Vidya Bharati Shaikshanik Mandal, Amravati's

Vidya Bharati Mahavidyalaya, Amravati

Affiliated to Sant Gadge Baba Amravati University, Amravati Maharashtra

NAAC Re-accredited with Grade “A”(CGPA 3.26-Second Cycle)
CPE Status (Third Time) by UGC,
Mentor College under Paramarsh Scheme by UGC
'Lead College' by S.G.B. Amravati University, Amravati
ISO Certification: 9001:2015 and 14001:2015

Website: vbmv.org

Course Outcomes for All Courses

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Under-graduate Courses:

Post-Graduate Courses

- **Management Studies**
- **Computer Management**
- **Human Resource Development**
- **Computer Science**
- **English**
- **Zoology**
- **Physics**
- **Chemistry**
- **Mathematics**
- **English**

Physics

1. Course: F.Y. B.Sc. (Physics) **Semester- I** (Mechanics, Properties of Matter, Waves & Oscillation)

By the completion of this course, the students will be able to

1: understand the concepts of gravitation via calculations of various parameters such as gravitational force, field, potential etc., and planetary motion (Kepler's law).

2: study the concept of rigid body, Moment of inertia and conservation of angular momentum (concept of zero external torque).

3: learn the concepts of SHM's of various body (point mass and continuous bodies), calculations of frequency of SHM's and condition of resonance.

4: Study the composition of two SHM's to get different Lissageious figures, Production, detection and applications of ultrasonic waves.

5: know in details the elastic constants, properties of elastic bodies and different methods to measure elastic constants.

6: study the concepts of kinematics of moving fluids, Bernoulli's theorem, surface tension and viscosity with measurement through Jaeger's method.

2. Course: F.Y. B.Sc. (Physics) **Semester- II** (Kinetic theory, Thermodynamics and electric currents)

By the completion of this course, the students will

1: be able to get knowledge regarding kinetic theory of gases, transport phenomenon in gases like transport of mass, momentum and energy.

2: get the concepts of basic laws of thermodynamics, different thermodynamic processes, concept of internal energy, entropy, Carnot's engine, impossibility of absolute zero temperature, etc.

3: enjoy the study of Joule-Thomson effect, liquefaction of hydrogen and helium gases, thermodynamic systems, variables and relations.

4: understand the motion of charge particles in electric and magnetic fields, working of mass spectrograph, linear accelerator and cyclotron.

5: be able to understand the basic network theorems, construction and working of Ballistic galvanometer, concepts of varying currents through different circuits, Kirchhoff's law to calculate currents in different branches of circuits.

6: understand the concepts of alternating current with various combinations of resistor, capacitor and inductor, theory of transformer and energy losses in transformer.

3. Course: S.Y. B.Sc. (Physics) **Semester- III** (Mathematical background and Electrostatics)

By the completion of this course, the students will

1: be able to understand the basic concepts of divergence, gradient and curl as well as study of stationary charges via electric forces, electric field, electric potential, etc and determination of magnetic field by Ampere's law.

2: get the knowledge of Laws of electromagnetic induction via Faraday's law and knowledge of electromagnetic field by Maxwell's equations.

3: understand the semiconductor Physics and its applications, Hall effect and knowledge of LED.

4: study the BJT along with working and applications, also study the OP-AMP and its applications.

5: get the knowledge of special theory of relativity via length contraction, time dilation, relativistic addition of velocity, frames of references, relativity of mass and Einstein's mass energy relation.

6: understand the structure of earth, types and causes of earthquakes, intensity of earthquakes, scattering, absorption and reflection of solar radiation by atmosphere and mechanism of cloud formation, also different energy sources inside and above the

earth's surface.

4. Course: S.Y. B.Sc. (Physics) **Semester- IV** (Ray Optics, Wave Optics, Propagation of electromagnetic waves, Non-conventional energy sources)

By the completion of this course, the students

1: will understand the concept of ray optics, determination of focal length, wavelength and refractive index by Newton's ring experiment.

2: will be able to get the knowledge of bending of light beam, Fresnel and Fraunhofer diffractions, grating and Rayleigh's criterion for resolution.

3: understand the phenomenon of polarization, Nocol prism, production and detection of circularly and elliptically polarized light.

4: will enjoy the study of MASER, LASER and their applications, three levels and four levels laser system and Ruby laser and He-Ne laser.

5: will study the structure of fiber optics and principle of propagation of light through it, losses in fiber optics, advantages and applications of fiber optics.

6: study Solar energy, Wind energy, ocean energy- Waves & tides, geothermal energy, Hybrid Systems, Hydrogen energy systems, Fuel cells, different types of solar energy storages and their principles, Photo-voltaic systems-concept, operating principle and applications.

5. Course: T.Y. B.Sc. (Physics) **Semester- V** (Quantum mechanics, Atomic and molecular spectroscopy, Nuclear Physics, Hybrid parameters and Oscillators)

By the completion of this course, the students will

1: study the failure of classical mechanics along with origin of quantum mechanics, matter waves, wavepackets, and Heisenberg's uncertainty principle.

2: be able to understand the concept of Schrodinger time dependent and independent wave equations, Operators, eigen value and eigen function, application of quantum mechanics to particle in 1-D box and zero point energy of simple harmonic oscillator.

3: study the atomic models, X-ray, Raman effect and Raman spectroscopy.

4: will be able to get the knowledge of detection of charged particles, alpha decay, beta decay, Nuclear fission and Nuclear fusion.

5: will enjoy the study of Hybrid parameters- low frequency equivalent of CE amplifier & its analysis, General principles of amplifier classification, Noise and distortions in amplifiers.

6: will study the positive and negative feedbacks in amplifiers along with advantages and disadvantages, oscillators and multivibrators.

6. Course: T.Y. B.Sc. (Physics) **Semester- VI** (Statistical Mechanics and Solid State Physics)

By the completion of this course, the students

1: will get the knowledge of Basics of Statistical Mechanics such as Phase space, Unit Cell, Probability, Molecular speed distribution etc.

2: will be able to understand the concepts of MB, BE and FD statistics along with the knowledge of Fermi energy and Fermi temperature.

3: can enjoy Crystollographic study such as unit cell, Miller Indices, Reciprocal lattice and defects in crystals which are responsible for change of electrical properties and change of colours of matters.

4: will study the band structure of material and classification of the material viz: insulator, conductor and semiconductor.

5: will be able to understand the classification of magnetic materials such as dia, para and ferromagnetic materials, also Langevin's theory of dia and paramagnetic and losses in magnetic materials.

6: will acquire the knowledge of Superconductivity and nano-technology and their applications.

Electronics (Instrumentation)

Semester I

Electronics Paper I

1. Students study the basics of network theorems and its application.
2. Study of semiconductor devices and its application.
3. Learn the basic concept of biasing and stabilization.
4. Understand the principle and working of various types of measuring instruments.
5. Study of basics in integrated circuits and embedded system.
6. Practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of network theorems in electronics.

Semester II

Electronics Paper II

1. Study the number system and logic gates.
2. Understand the applications of logic gates.
3. Understand the use of K-maps for digital circuit design.
4. Study of sequential and combinational logic circuits.
5. Study of semiconductor memories.
6. Practical course develop the basic skills in designing of logic circuits.

Semester III

Electronics Paper III

1. Study of hybrid equivalent circuit.
2. Study of types of power amplifier and its applications.
3. Understand the concept of feedback, feedback amplifiers and oscillators.
4. Understand the concept of difference amplifiers and its advance applications.

5. Study the concept of A/D and D/A convertors and its types.

6. Practical course build up the confidence and basic skills in designing of analog circuits.

Semester IV

Electronics Paper IV

1. Study and understand the architecture of 8-bit microprocessors (8085).

2. Understand the addressing modes and instructions of 8085.

3. Understand and design of the programming of microprocessor 8085.

4. Study and understand the architecture of 8255 Programmable Peripheral Interface.

5. Study the analog, digital and Fiber optic communication.

6. Understand the concept of Modulation, Demodulation and its types.

7. Practical course build up the basic skills in designing of programmes to perform specific task in 8085 microprocessor.

Semester V

Electronics Paper V

1. Study the various types of biomedical instruments.

2. Study and understand the various types of transducers.

3. Study the various temperature sensing devices and measurement techniques.

4. Understand the concept of IC 555 Timer and concept of multivibrator using IC 555.

5. Understand the IC565 PLL and its various applications in communication and frequency generation.

6. Understand and study of various types of sensors and actuators.

7. Practical course develop the basic skills in designing of various multivibrators using IC555 and also understand the various types of sensors and actuators.

Semester VI

Electronics Paper VI

1. Study and understand basics of 16-bit microprocessors IC 8086.

2. Understand the addressing modes and instructions of 8086.

3. Understand and design of the programming of microprocessor 8086.

4. Study and understand the architecture of 8051 Microcontroller.

5. Understand the ability to differentiate microprocessor and microcontroller.

6. Understand the instruction set of 8051.

7. Understand and design of the programming of microcontroller 8051.

9. Understand the fundamentals of advanced microcontroller technology.

10. Develop basic skills in construction and preparation of report of Minor projects on microprocessor 8085, 8086, microcontroller 8051, AVR, ARM, Communication, sensors, power amplifier, code converters, Biomedical Electronics, Digital Electronics or any advance topic of Electronics.

Zoology

Semester I Zoology Paper I

1. Study Classification and general characters, type study and organ system of all the non-chordates phylum.

2.Know the parasitic adaptations from protozoon's.

3.Learn the life history of *Ascaris lumbrcoids,Fasciola hepatica,* and pertaining pathogenic impacts.

4.Study Water vascular system in Echinodermata.

5.Learn general characters and body organization of Balanoglossus.

6.Practically students learn observations of available specimens ,classification up to classes and sketching of the specimens from phylum protozoa to Hemichordata.

7. Understands internal body parts of the animal when they observe the demonstration of the specimens.

8.Learn the culture of Paramoecium and Volvex.

9. Mounting of selected body parts of some animals.

Sem-II (Zoology Paper-II)

1.Learn general organization of Prokaryotic and Eukaryotic cell.

2.Study the ultra structure of cell organells ,nucleus ,chromosomes and plasma membrane.

3.Understand the giant chromosomes.

4.Study cell division (Mitosis and Meiosis).

5.Learn Gamitogenesis and Fertilization.

6.Study the development of cleavage up to the formation of Amphioxus.

7.Study the development of cleavage ,blastula, gastrula up to the formation of three germ layers in Frog as well as Chick.

8.Learn structure and functions of extra embryonic membranes .

9.Learn parthenogenesis and regeneration .

10.Learn types, sources and uses of stem cells.

Practical-

1.Learn stages of cell division and cytological experiments

2.Understand embryological developmental stages of Frog and Limnea.

3.Understand the life cycle of Mosquito, Housefly, Cockroach,butterfly,and Moth.

Semester III (Zoology Paper-III)

1. Understand the origin of chordate.

2. Learn the type study of protochordate *Amphioxus* and Scoliodon .

3. Understand migration in fishes.

4.Study the type study of *Rana tigrina* and *Calotes versicolor.*

5.Understand the parental care and snake venom.

6.Learn the type study of *Columba livia* and migration in birds.

7.Understand prototheria ,metatheria and aquatic Mammals.

8. Understand physiological embryological morphological, anatomical evidences of evolution.

9. Understand evolution of man.

10.Learn connecting links Peripetus and Archaeopteryx.

11.Understand evolution of heart and aortic arches.

12.Learn the aquatic,terrestrial and desert adaptations.

Practical-

1. Detected the monohybrid and dihybrid cross with the help of plastic beads.

1. Identify the chordate specimens .

2.Understands internal body parts of the animal when they observe the demonstration of the specimens.

3.Learn the osteology of Rabbit and Varanus

Zoology paper IV

1.Know the basic concept of genes and observe the monohybrid and dihybrid traits in the societal atmosphere.

2.Students understand the gene linkage and its arrangement and types complete and incomplete.

3.Learn the mechanism ,theories, types and they also aware factors affecting crossing over.

4.Learn multiple alleles in relation to eye color in Drosophila .

5.Learn multiple alleles in relation to blood groups in Man.

6.Understand and aware Erythroblastosis foetalis.

7.Learn chromosomal and Genic balance theory of sex determination with suitable examples.

8.Understand environmentally and hormonally controlled sex determination.

9.Understand the Gynandromorphs in animals.

10.Learn and aware the genetically diseases Sickle cell anemia and Diabetes mellitus.

11.Understand the some common syndrome like the Turner's syndrome ,Klinefelter's syndrome, Down's and Edward's syndrome.

12.Learn physiologically and biochemically genetical disease Cystic fibrosis, Phenylketoneuria, Albinism and Alkaptonuria.

13. Understand and aware of Hemophilia as a sex linked genetic disorders and their inheritance in Man.

14.Understand and aware of Color blindness as a sex linked genetic disorders and their inheritance in Man.

15. Learn ad aware of Chorionic villous sampling and
Amniocentesis.

16.Understand male and female birth control measures.

17.Learn identical and Siamese twins and significance of twins study.

18.Learn biotic and biotic factors. Also study of ecosystem relationships between habitat and ecological niche.

Practical-

1.Practical course develop interest to solve the Mendel's monohybrid ad dihybrid cross.

2.Understand and develop the skills of preparation of human karyotypes very easily

3.Undertand photo slides of syndrome

4.Lean human genetic trait and apply the Hardy-Weinberg principle in baldness, length of index finger etc.

5.Estimate dissolved oxygen,co2very carefully.

Zoology Semester V

1. Study of physiology of respiration , circulations and respiratory pigments.

2.Learn structure of human heart its function and cardiac cycle.

3.Understand the structure, types, and composition of muscle, neuromuscular junction, the mechanism of muscle contraction by sliding filament theory,and the physical and chemical changes during muscle contration.

4.Study the structure of neuron its types ,Conduction of nerve impulse through medullary and non- medullary nerve fiber,role of the neurotransmitters, and structure of synapse .

5. Learn the hormones and physiological role of Pituitary gland, Adrenal gland,Thyroid gland,and Islets of Langerhan very carefully.

6.Understand the hormonal disorder of Dwarfism, Gigantism, Acromegaly , Goiter , Myxoedema and Cretinism.

7.Learn hormonal control of reproduction in males and Females, structure and physiology of Mammalian placenta, Menstrual cycleand Estrous cycle.

8.Study the osmoregulation and ionic regulation in aquatic animals, Ammonotelism,Ureotelism and Uricotelism.

9.Understand the beneficial insects and harmful insects with suitable examples

10.Study the Apiculture and the Sericulture.

11.Study the scope, importance ,present status of aquaculture in India.

12.Learn the circular hatchery and modern drugs used in fish breeding as well as monoculture, polyculture and integrated aquaculture.

Practical-

1. Practical course develop the basic skills necessary for the understanding of the Physiological concepts and carefully handled the blood parameter apparatus.

2.Students understand the life history of useful insects, honey bees, Lac insect and silk Moth.

3.Learn and observe carefully the histological slides of major organs of the body system.

5.Identify and classify the locally available fishes, their economical values.

Semester-VI Zoology Paper VI

1.Understand that DNA is a genetic material with experimental proofs Griffiths experiment, Avery and coworkers experiments, Hershey and Chase experiment.

2.Learn the chemistry of DNA and RNA, types of RNA.

3.Learn Messelson and Stahl experiment of DNA replication.

4. Learn one gene one enzyme hypothesis and genetic code .

5. Learn Lac –Operon model of E.coli ,mutation theory of DeVries,chromosomal aberrations and polymerase chain reaction.

6.Understand Western and Southern blotting technique.

7.Study the recombinant DNA technology and gene cloning-enzyme in recombinant DNA technology.

8. Study of Immunology and Innate and adaptive innte and adaptive immunity .

9.Study of cell mediated immunity and role of cytotoxic T- cell.

Practicals-

1. Knows the handling skills of micro technique scope and their importance.

2.Perceive preparation of fixatives.

3.knows the collection of various tissues ,organs from slaughter house for the permanent slide of micro preparation Process.

4.Understand the use and care of oven and its functions.

5.Understand honing stropping knives , section cutting and spreading .

Botany:

Paper-1 Botany

1. This course makes easy students to understand the lower plants like algae, bryophytes and pteridophytes.

2 Students learns the Preparation of temporary mount, identification of unknown cryptogams and identify the specimen by giving the reason e.g. Oedogonium, Hydrodictyon, etc.

3. Students also acquire the knowledge of handling the compound microscopes.

4. They also learn different types of life cycles and alternation of generations phenomenon present in lower plants.

Paper-II Botany

1. This course makes students familiar to Morphology of Gymnosperms and anatomy of the members like, Pinus and Gnetum is also revealed.

2. Also they learns the technique like Preparation of double stained permanent mount of Pinus stem, needle and Gnetum stem.

3. The students also Study the fossil plants by observing the slides and specimens of important fossil gymnosperms like Lyginopteris.

4. Detailed morphological study of types of root, stem and leaf of angiosperms with its modifications also done by students for e.g. Forms of corolla, Types of placentation, Morphology of fruits etc.

5. They also cram the concept of Utilization of plants as Spices, fiber yielding plants etc.

Paper-III Botany

1. Students are acquainted about Fossils plants like Compression, impression etc. A complete fossils study is made with illustrating the examples from an ideal fossil i.e. Lyginopteris oldhamia.

2. Students get known with techniques of Preparation of permanent double stained slide with special emphasis on T.S. /T.L.S. /R.L.S. of stem.

3. Students observe a wide range of flowers available in locality and methods of their pollination.

4. Also they study Taxonomical description of plants belonging to the different families in technical language and their identification up to family level.

5. They also study the embryology of angiosperms with special references to the microsporogenesis , megasporogenesis , development of male and female gametophyte, and embryogenesis etc.

Paper-IV Botany

1. An elaborated concept of cell in detail is studied by the students i.e. Prokaryotic and Eukaryotic cell along with the other components like Cell wall and its Structure and Functions, Plasma membrane and its Structure (models) and Functions etc.
2. They learn about morphology of chromosomes and their aberrations. The students are also acquainted with Mendel's laws of Dominance and segregation etc. along with concept of linkage phenomenon and numerical problems based on that.
3. They also study the non allelic interaction of genes like complementary ratio, supplementary ratio etc.
4. They also gain knowledge of enzymology in details and their mechanism of action.

Paper-V Botany

1. Students are erudite to Importance of water to plant life by studying the phenomenon like Imbibition, Diffusion, Osmosis, Plasmolysis, Active and passive Absorption of water by plants.
2. Also they learned in details the phenomenon like Ascent of sap and theories like Root Pressure and Transpiration Pull Theory. The important phenomenon in plants like Photosynthesis and Respiration are also learned by the students.
3. Various aspects of plant physiology, metabolism and growth are taught to the students. The flowering in plants is a major process in which plants prepare themselves for the reproduction this flowering and photoperiodism is cram in details.

Paper-VI Botany

1. The students are acquainted with the knowledge of Nucleic acid like DNA and RNA and the experiment related to discovery of them e.g. Giffith's Expt, Hershy and Chase Expt. etc. DNA Double Helical model, DNA replication in Eukaryotes; DNA Packaging - Nucleosome and

Solenoid is studied in detail. Also Satellite, Repetitive DNA and Transposable element in plants (AC-DS system) are also studied. Advance molecular biology process like Regulation of Gene Expression in Prokaryotes (Operon concept with special reference to Lac Operon); Regulation of gene expression of Eukaryotes (Britton Davidson Model) are also acquainted by the students.
2. The students get insight of phenomenon like Protein Folding Mechanism and Structure of proteins (Primary, Secondary, Tertiary and Quaternary).

Chemistry

1S Chemistry

1. This course facilitates students to understand fundamental laws regarding states of matter, thermodynamics and structure of atom. Students acquire thorough knowledge of mole concept, derivations, depictions and problem solving and periodic properties of the elements including the preliminary theories of bonding.
2. Students learn fundamental concepts of organic and inorganic chemistry which governs the structure, bonding, properties, structural effects, acid-base theories, preparation methods, and reactivity of organic molecules.
3. Chemistry is an experimental and applied subject. Hence, practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of chemistry & helps in development of practical skills of the students.

2S Chemistry

1. This course facilitates students to physical properties and fundamental laws of reactivity of molecules.
2. Students acquire comprehensive knowledge of periodic properties of the elements and physical properties of matter along with nature of bonding in molecules.
3. Students absorb essential concepts of organic chemistry and reactivity of commercial organic molecules like Pheols, Ethers, Epoxides.
4. The practical course inculcates the basic skills to perform experiments to measure physical properties of chemicals and qualitative analysis of various metal ions in a given mixture.

3S Chemistry

1. Students are made aware about Thermodynamics and equilibrium processes, States of matter and Eletrochemistry.
2. Students will get familiar with phase rule, phase diagram of one and two component systems. Students attain basics and applications of stereochemistry of different isomers and important chemicals like aldehydes, ketones.
3. Students are introduced to analytical chemistry in which they are made aware of inorganic quantitative analysis (Volumetric and Gravimetric analysis) wherein they study non-instrumental volumetric analysis which comprises of study of various titrations, indicators used in it& some theoretical aspects related with titrations.
4. Along with it they also study error in quantitative analysis & ways to minimize them. They instill skills related to chemical kinetics and physical property measurement.
5. Students are trained to determine the rate constant of chemical reactions, solubility, heat of neutralization, critical solution temperature of partially miscible system & distribution coefficient.

4S Chemistry

1. Students are introduced to chemistry of d and f-block elements and metallurgy to understand chemical reactions and processes occurred in metallurgy.
2. They learn colligative properties and their applications and understand the crystalline state in-depth. The emphasis is on learning reaction mechanisms of various organic reactions.
3. In practical sessions, students get training for using complexometric titrations and spectrophotometric techniques. They learn isolation of natural products like casein from milk, caffeine from tea leaves.

5S Chemistry

1. Students are introduced to co-ordination compounds and theories like VBT, CFT to understand their formation and bonding. organometallic chemistry & use of organometallic compounds in synthesis of organic as well as inorganic compounds.
2. They also study heterocyclic compounds and their role in everyday life.
3. Students learn basic concepts of photochemistry and molecular spectroscopy and their applications.

4. Students are trained in the techniques such as Conductometry, Polarimetry and Potentiometry.

5. Learners become proficient in preparation of co-ordination compounds of different types.

6S Chemistry

1. Learners develop acquaintance for spectrophotometry, colorimetry, various types of chromatography like Paper, TLC, etc. Students get in-depth knowledge of Infra-Red (IR), Nuclear Magnetic Resonance (NMR), Mass and Ultra-Violet (UV) spectroscopy.

2. They acquire understanding of Quantum Mechanics, Electrochemistry, Nuclear chemistry and their applications.

3. Learners get training for chromatographic techniques like Paper, TLC, etc. , organic quantitative analysis, and instrumental techniques viz. pH-metry, Potentiometry, Conductometry and Colorimetry.

Mathematics

Course Outcome of B. Sc. Mathematics

B.Sc. I Paper I: Course Outcome of Algebra and Trigonometry

Students will able to

1. Describe real and imaginary parts of circular and hyperbolic functions.

2. Find roots of complex numbers, Relation between circular functions and hyperbolic functions

3. Compute summation of Series based on Geometric series, Binomial series, Gregory Series, Sine series, Cosine series, Exponential series.

4. Define Quaternion and Illustrate operations on Quaternion.

5. Evaluate Relations between the roots and coefficients of equations.

6. Find Solutions of cubic and Biquadratic equations.

7. Evaluate the rank of a matrix by using the concept of the determinant rank.

8. Obtain the characteristic polynomial of a matrix.

9. Obtain the eigenvalues, eigenvectors of a matrix.

B.Sc. I Paper II: Course Outcome of Differential and Integral Calculus

Students will able to

1. Define limit and Continuity of a function at a point.
2. Determine whether a given function is continuous or not.
3. Evaluate nth order derivative of product of two functions.
4. Identify the types of indeterminate forms.
5. Know Rolle's theorem and its geometrical meaning
6. Deduce the mean value theorems of differentiability by using Rolle's theorem give the geometrical interpretation of the mean value theorems
7. Apply Mean Value Theorems to various problems of Analysis.
8. Define partial derivatives of the first order for a function of several variables.
9. Define and identify homogeneous functions.
10. State, prove and use Euler's theorem for homogeneous functions.
11. Evaluate reduction formulae.
12. Find the volumes of some solids of revolution,
13. Find the areas of some surfaces of revolution.

B.Sc. I Paper III: Course Outcome of Differential Equations: Ordinary and Partial

Students will able to

1. Extract the solution of differential equations of the first order and of the firstdegree by variables separable, Homogeneous and linear DE, Exact DE methods.
2. Find a solution of differential equations of the first order and of a degree higher than the first by using methods of solvable for p and y.
3. Compute all the solutions of second and higher order linear differentialequations with constant coefficients, linear equations with variable coefficients.
4. Solve simultaneous linear equations with constant coefficients.
5. Form partial differential equations.
6. Find the solution of First order partial differential equations for some standard types.
7. Solve Partial differential equations of second and higher orders.
8. Evaluate Homogeneous and non-homogeneous equations with constant coefficients.

B.Sc. I Paper IV: Course Outcome of Vector Analysis and Solid Geometry

Students will able to

1. Find Scalar Triple Product, Vector Triple Product.
2. Evaluate Vector Differentiation and Vector Integration.
3. Define Space curves and t, n, b vectors.
4. Compute SF Formulae.
5. Find and interpret the gradient curl, divergence for a function at a given point.
6. Evaluate integrals by using Green's Theorem.
7. Describe the various forms of equation of a Sphere.
8. Find equation of Cone and Cylinder.

B.Sc. II Paper V: Course Outcome of Advanced Calculus

Students will able to

1. Define different types of sequence.
2. Discuss the limit of sequence.
3. Prove properties of convergent and divergent sequence.
4. Verify the given sequence in convergent and divergent by using behaviour of Monotonic sequence.
5. Give examples for convergence, divergence and oscillating series.
6. Discuss the behaviour of the geometric series.
7. Prove theorems on different test of convergence and divergence of a series of positive terms.
8. Verify the given series is convergent or divergent by using different test.
9. Define and evaluate the limits of functions of several variables.
10. Decide whether a function of several variables is continuous or not at a given point or a set of points.
11. Compute the maxima and minima of various functions.
12. Define double integral and repeated integrals of a real-valued function of two variables.
13. Define and evaluate double integrals over some special types of regions.

14. Compute double integrals using polar co-ordinates.
15. Define the triple integral of a real-valued function of three variables.
16. Evaluate triple integrals using repeated integrals.
17. State and prove Gauss and Stoke's theorem.

B.Sc. II Paper VI: Course Outcome of Elementary Number Theory

Students will able to

1. Define divisibility.
2. Illustrate the Division and Euclidean Algorithm
3. Discuss Greatest common divisor and Least common multiple.
4. Describe the properties of prime numbers
5. State and prove unique factorization theorem.
6. Show that every positive integer can be expressed as product of prime power in unique way
7. Write a formula for the number of positive integers less than n that are relatively prime to n
8. Define congruences and describe the properties of congruences
9. Solve the system of linear congruences
10. State and prove Chinese Remainder Theorem.
11. Discuss special functions.
12. Evaluate primitive roots.
13. Compute quadratic residues.

B.Sc. II Paper VII: Course Outcome of Modern Algebra: groups and rings

Students will able to

1. Define give examples of group, subgroup.
2. Compute properties of group.
3. Find permutation group.
4. Check if the intersection, union and product of two subgroups is a subgroup.
5. Describe the structure and properties of cyclic groups.

6. Verify whether a subgroup is normal or not,
7. Obtain a quotient group corresponding to a given normal subgroup.
8. Define normal subgroups , quotient groups and index of a subgroup.
9. Define homomorphism, kernel of a homomorphism, isomorphism.
10. Prove the fundamental theorem of homomorphism for groups and Isomorphism theorems.
11. Define and give examples of rings.
12. Derive some elementary properties of rings from the defining axioms of a ring.
13. Give examples of subrings and ideals of some familiar rings.
14. **C**heck whether a subset of a ring is a subring or not.
15. Check whether a subset of a ring is an ideal or not.
16. Define and give examples of quotient rings.
17. Check whether a function is a ring homomorphism or not.

B.Sc. II Paper VIII: Course Outcome of Classical Mechanics

Students will able to

1. Understand constraints D' Alembert's Principle and Lagrange's equations .
2. Solve the one-body problem and central orbits and equations of motion .
3. Understand Keplers Laws of Motion and Virial theorem.
4. Find functional and extremals.
5. Prove Euler's equation and give examples.
6. Compute Hamilton's Principle.
7. Understand Least action Principle.
8. Find Generalized coordinates, finite and infinitesimal rotations.

B.Sc. III Paper IX: Course Outcome of Mathematical Analysis

Students will able to

1. Define the Riemann Integral of a function derive the conditions of Integrability and determine the class of functions which are always integrable.
2. Discuss the algebra of integrable functions

3. Compute the integral as a limit of a sum.
4. Learn the mean value theorems of integrability and their applications.
5. Understand Improper Integral and their convergence.
6. Prove different test of convergence of integrals.
7. Understand the significance of differentiability for complex functions and be familiar with the Cauchy-Riemann equations.
8. Determine whether a given function is analytic.
9. Define Bilinear transformation, cross ratio, fixed point.
10. Write the bilinear transformation which maps real line to real line, unit circle to unit circle, real line to unit circle.
11. Define and recognize the concept of metric spaces, open sets, closed sets, limit points, interior point.
12. Define and Illustrate the concept of completeness

B.Sc. III Paper X: Course Outcome of Mathematical Methods

Students will able to

1. Define a recurrence formulae.
2. Classify Bessel's and Legendre's equations.
3. Find Fourier series expansions for given functions.
4. Find Cosine and Sine series expansions for given functions.
5. Understand the concept of Laplace transform and their applications
6. Determine application of Laplace transform.
7. Determine Fourier Sine and Fourier Cosine transform.

B.Sc. III Paper XI: Course Outcome of Linear Algebra

Students will able to

1. Define Vector Space, Quotient space Direct sum, linear span and linear independence, basis and inner product.
2. Decide whether a given set of vectors in a vector space is linearly independent or not.
3. Determine whether a given subset of a vector space is a basis of the vector space or not.
4. Construct a basis of a finite-dimensional vector space;

5. Obtain and use formulae for the dimensions of the sum of two subspaces, intersection of two subspaces and quotient spaces.
6. Discuss the linear transformations, rank, nullity.
7. Find the characteristic equation, eigen values and eigen vectors of a matrix.
8. Prove Cayley- Hamilton theorem, Schwartz inequality, Gramschmidt orthogonalisation process.
9. Understand Modules and its properties.

B.Sc. III Paper XII: Course Outcome of Graph Theory (Optional)

Students will able to

1. Identify different ways of representing a graph.
2. Identify complete graphs, paths, cycles.
3. Obtain the union and complement of a graph.
4. Write the degree sequence of a graph and obtain the number of edges **of** a graph using the degrees of vertices.
5. Identify graphs isomorphic to a given graph.
6. Distinguish induced subgraphs from the given set of subgraphs.
7. Determine cutset and circuit.
8. Distinguish between walks, paths, circuits and cycles in a graph
9. Identify connected graphs, Bipartite graphs, Trees.
10. Understand vector space associated with graph.
11. Determine Incidence matrix and Adjacency matrix of graph.

B.Sc. III Paper XII: Course Outcome of Special Theory of Relativity (Optional)

Students will able to

1. Discuss postulates of special theory of relativity.
2. Understand Lorentz transformation and its geometrical interpretation.
3. Determine the Lorentz contraction Factor.
4. Determine the Length contraction, Time dilation.
5. Understand Four dimensional Minkowskian space-time of relativity
6. Determine Lagrangian and Hamiltonian.

7. Derive Maxwell's equations of electromagnetic theory in vacuum.

Computer Science

1. Identify the fundamental concepts of computer and apply the basic C programming with the concepts of Data Structures and Operating System.

2. Demonstrate the principles of object oriented programming with C++ and Advanced C++ and understand the concepts of web technology and web designing.

3. Understands the RDBMS principles and Visual Basic with its Advance concepts.

B.Sc. (Computer Application)

1. Understands the basic concepts of internet and identify & apply the C programming language and HTML

2. Understands java programming with oops concepts and identify the software aspects of computer systems

3. Understands the Advanced java with asp programming.

Marathi

After completing this course, students will be able to grasp the following

1. Saint Dnyaneshwar Maharaj demand for universal happiness
2. Saint Chokhamela's poetry as an idol of Dalit pain.
3. Rebel saints of the 16th century
4. Salient features of Saint Ramdas's *Dasbodh*
5. Depiction of Varadhi dialect in the poems of Vithal Wagh
6. Salient features of the classics of Madhukar Wakode
7. Develop attitude for Literary Forms. (Lalit Gadya, Marathi Poetry & Story, Marathi vaicharik sahitya & Novel)
8. Develop Reading, Writing & Communication Skills

9. Understand interdisciplinary aspects of Marathi.
10. Information about Literary Theory.
11. Information about the history of MODERN Marathi Literature.
12. Develop Attitude of Marathi Linguistics & Grammar.

Commerce

Bachelor of Commerce (Accounting & Finance)

Course Outcome:

1. The graduates will get hands on experience in various aspects acquiring skills for Marketing Manager, Selling Manager, over all Administration abilities of the Company.
2. The students will possess the knowledge, skills and attitudes during the end of the B.com (BAF) degree course.
3. By virtue of the training they can become a Manager, Accountant, Management Accountant, cost Accountant, Bank Manager, Auditor, Company Secretary, Stock Agents, Government jobs etc.

Bachelor of Commerce (Grant in aid Course)

COURSE OUTCOMES (COs)

At the end of the B.Com Programme, Graduate will be able to……

1. Have comprehensive knowledge of Accounting, Taxation, and Management & Business Law.
2. Proficient with professional, ethical, social, interpersonal & entrepreneurial skill.
3. Prepare for Higher Studies & to achieve corporate & entrepreneur Success.
4. Learn & gear up with theoretical knowledge in implementing business practice.

ENGLISH

COURSE OUTCOMES (UG-LEVEL)

1: Students are able to make accurate use of English Language in their respective fields.

2: Students utilise those values in the society which they learnt through literature.

3: Students could express themselves in oral and written communications.

4: Students are able to use English Language effectively and accurately in formal and informal situations of life.

5: Students are able to write Letters of applications, Business Letters, E-mails, News-report, Essay, Resume, review, etc.

6. Students will learn analysis of the text from prose passages for understanding the contents

7. Prose passages will help improve reading and writing skills

8. Students will develop imaginative thinking by reading and reciting poetry

9. Language activities will promote effective use of language in day to day life and enhance professional skills

10. Students will develop rational thinking along with learning life skills.

11. Students will learn professional ethics.

12. Students will learn environmental consciousness.

COSMETIC TECHNOLOGY

Course Outcomes ((B.Tech)

1. Describe purpose and meaning of cosmetics
2. Write down classification and characteristics of cosmetics
3. Describe raw materials used to design cosmetics
4. Describe and evaluate concept of cosmetic safety
5. Prepare various types of emulsions and suspensions
6. Identify types of emulsions
7. Identify herbal drugs used in cosmetic formulations
8. Write down adulteration of natural products
9. Describe structure and function of skin, hair, nail, and tooth
10. Determine blood group, bleeding time, clotting time and hemoglobin concentration of blood sample
11. Describe purpose of computer application
12. Describe purpose of statistics in research
13. Write down classification of fixatives

14. Describe cosmetic fragrances
15. Create and evaluate skin care, hair care and body cosmetics
16. Classify colors, dyes and pigments
17. Describe visible spectrophotometry, I.R. Spectroscopy
18. Write down principles and techniques of chromatography
19. Describe concept and perceptive of Human Resource Management
20. Write down marketing management
21. Describe production management
22. Describe the novel drug delivery system
23. Write down the sources of raw materials and their use in formulation of perfumes
24. Write down importance of quality control in cosmetic preparations

Course Outcomes ((B.Voc)

1. Describe purpose and meaning of cosmetics
2. Write down classification and characteristics of cosmetics
3. Describe raw materials used to design cosmetics
4. Describe and evaluate concept of cosmetic safety
5. Prepare various types of emulsions and suspensions
6. Identify types of emulsions
7. Identify herbal drugs used in cosmetic formulations
8. Write down adulteration of natural products
9. Describe structure and function of skin, hair, nail, and tooth
10. Determine blood group, bleeding time, clotting time and hemoglobin concentration of blood sample
11. Describe purpose of computer application
12. Describe purpose of statistics in research
13. Write down classification of fixatives
14. Describe cosmetic fragrances
15. Create and evaluate skin care, hair care and body cosmetics
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19. Describe concept and perceptive of Human Resource Management
20. Write down marketing management
21. Describe production management
22. Describe the novel drug delivery system
23. Write down the sources of raw materials and their use in formulation of perfumes
24. Write down importance of quality control in cosmetic preparations

Computer Application

BCA-I SEM-I

1) 1ST1-COMPUTER FUDAMENTAL

1) The Subject teaches about the computer,block diagram devices of computer like input and output,memory.
2) It also teaches the number system and basic programming concept.

2) 1ST2 C Programming

This subject is the basic programming language giving students an idea of
History of c prog,basics of c operators,Structure and how to write basic c program.

3) 1ST3 D.T-I

1) The subject learning outcome is number System,its conversion into different number system,Boolean algebra,etc.
2) It also helps in learning the basic logic gates, logic families,ALU,and Combinational logic circuit.

4) 1ST4 NM

1) This subject is used to improved numerical ability of the student.
2) Subject outcome is based on numerical methods to find root of equation and

Solving simultaneous equation.

5) 1ST5 DM

1) The subject learning outcome is Function and recurrence relation. Set operations, Generating Functions, Relation and Boolean Algebra.

6) 1ST6-COMMUNICATION SKILL

1) The subject prepares the student for the English Grammar,types of written communication and creative writing.

BCA-I-SEM-II

1) 2ST1 OS

1) The subject teaches about the os,basics of o.s.,Functions of o.s.,File management and Memory Management .

2) 2ST2 Advanced C

1) The subject deals with the advanced partr of c-prog. Loke string handling,function in c,Structures ,File handling,and error handling.

3) 2ST3 DT-II

1) The subjects teaches the digital electronics part of multivibrators,flip flops,counters,shift,registers,memory,converters,etc.

4) 2ST4 N.M

1) This satisfied is used to improved numerical ability of the student.

2) Subject outcome is Regression analysis,Interpotation and numerical Integration.

5) 2ST5 D.M.-II

1)The subjects learning outcome is graph theory,Thisw subjects is completely base on graph theory.

2) This subject help students to understand concepts of graph theory and tress.

7) **2ST6 C.S**

1)Advance grammar,Analytical ability, Drafting of reports and lette and how to write on topics and short notes.

BCA – Sem III

3ST1: Data Structure(D.S.)

1. The Subject teaches about general algorithm, Arrays, Stacks, Recursion, Queues and Linked List, Tress and also teaches student about sorting techniques of data.

3ST2: OOP with C++

1. It deals with teaching students about OOPS concept, Control Structure, Virtual Function and Polymorphism.
2. Student becomes aware about Complex Programming.

3ST3: Database Management System (D.B.M.S.)

1. The Subject teaches about the basic concept of database management, Relational model, SQL, Functions and Block structure.
2. Prepares student for back-end Database Structure Management.

3ST4: Advanced O.S.(AOS)

1. The subject teaches about advanced O.S. Concept; Process Management, Concurrent Programming, Storage management, Virtual Storage Management, Processor Management etc.

3ST5: Electronics

1. The subject teaches about the microprocessor, its architecture, Instructions and Program of 8085 and 8086, Interfacing and evaluation.
2. Gives the hardware knowledge to students.

BCA - Semester IV

4ST1: System Analysis Design and MIS (SADMIS)

1. The subject teaches about project Management, basics of system design, Different parameters, MIS- its characteristics, functions, structure and classification.
2. Also information about System Planning.

4ST2: Visual Basic (V.B.)

1. It is a Programming language which teaches student the basic of Programming in V.B.
2. The subject makes student proficient in Event Deiven Programming concept. In VB, Internal Functions, and operation of files in V.B.

4ST3: Web Designing and Office Automation

1. The subject gives knowledge about information technology, excel, Access.
2. It also teaches student about web tools, basic of web page design, HTML-4, and introduction to Dream viewer, E-Commerce

4ST4: Networking

This subject teaches the basic of Network like Network concept, types of network, Digital and analog data transmission, types of Communication Services.

4ST5: Advanced Microprocessor and Microcontroller

1. This subject teaches microcontroller, 80286, 80386, 8051 instruction set.
2. It Give knowledge to students about Hardware Programming Interfacing.

BCA SEM-V

5STI-CORE JAVA

This subject teaches the students about fundamental of core java like classes and inheritance, Package And Interface, Exception Handling And Threads, Applete, Awt, Gui Components Etc.

5ST2-NETWORK SECURITY

This subject outcome is to teach students about the importance of security ,security trend, encryption techniques ciphers, public key cryptography and RSA MODEL.

It also teaches students about IP security architecture and web security.

5ST3-SOFTWARE ENGINEERING

The subject teaches about software development life cycle including designing, analysis, coding, testing and maintenance of software.

It also teaches concepts of software project management and software quality management.

5ST4-COMPUTER GRAPHICS

It teaches students about the basics of generating computer graphics ,geometrical transformation, drawing algorithms, animations, techniques and its implementation in c programming.

5ST5-E-COMMERCE

This subject gives students, introduction to E-commerce, electronic markets, electronic payments etc.

It also explains Business strategies related with it and other business models like B2B EC, etc.

BCA SEM-VI

6STI-.NET USING ASP

The Subject Teaches Student About The Most Widely Used Programming Language I.E. Net Using Asp, It Teaches The Application, Explanation Of C# .Net, Working With Ado.Net And Advanced Concepts Of Asp.Net.

6ST2-.CLIENT SERVER TECHNOLOGY

This subject teaches the uses of client –server technology, fundamentals of clients server design, division of lab our, techniques and protocols, scheduling implementations, semaphores.

6ST3-MULTIMEDIA AND ITS APPLICATION

The subject focuses on the definition of multimedia and its uses, its application-hardware and software .

It teaches tools for multimedia, linking multimedia object etc.

It also teaches production building blocks, animation, video, recording formats etc.

It also deals with multimedia project development and case studies.

6ST4-SOFTWARE TESTING

The subject teaches the principles of testing, white box testing, integration testing, acceptance testing, regression testing, test planning, test cases, test summary report etc.

6ST5-ADVANCE DBMS

The subject teaches advanced concept of DBMS like ,file organization, physical database design and tunning, concurrency control transactions and schedule, crash recovery.

It also teaches about parallel and distributed database object database systems, data warehousing concepts and data mining.

Psychology

COs of the course 'Fundamentals of Psychology'

The course enables the students to:

1. Describe the historical perspective of Psychology?
2. Importance of various schools in psychology in understanding human behavior.
3. Describe various methods in Psychology.
4. Classify various types of attention.
5. Classify various determinants of perception and attention.
6. Illustrate different methods of learning.
7. Elucidate problem solving strategies and impediments in problem solving.
8. Describe various stages of memory and methods to measure memory.
9. Illustrate various theories of forgetting.
10. Describe motivational cycle and types of motives.
11. Elucidate theories of emotion.
12. Describe various types of intelligence.
13. What are the determinants of personality?
14. Describe various theories of personality development.

Cos of the course 'Introduction to Positive Psychology'

1. Differentiate between positive and traditional psychology.
2. Describe the assumptions and goals of positive psychology.
3. What is psychology of well being?
4. Describe connection between positive emotions and well being.
5. How to cultivate positive emotions?
6. What is resilience?
7. Elucidate how personal goals as windows to wellbeing.
8. Describe the traits that makes trait positive.
9. Importance of self regulation and self control in well being.
10. Cite everyday explanations for self control failure.

Cos of the course 'Psychology: Applied to Healthy Life'

1. Describe the status and importance of applied psychology in Indian context.
2. Describe the role of real self and ideal self in adjustment.
3. What are health hazards?
4. Describe General Adaptation Syndrome model.
5. Describe the methods of stress management.
6. What is hallo effect and devils effect?
7. Describe the importance of first impression.
8. What are various types of anxiety based disorders?
9. Describe various types of schizophrenia.
10. Cite clinical picture of schizophrenia.
11. Describe various types of mood disorders.
12. Classify different types of personality disorders.
13. Describe characteristics of good psychological test.
14. What are different types of reliability?
15. What is test validity? Describe different types of validity.

Sociology

Course: Introduction to Sociology

By the completion of this course the student will be able to

1. Learn origin and development of Sociology and its relations with other social science subjects.
2. acquint various social systems and their applications.
3. understand basic social concepts like society, community, groups, etc.
4. gain the importance of socialisation, culture, social control, etc.

Course: Indian Social Structure and Social Problems

By the completion of this course the student will be able to

1. have knowledge of tribal, rural and civil societies.
2. understand primary Indian systems like family, caste, marriage, class to the notice of students.
3. assess and understand several social problems, their causes and relevant remedies.

Course: Social Anthropology

By the completion of this course the student will be able to

1. have knowledge of origin, nature and ambit of Social Anthropology and its relations with other social science branches.
2. recognize various social systems of tribal community like family, clan, marriage
3. understand tribal economy, faith, religion, magic and their political systems.
4. Diagnose and understand the problems of tribals, reformative programs and various schemes addressing their problems.

Political Science

Course: Indian Constitutional Provisions and Local Self Government

By the completion of this course the student will be able to

1. Understand characteristic of Indian Constitution, Preamble, and Fundamental Rights.
2. have knowledge of directive Principal of State Policy, Fundamental Duties, Citizenship
3. Role of President, Vice President, Prime minister in Indian constitution
4. Knowledge about Parliament- loksabha, Rajyasabha
5. Understanding of Judicial System of India-Supreme Court, High Court

Course: Indian Constitutional Provisions and Local Self Government

By the completion of this course the student will be able to

1. Understanding and importance of Election Commission of India- structure, power and Function
2. Thoughtfulness of state Executive- Governor, Chief Minister, council of Minister
3. acquint with State Legislature- structure, power and Function
4. Knowledge of local self Government
5. understand importance of women Political Participation in Panchyat raj, Nagpur Pact in Maharashtra formation, Right to Information Act

Course: Comparative Government and Politics

By the completion of this course the student will be able to

1. understand the meaning of comparative Government, Approaches of the comparative study, Constitutionalism
2. Role and importance of the Government and Politics of U.K- Constitution, Executive, Legislature, Judiciary, Political Party
3. understand the Government and Politics of U.S.- Constitution, Executive, Legislature, Judiciary, Political Party
4. understand the Government and Politics of Switzerland- Constitution, Executive, Legislature, Judiciary, Political Party
5. recognize the Government and Politics of China- Constitution, Executive, Legislature, Judiciary, Political Party

Course: Political Theory

By the completion of this course the student will be able to

1. Recognize the nature and Significance of Political Theory, Meaning and scope
2. Understand State- Theory of state Origin- Devine theory, Social Contract Theory, Evolutionary Theory

3. Acquaint with political Concept- Sovereignty, citizenship, Liberty CO4: Equality and Justice, Democracy

5. Understand the importance of development and Welfare State

Economics

Course: Micro Economics

On completion of the course, students are able to

1. have fundamental concepts of economics and understand economic approach
2. Know role of market in real life.
3. Understand the theory of oligopoly & duopoly

Course: Economy of Maharashtra

1. Understand nature of Maharashtra economy
2. Know population & economic development
3. Recognize infrastructure and economic development
4. Understand role of agriculture in Maharashtra economy

Course: Macro Economics

On completion of the course, students are able to

1. Recognize macro-economic analysis
2. Understand of national income
3. Distinguish classical & Keynesian theories of output and employment
4. Know consumption & Investment function
5. Understand concept of public fiancé
6. Be aware of concept of public revenue
7. Understand concept of inflation and deflation

Course Indian Economy Developments and Environmental Economics

On completion of the course, students are able to

1. Understand India's foreign trade and globalization
2. Know public expenditure in India
3. Recognize public debt& deficit finance and concept of fiscal policy
4. Realize concept of budget & deficit finance
5. Apprehend international trade theories
6. Grasp gains from international trade & trade policy
7. Recognize economics of agriculture
8. Get about Indian agriculture sector
9. Understand the concept of environmental pollution
10. Recognize relation between population and environment
11. Understand types of pollution and its remedies

Management Studies

COURSE OUTCOME : BBA

By fulfilling all course requirements for the bachelors of business administration, students can:

1. Describe, explain, and apply fundamental concepts and relationships underlying accounting, economics, finance, management, marketing, and human resource management.
2. Apply information technology and use the information to support business processes and make decisions.
3. Identify the theories and practices of business ethics and social responsibility.
4. Apply quantitative skills to analyze and solve business problems and discover opportunities.
5. Communicate verbally and in writing about business topics.
6. Function effectively as team members.

Post-Graduate Courses

Botany

CO of M.Sc. Botany:

Paper-I to IV Botany

1. Students are reintroduced with the detail concept and mechanism of different topics like Apoptosis, Ex-situ Conservation water blooms and Homeotic mutants in *Arabidopsis thaliana* along with the chromosomal morphology and Karyotype analysis of the plants.

Paper-I to IV Botany

1. Re-understand the basic concept of Cytogenetics like polyploidy, study the various fungi like, Morchella, Agaricus , Asperigillus etc.
2. Also understand the context of physiological function of plant in relation to various types of stresses.
3. The students study biosynthesis of important amino acids and their role in stress resistant mechanism like proline metabolism in plant.

Paper-I to IV Botany

1. Students get better understanding of the morphological, Anatomical and taxonomic studies of phaneragams.
2. Learnt the laboratory skills for doing and understanding practical knowledge related to the protein, DNA and genetic engineering.
3. They got detail in site of Some of the important aspects of plant tissue culture along with the techniques of gene cloning and Agrobacterium mediated gene cloning.

Paper-I to IV Botany

1. Students are acquainted with the knowledge regarding the biosphere and ecosystem. Their interest developed towards the environment, while studying the pollution.
2. Along with that they also learnt the phenomenon of bioremediation and phyto-remediation. they also studied the aspects of economical botany.

Commerce

M.Com.

Course Outcome (CO): This course is a notch higher than Bachelor degree in Commerce and helps build an in-depth knowledge about Commerce & Management Techniques. I t is a specialized course which prepares an individual for career in Finance & Corporate sector. This course serves the needs of Managerial Cadre in Business & Industry.

Management Studies

COURSE OUTCOMES : MBA

1. Demonstrate the knowledge of management science to solve complex corporate problems using limited resources
2. Apply ethical principles and make ethical choices .
3. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
4. .Communicate effectively with all stakeholders of his role as a manager.
5. Engage in independent and life-long learning .

Computer Management:

COURSE OUTCOMES **:**

1. MCM program has been designed to prepare graduates for attaining the following program outcomes:

2. An ability to apply knowledge of computer science and management to develop computer applications. It can use modern computing tools and techniques to design a computing system which can meet desired needs within realistic constraints such as safety, security and applicability.

3. An ability to communicate effectively and present technical information in oral and written reports and to utilize the computing knowledge efficiently in projects with concern for societal, environmental, and cultural aspects. It can also be used to create and design innovative methodologies to develop multiple as well as special purpose software.

Human Resource Development:

Course Outcome :

1. The course has been encapsulated with the general management principles along with the communication skills. This helps in forming a wide knowledge base and equips students with application oriented approach.
2. The course also makes students prudent in the application of organizational behavior in the company.
3. The training and development practices were learnt by students. It is essential to see how training feedback system works and for this purpose students visited different organizations in Amravati as well as other cities of Maharashtra.
4. How social responsibility is responsible is essential, to see this they studied the projects undertaken by different business houses in Amravati city.
5. The student acquires various laws which are to be observed in performing the day to day business. The emphasis is on the different latest provisions of the law and how those laws can be used in best interest of the organization.

Computer Science

Course Outcomes (COs)

1. Understands the Operating System pjrinciples, Communication and Networking, Digital Systems in Electronics, and Data Structures and Identify the C# programming, JAVA programming

2. Demonstrate the Principles of Machine Learning with Prolog Programming, Distributed operating system, Compiler Construction concepts, Computer Graphics Principles, And Design and Analysis of Algorithms.

English

- ***COURSE OUTCOMES (PG-LEVEL)***

1: Students are able to become familiar with the nature of literary canons and canon-formation.

2: Students employ the knowledge of literary traditions to produce imaginative writing.

3: Students are capable of demonstrating knowledge of the major movements, authors and canons of literature in English from the medieval period through the present.

4: Students are capable of developing complex reading, writing and research skills.

5: Students are able express their thoughts effectively in a variety of forms,

Zoology

Course Outcomes (PG)

M. Sc.I (Zoology)

Semester I

Zoology Paper I Animal Structure and Function NonChordata

1. Study the basic concepts of biosystematic taxonomy, history of classification, trends in biosystematics, chemotaxonomy, cytotaxonomy, molecular taxonomy and classification from proteista to phyllum echinodermata.

2. Learn the dimensions of speciation, taxonomic characters They can understand and easily differentiate with other animals.

3.Learn the cladistic methods of classification,also understand the difference in the application of phonetic and cladistic classificationand their phylogram and cladogram.

4. Understand the feeding and digestion ,mode of digestion from Bryozoans ,protozoon's ,other invertebrate species and Echinodermata.

5. Study the micro- morhpology and mechanism of movements ,hydrostatic movement and insect flight mechanism.

6.Study the organs of respiration in invertebrate and respiratory pigments their functions as well as mechanism of respiration specially in Molluscans and Arthropodan species.

7.Study the excretory organs structure and their functions from Protozoans to Echinodermata and they can knows that how this system originate.

8. Study of general organization of nervous system and also the sense organs their morphology and functions

9. Learn the reproductive organs mechanisms ,types, parthenogenesis and functional variations of reproductive system in non- chordate.

Paper II Animal Sturcture and Function(Chordata)

1.Study the different kinds of taxanomic character,taxanomic procedures,taxanomic keys their merits and demerits.They can differentiate characters of chordate and nonchordate.

2.study the interpretation and application of important rules, formation of scientific names of various taxa and taxanomic categories.

3.Understand the vertebrate integument like mammalian skin ,derivatives of skin their structure and functions

4.Learn the structural and functional organization of digestive system from class protochordate to class mammalian.

5.Learn the characteristics, organ structure their functions as well as accessory respiratory organs.

6.Understand the organ structure and functional organization of vertebrate excretory as well as of nervous system .They can understand morphological adaptation for echolocation in Bat, lateral line system in fishes, Electroreception in different animals

7.Learn flight, aquatic adaptive radiation in mammals .they can also knows the migration in birds and fishes and assume that how and why people and animal disperse.

Practical (paper I and II)

1.Learn and observe the available specimen of in-vertebrate and vertebrate. Sketching of the specimens on record and power point demonstration of dessected some selected animals so students can understand the internal body organ structure and system .

2.Mounting of some selected body parts of some animals.

3.Understand the taxonomy of animal specimens and charts available in the laboratory representing the different orders of nonchordata and chordate.

4. Students can Prepared permanent stained slide as wellas observe the mammalian histological slide to know the microscopic structure.

Practical

1.Students learn observations of available specimens ,classification up to classes and sketching of the specimens from phylum protozoa to Hemichordata with the help of charts,and they learn their habits and habitat.

2.Understands internal body parts of the animal when they observe the demonstration of the specimens on PowerPoint presentation in the laboratory.

3.Learn and observe the culture of Paramoecium and Volvex.

4. Detected and Mounted of selected body parts of some animals very carefully.

M.Sc I Sem I

Zoology Paper III Gamete Biology

1. Study heterogamy in Eukaryotes specially Morphology, Differentiation , Function of Leydig cells.

2. Study Morphology, Endocrinological Aspects of ovarian follicular growth and differentiation.

3. Understand internal and external fertilization they can understand reaction of sperm and reaction of egg.

4. Understand creating multicellularity during cleavage divisions,types gastrulation and formation of germ layers in animals.

5. Learn and they can understand Genomic imprinting is an epigenetic phenomenon that causes genes to be expressed in a parent-of-origin-specific manner in different animals.
6. Understand Assisted Reproductive techniques with the help of powerpoint presentations like Invitro fertilization, ICSI, GIFT and also known disadvantages of ART.
7. Study the procedure applications of transgenic animals with varios examples.
8. Study procedure and applications of gene knockout technology and gene therapies with the help of Ex and In vivo gene therapy, they can also Antigenes and Antisense therapy so they can assume these biotechnological techniques useful in increase commercial products as well as useful for cure some gene related diseases.

Paper IV Genes and Differentiation

1. Understand types of cell speciation, cell commitment and differentiation.
2. Study germ cell determination in nematodes, insects and amphibians and germ cell migration in amphibians, reptiles, mammals and birds.
3. Study Body Axis and gene pattern formation in drosophila, amphibian and chick. They can understand establishment of body axis formation in birds and mammals.
4. Study Homeobox concept in different phylogenic group.
5. Study Malformation, disruption, Teratogenic effect of Xenobiotics.
6. Understand the changing evolution through development modularity, developmental constraints, and basic evolutionary mystery.
7. Understand Birth population control measures in male and female.
8. Understand biology of chromosomal and genetic basis of sex determination in mammals and Drosophila. They can understand secondary and environmental sex determination.
9. Study regeneration process with the help of different animals.
10. Study in details on Stem cell, stem cell disorder, stem cell and diabetes.

Practical (paper III and IV)

1. Understand morphology and histology of non-chordata and chordate ovary and testis specially observed permanent slides of insect, snail,frog and rat under binocular light microscope.
2. Observed permanent stained slides of Oogenesis and spermatogenesis of rat.
3. Study different types of eggs on the basis of their yolk content.

4. Collected frog and toad spawn from nearby area for the study of developmental stages.

5. Study of cleavage in limnea in laboratory.

6. Study development of amphioxus, frog, chick with the help of slide and whole mount.

7. Observed developmental stages of chick embryo by incubation in the oven.

8. Study Semen analysis so they can understand normal and abnormal sperm count.

Sem-II Paper VII - Endocrinology

1.Study of histological endocrine glands of vertebrate. They can assume the role of hormones in human being.

2Understand that the role of neurotransmitter melatonin in the Jet-lag and sleep disturbance as that is ant-oxidant.

3 Learn histophysiology of endocrine placenta ,testis ovaries as wel as Islets of Langerhans.they can understand that the islets of langerhans cell secrete secretion called insulin decrease blood sugar level.

4. Understand classification of Hormones like peptides, Steroides and derevatives of amino acids.

5. Study the hormone action at cellular and genetical level.

6. Understand that the hormones are helpful in biological clock, digestion process, growth, reproduction Carbohydrates, lipid, and protein metabolisms.

7. Study synthesis transport metabolism of steroid hormones, epilephrine, insulin, prostaglandins.

8. Learn throid hormone its disorders and pitutory and adrenal gland hormones and disorder.

9. Understand the diseases, their symptones diabetes type 1 diabetes type 2. Diabetic kidney problems, Diabetes and pregnancy , diabetic nerves problems and autoimmune problems.

10. Understand neuroendocrine mechanisms insects, crustacean, amphibia and they also understand the evolution of hormone.

Sem-II Paper-VIII – Environment & Ecology

1. Understand the physical, biotic aboitic environment and they can also understand the biotic and abiotic environmental interaction.

2. Study of characteristics, population growth curves, population regulations r and k selection, concept of metapopulation diversity index Simpson's index and Shannon's index.

3. Understand species interaction, types of interaction interspecific competition and Symbiosis.

4. Learn the nature of communities, communities structure and attributes.

5. Study ecological succession types, mechanisms changes involved in succession.

6. Learn energy flow mineral cycling, primary production decomposition.

7. Study structure and function of some Indian ecosystems like terristerial, aquatic and marine water.

8. Understand soucess, nature effects of Air pollutants. and also they can understand sources nature and effects of water, air, pollution, Global warming, global climating change. Global diamming.

9. Understand major diverts of biodiversity change and also understand conservation biology such as sanctuaries, National parks, tiger projects.

10. Understand metabolism and effects of organochloro, organophosphate and carbamate pesticides, alkolodies cyanides.

11. Understand inter government policy, protocol, for climate change.

12. Understand environmental protection energy also laws, legislation pertaining to environment, Environmental impact assistment processes.

Practical paper VII & VIII

1. Study the rate of oxygen consumption by aquatic animals.

2. Study anatomical & histological permanent slides of endocrine glands in vertebrates, insects.

3. Understand the estimation of total hardness & nitrate contents of different samples of water.

4. Learn determination of LC 50/ LD 50 and 95% confidance limit of any toxicant determine from aquatic organisms.

1. Understand basic features phenotypic effects of mutation they can understand mutational changes at molecular basis of gene, such as induces mutation by chemicals and radiation.

2. learn mutational changes in DNA replication, hot spots of mutation. They can understand detection of mutagenes with the help of Ames test and also DNA repair mechanism.

3. Understand the agents and mechanisms of somatic cell fusion with selection of hybrids and chromosomes segretation.

4. Understand epigenetics mechanism they can knows mechanisms of DNA methylation in Mammales as well as mechanism of histone modification and polyconb mechanism, epigenetic control of gene activity.

5. Understand the hierarchy in genome orgnisation and mobile DNA as well as genetics of cancer like benign and malignant tumors'.

6. Understand the Human karyotypes banding, dosage, compensation and numerical abnormalities of human chromosomes and related syndromes. Like edwords syndromes, turner's syndromes. etc.

7. Understand structural abnormalities of human chromosomes and related syndromes like deletion, Robert sonian translocation, Cry-du-chat syndrome prader-willi syndrome, Willions syndromes etc.

8. Understand human metabolic disorder they can also understand phenylketonuria, leach-nyhan syndrome phalassemia parkinson's dieseas.

9. Understand mitochondrial DNA and human diseases they can understand carrial detection fetal analysis. And pedigree analysis.

Sem-III Paper IX Molecular Cytogenetics-I

1.Understand microbial genetics that is information of

bacterial chromosome, Bacterial transformation, conjugation transduction, types of bacteriophages and extra chromosomal inheritance through mitochondrial genes, maternal inheritance of kappa particles in case of paramecium and shell coiling in limnaea.

2. Learn introduction to drosophila genetics its advantages and as a model organism for genetic studies. They can also understand polytene chromosomes their polytenisation process, significance bands and interbands, chromosomal puffs, regulation of chromosomal puffing activity induction of puffs by stress.

3. Understand behavioral traits like mutants, tools and methodologists for genetics analysis as well as genetics and molecular basis of behavioral traits in drosophila.

4. Understand a principles, procedure and applications of DNA finger printing they can also understand chromosomes painting, flow cytometery, DNA sequencing method, polymerase chain reaction.

5. Understand models of lambda phage, E. coli, C.elegans drosophila and human genome analysis. They can also understand functional genomics.

6. Study the genetic variation in natural populations its phenotypic variation, polymorphism of chromosomes structures their variation at molecular level. They can understand principles of Hardy- Weinberg of genetic equilibrium, genetics drift, geneful they can also understand ecological significance of molecular variations.

7. Study the genetics of quantitative traits in populations such as molecular analysis of quantitative traits genotypes-environmental interactions and in breeding depressions and heterosis.

8. Understand methods of phylogenetics tree reconstruction and neucliec acid phylogeny like DNA-DNA hybridization, restriction enzymes sites.

9. Study the protein phylogene mitochondria DNA and evolution and molecular clock.

Practical paper IX and X

1.Study the Barr bodies in human female leucocytes they can understand the Barr body is present only in female leucocyte.

2.Study the salivary gland chromosome s in Chironomous or Drosophila larvae so they can understand that the gaint chromosome position or location in the body and structure observed under dissecting microscope.

3.Study of mitosis in cleavage of frog from permanent slides and study of meiosis by using smear method in testis of rat.

4.Learn and prepared human karyotypes by using photograph.

5.Identify the wings and eye mutational change in Drosophila.

6. Study the Extraction of RNA & DNA and they can estimated RNA / DNA spectrophotometrically .

7. Study the problems on genetics based on dihybrid crosess sex linked inheritance and blood groups and also understand the various womens genetics traits and genetics disorders.

Sem III Paper – IX Elective Paper- Animal Physiology-I

1. Study the muscle physiology specially on ultra structure of skeleton muscle, Sarcotubular system, Ion distribution, types of contractions, muscle proteins, physical and chemical properties

of skeleton muscle. Sliding filament theory. Chemical changes during muscle contraction, roll of calcium iron and ATP.

2. Study the ultra structure of neuromuscular junction and roll of neurotransmeters, and they can understand the symptons of myasthenia gravis as well as neuromuscular transmission influence by toxins and drugs.

3. Understand muscular disorder like hypotonicity, hypertonocity, red and white fibres and their functions.

4. Study the structure of neuron, electrical properties of nerve, ionic concentration in the cytoplasm local circuit, theory and salutatory conduction.

5. Study the structure of synapse, biosynthesis, storage, electrical events in the post synaptic neuron roll of calcium and types of neuro transmission.

6. Study neurotrophins, growth factors, physiology of imprinting,physiology of emotion, Parkinson disease and Duchenne's muscular dystrophy.

Sem III Paper – IX Elective Paper- Animal Physiology-II

1. study receptors physiology and their pathways they can also understand mechano, photo, chemo, electro, magneto, receptors

2. Study physiology of high altitude and they can assume that effects of acute exposer to high altitude and respiratory changes.

3. Study physiology of exercise and they can understand skeleton muscle blood flow cardiovascular response, blood pressure, endocrine response, metabolic adjustment in exercise.

4. learn the physiology of excretion they can understand histophysiology of excretory organs, urine information, filtration , reabsorption, secretion, and renal physiology.

5. Understand function of aldosterone, renninangiotensin system and roll of kidney in pH regulations and water salt regulation.

6. understandard structure and mechanism of pituitary harmones hypothermic hormones, Hormonal function in male and female, foetal physiology.

7. Understand the socio physiology, honey and lac production in insects, pheromones in insects and Mamales.

8. Understand the physiology underline fear and anxiety in animals and parental care in prinates.

Practical Based on Elective Paper-Animal Physiology I & II

1. Learn estimation of serum creatinine and urea, Calcium, Phosporus, sodium, and potassium.
2. Study separation and identification of amino acids by paper and thin layer chromatography.
3. Study the experiment on blood like Erythrocyte sedimentation rate, pack cell volume, mean corpuscular volume and hemin crystal test.
4. Estimated protein, glucose, and cholesterol in blood.

Sem- IV Paper XV Elective paper-Animal Physiology-III

1. Study the physiology of nerves system specially structure and functional compartmentalization of brain and types and structure of reflex Arc.
2. Study the physiology of sleep , physiological changes during sleep, role of neurotransmission in sleep and mechanism of sleep 3. Understand the physiology of learning process and learing and mimicry . They can also understand the organ and physiology of echo location.
4. Study the mechanism and significance of bioluminescemce and bioelectricity .
5. Study the homeostasis physiology, water contents and distributions abnormal water, and electrolyte metabolism and water intoxinations .
6. Study the intracellular chemical messenger paracrine and autocrine agents.
7. Study the biological rhythems adaptation and acclimatization.
8. Study the basic thermoregulatory mechanism in poikilotherms and endotherms.
9. Study the basic osmoregulatory mechanism in stenohaline and euryhaline species they can understand freshwater, marine water and terrristrerial environment
10. Understand mechanism of calcium phosphate, in homeostasis process.
11. Understand liver is important in the storage and homeostasis of iron process.
12. Understand homeostasis mechanism of minerals and antidiuretic hormones.

Sem- IV Paper XVI Elective Paper –IV

1. Study the digestion absorption, utilization of protein, Carbohydrates and lipids,.
2. Study histophysiology of gastric gland and secretary functions of the elementary tract. They can also understand the gastrointestinal function.
3. Understand gastrointestinal disorder like Achalasia gastritis pancreatitis and colitis.
4. Study the anatomical and physiological organization of respiratory system, mechanism of exchange of respiratory gases, transport of gases by blood, oxygen dissociation curve, Co2

dissociation curve neurohormonal and chemical regulation of respiration. They can also understand infectious respiratory disease like SARS, Avian Flu, and Swine Flu,

5. Study the anemia and polycythemia, regulation of heartbeats and blood pressure they can understand circulatory and respiratory responses. to extreme conditions and blood pigments, role of oxygen and CO2 transport and physiological significances.

6. Study the anatomical and histology of Mammilian heart, Cardiac output, Cardiac sound, Cardiac cycle, Pacemaker system,

7. Study the blood pressure and its regulation, factors that affected blood pressures interpretation of ECG, Lymph composition, formation , function and structure of lymph nodes.

Practical - Physiology XV & XVI

1. Study the saliva its isolation and identification of rumen microorganism.

2. Study the estimation of Rumen ammonia and blood urea under various physiological conditions.

3. Study the preparation and examination of blood smear to know the blood cell as well as differential leucocytes count.

3. Study the histochemical demonstration of acid and alkaline phosphasate and separation of protein by paper and gel electrophoresis.

4. Study the qualitative analysis of urea, ketone body and salts.

Physics

Course Outcomes (COs):

1. Course: M.Sc. I (Physics) Semester- I

By the completion of this course, the students will be able to

1: get the deep knowledge of mathematical physics via study of matrix algebra, complex variables, differential equation of second order, Bessel's differential equation & integral theorem.

2: understand the ideas of classical mechanics by studying Nwetonian mechanics,

D'Alebert's principle, angular momentum, constraint, Lagrange equation, cyclic co-ordinates, central forces, etc.

3: learn the concepts of quantum mechanics: failure of classical mechanics, general formulation of quantum mechanics, simple harmonic oscillator, zero point energy, pauli spin matrices, symmetry and constants of motion.

4: Study the computational method and programming.

5: perform the computational programme through laboratory course I and learn the experimental skill of determination of wavelength, small thickness, etc. through laboratory course II.

2. Course: M.Sc. I (Physics) Semester- II

By the completion of this course, the students will

1: be expert in the knowledge of electrodynamics by studying Guass's law & its applications, potential, electric field concepts, electricity and magnetism, time vaying fields, etc.

2: get the basic concepts of quantum mechanics part II via study of time dependent and independent perturbation theory, scattering, systems of particles, radiation theory, etc.

3: enjoy the study of solid state physics to learn crystallography, diffraction of X-rays, Bragg's equation, reciprocal lattice, specific heat of materials, etc.

4: understand the basic knowledge of network theorem and solid state devices which includes the study of network analysis, passive components, semiconductor study, rectifier, BJT, amplifiers, and feedback in amplifiers.

5: be able to get the practical knowledge of determination of e/m, GM counter study, etc. though laboratory course I and network theorem study and other electronic experiments via laboratory course II.

3. Course: M.Sc. II (Physics) Semester- III

By the completion of this course, the students will

1: study the radiation and plasma physics though the study of wave equation, Cerenkov radiation, motion of charge particles in electric and magnetic fields, Debye shielding effect, plasma oscillations, cutoff and resonances, CMA diagram and reflection of em waves.

2: be able to understand the concept of statistical mechanics in details through study of classical & quantum statistics, ideal Fermi-Dirac gas, phase transition, and super fluid, etc.

3: get knowledge of atomic and molecular physics via study of vector atom model, Raman, Zeeman, Pachen back effects, molecule types, vibrational modes & energies, etc.

4: understand the concepts of condensed matter physics and study band structure, magnetism, ferromagnetism, dielectric and superconductivity etc.

5: study practicals condensed matter physics though laboratory course I and do the project though laboratory course II.

4. Course: M.Sc. II (Physics) Semester- IV

By the completion of this course, the students

1: will be able to get the knowledge of nuclear and particle physics. In this, they study properties of nucleus, nuclear forces, beta decay, nuclear models, neutron physics, nuclear detectors, particle physics, etc.

2: will understand Op-Amp theory and its applications where they get the knowledge of differential amplifier, oscillators, analogue computation, filter circuits, etc.

3: will get the knowledge of condensed matter physics part II where they study imperfection in crystal, dislocation reaction, interacting electron gas, point defects, lattice disorder and colour centers, etc.

4: will study the nanoscience and nanotechnology via the knowledge of free electron gas theory, quantization method, carbon nanostructure, quantum well, scanning electron method, etc.

5: will, in laboratory course I study the practicles of Op-Amp and its applications and in

laboratory course II they prepare project report by completing project so that they get research knowledge.

Chemistry

M.Sc. Sem-1

Inorganic Chemistry

1. This course facilitates students to understand fundamental of Stereochemistry and Bonding in Main Group elements, Metal-ligand bonding, Molecular orbital theory of coordination compounds, Boron hydrides & Metal Cluster, Non-aqueous solvent behavior, Metal-ligand equilibria in solution, Symmetry and group theory.

Organic Chemistry

1. This course facilitates students to understand fundamental of Nature and Bonding in Organic Molecule, Stereochemistry of organic molecule, Reaction mechanism: Structure and Reactivity, Aliphatic nucleophilic substitution, Elimination Reactions, Aromatic electrophilic substitution, Aromatic Nucleophilic Substitution.

Physical Chemistry

1. This course facilitates students to understand fundamental of Quantum Chemistry, Surface Chemistry, Thermodynamics, Nuclear Chemistry, Chemical Dynamics, Theories of reaction rates, Unimolecular reactions, Reactions in solution, Solvent effects on reaction rate. Factors determining reaction rate, Numericals.

Analytical Chemistry

1. This course facilitates students to understand fundamental of Basic concepts of Analytical Chemistry, Purification Techniques, Statistical Analysis, Separation Techniques, Ion-Exchange Separation, Gas Chromatography, High Performance Liquid Chromatography (HPLC), Chemical Safety and Handling of Chemicals, Eexplosives &Chemial weapons:

Outcomes

1. Students acquire thorough knowledge of derivations, depictions and problem solving and periodic properties of the elements including the preliminary theories of bonding. preparation methods, and reactivity of inorganic molecules.

Practical

1. Chemistry is an experimental and applied subject. Hence, practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of chemistry & helps in development of practical skills of the students in Organic Synthesis: Single Stage Preparations, Qualitative Organic Analysis, Quantitative Analysis. Use of Computer Programs 5 terms of practicals,

M.Sc. Sem-2

Inorganic Chemistry

1. This course facilitates students to physical properties and fundamental of Electronic spectra, Magnetochemistry, Reaction Mechanism of Transition Metal complexes-I, Reaction Mechanism of Transition Metal complexes-II, Metal pi-Complexes, Metal carbonyls, Metal nitrosyls, Fluxional Organometallic compounds, Bio-inorganic chemistry, Bioinorganic chemistry, Bioinorganic chemistry of Fe, Bioinorganic chemistry of Co.

Organic Chemistry

1. This course facilitates students to physical properties and fundamental of addition of C-C & C-X multiple bond, mechanism of molecular rearrangement, Free radical reaction, photochemistry, Pericyclic Reactions, green chemistry.

Physical Chemistry

This course facilitates students to physical properties and fundamental of Chemical Dynamics, Quantum Chemistry, Macromolecules, Electrochemistry, Statistical Thermodynamics

Analytical Chemistry

1. This course facilitates students to physical properties and fundamental of Optical Method, Flame Emission and atomic spectrometry, Water pollution, air pollution, Soil Pollution and Pesticide Analysis, Radiation pollution

Practical

1. Chemistry is an experimental and applied subject. Hence, practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of

chemistry & helps in development of practical skills of the students in Use of Computer Programs 5 terms of practicals, Preparation of inorganic compounds by greener methods and their characterization by elemental analysis, MW determination, decomposition temperatures and molar conductance studies.

Outcomes

1. Students acquire thorough knowledge of derivations, depictions and problem solving and periodic properties of the elements including the preliminary theories of bonding. preparation methods, and reactivity of inorganic molecules,

M.Sc. Chemistry (sem-3)

Spectro Chemistry

1. This course facilitates students to physical properties and fundamental of Unifying principle, Microwave spectroscopy, Reactivity and Characteristics of Nanoparticles, Ultraviolet and visible spectroscopy, Infrared spectroscopy, Mass spectrometry, Nuclear Magnetic Resonance Spectroscopy, Characterization of Organic Molecules. Students are introduced to analytical chemistry in which they are made aware of inorganic quantitative analysis (Volumetric and Gravimetric analysis) wherein they study non-instrumental volumetric analysis which comprises of study of various titrations, indicators used in it& some theoretical aspects related with titrations. Along with it they also study error in quantitative analysis & ways to minimize them.
2. They instill skills related to chemical kinetics and physical property measurement.

Students are trained to determine the rate constant of chemical reactions, solubility, heat of neutralization, critical solution temperature of partially miscible system & distribution coefficient.

Analytical Chemistry

1. This course facilitates students to physical properties and fundamental of Thermal methods of analysis and thermometric titrations, Thermometric titrations, Electroanalytical Methods, High frequency titrations, Electrogravimery, Coulometry. Chemical,biochemical and biosensors, Electoanalytical Techniques, Polarography, Voltammetry, Related Techniques, Bio-analytical chemistry.

Organic Sp-I

1. This course facilitates students to physical properties and fundamental of Oxidation-Reduction, Polynuclear Hydrocarbons, Construction of Ring Systems, Non Aromatic Heterocycles, Formation of C-C bond Principle, Umpolung concept, Phosphours, and sulphur ylide, Enamines. Selective Oraganic Name Reaction, Modern Synthetic Methods.

Organic Sp-II

1. This course facilitates students to physical properties and fundamental of Carbohydrates, Lipids, Amino acids, proteins and peptides, Enzymes, Alkaloids and Terpenoids, Steroids and Hormones, Prostaglandins, pyrethoids, rotenones and pheromones, Vitamins and Natural Pigments

Practical

1. Chemistry is an experimental and applied subject. Hence, practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of chemistry & helps in development of practical skills of the students, Multistage Preparations, Estimations, Purification of Solvents.

Outcomes

1. Students acquire thorough knowledge of derivations, depictions and problem solving and periodic properties of the elements including the preliminary theories of bonding. preparation methods, and reactivity of inorganic molecules.

M.Sc. Chemistry (sem-IV)

Spectro-Chemistry

1. This course facilitates students to physical properties and fundamental of Raman spectroscopy, Photoelectron spectroscopy, X-ray diffraction, Electron diffraction, Neutron diffraction, Electron Spin Resonance Spectroscopy, Mossbauer spectroscopy, Determination of Structures of Complex Organic Molecules by Spectroscopic

2. Students are introduced to chemistry of d and f-block elements and metallurgy to understand chemical reactions and processes occurred in metallurgy. They learn colligative properties and their applications and understand the crystalline state in-depth. The emphasis is on learning reaction mechanisms of various organic reactions.

3. In practical sessions, students get training for using complexometric titrations and spectrophotometric techniques. They learn isolation of natural products like casein from milk, caffeine from tea leaves.

Analytical Chemistry

1. This course facilitates students to physical properties and fundamental of Radiochemical methods of analysis, Radiation detection and measurement, neutron activation analysis, isotopic dilution analysis, Radiometric titrations, Molecular photofluorescence and phosphorescence spectrometry, Optical Methods & Flow Injection Analysis, Food and Cosmetic Analysis The chemical analysis of food, Analysis of Cosmetics, Analysis of face powder, Analysis of deodorants and antiperspirants, Forensic &Fuel analysis

Organic Sp-I

1. This course facilitates students to physical properties and fundamental of Application of organometallics in organic synthesis, Organometallic Reagents, Organo transition metal reagents, Designing the synthesis based on retrosynthetic analysis , Protection and Deprotection of functional groups, Phase Transfer Catalysis, Reagents in Organic Synthesis, Heterocyclic Compounds

Organic Sp-II

1. This course facilitates students to physical properties and fundamental of Polymers, Dyes and Agrochemicals, General aspects of drug,Drugs design. Classification of Drugs- I, Antibiotics:, Antimalerial, Antipyretic and Analgesic, Anti- inflammatory, Sedatives & Hypnotics, Classification of Drugs- II Antitubercular & antileprotic, Anaesthetics, Antihistamines, Tranquilizers:, Cardiovascular

Practical

1. Chemistry is an experimental and applied subject. Hence, practical course inculcates the basic skills required for understanding the concepts and authenticating the basic laws and principles of chemistry & helps in development of practical skills of the students in Qualitative Organic Analysis, Scheme of Marking: Type of the mixture , Spectral Interpretation and use of Chem draw software, Miscellaneous Experiments (Mandatory)

Outcomes

1. Students acquire thorough knowledge of derivations, depictions and problem solving and periodic properties of the elements including the preliminary theories of bonding. preparation methods, and reactivity of inorganic molecules,

Mathematics

Course Outcome of M. Sc. Mathematics

M.Sc. I Paper I: Course Outcome of Real Analysis

After completing this course, the student will be able to:

1. Attain existence of Riemann Stieltjes integral, properties of the integral
2. Enumerate the uniform convergence of sequence, different test of convergence.
3. Study in detail the Power series.
4. Compute the maxima and minima of various functions.

M.Sc. I Paper II: Course Outcome of Advanced Abstract Algebra

After completing this course, the student will be able to:

1. Identify the concept of Normal groups and Quotients groups.
2. Analyze Permutation groups and Counting principle.
3. Explain Sylow theorem and its applications.
4. Provide information on ideals and Quotient rings.
5. Concentrate on a particular Euclidean domain, Euclidean domain and other forms of Polynomial rings.
6. Discuss Modules,submodules, quotient modules.

M.Sc. I Paper III: Course Outcome of Complex Analysis

After completing this course, the student will be able to:

1. Apply Cauchy's theorem for disk and the Integral formula.
2. Study Taylor's theorem, Maximum modulus theorem, Open Mapping Theorem

3. Analyze Singularities .
4. Understand Laurant series development, Rouche's theorem.
5. Study Residue theorem and the argument principle.
6. Differentiate the Taylor's series and Laurent series.
7. Understand properties of Analytic functions.

M.Sc. I Paper IV: Course Outcome of Topology I

After completing this course, the student will be able to:

1. Attain mastery in Cardinal and Ordinal numbers.
2. Locate Connectedness, compactness and continuity.
3. Enumerate open sets, closed sets, Topological spaces.
4. Study in detail the Seperation and countability axiom.

M.Sc. I Paper V: Course Outcome of Advanced Discrete Mathematics I

After completing this course, the student will be able to:

1. Define Semigroups, Monoids, Homomorphism and Isomorphism.
2. Describe the TF statements, connectives, atomic and compound statements.
3. Illustrate Tautology, Tautological implication, Truth Tables, Normal Forms, Principal Normal Forms.
4. Discuss the theory of inference, quantifiers, predicate calculus.
5. Interpret Lattices, Boolean Algebra, Karnaugh Map, Switching Circuits.

M.Sc. I Paper VI: Course Outcome of Measure and Integration Theory

After completing this course, the student will be able to:

1. Analyze measurable sets and Lebesgue measure.
2. Study Lebesgue differentiation theorem.
3. Understand Measures and outer measures.
4. Study the Stone-Weierstrass theorem and its applications.
5. Describe the Riemann integral and convergence of measure.

M.Sc. I Paper VII: Course Outcome of Advanced Linear Algebra and Field Theory

After completing this course, the student will be able to:

1. Discuss Canonical Forms
2. Analyze Quadratic forms.
3. Discuss Extension fields and Roots of polynomials.
4. Understand the elements of Galois Theory.

M.Sc. I Paper VIII: Course Outcome of Integral Equations

After completing this course, the student will be able to:

1. Understand Types of Integral Equations.
2. Solution of Fredholm integral equation of the second kind with separable kernels.
3. Solution of Volterra integral equation of the second kind by successive substitutions.
4. Applications of integral equations and Green's function to ordinary differential equations.

M.Sc. I Paper IX: Course Outcome of Topology II

After completing this course, the student will be able to:

1. Discuss the connected space, compact space, complete metric space, related theorems on Baire space.
2. Know about product space, metrization and par compactness

M.Sc. I Paper X: Course Outcome of Advanced Discrete Mathematics II

After completing this course, the student will be able to:

1. Understand the concept of Graphs .
2. Know about different trees and cutset.
3. Introductory Computability Theory : Finite state machines.
4. Define Automata.
5. Discuss the Grammers and Language.
6. Construct turing machine.

Cosmetic Technology:

Course outcomes (M.Tech.)

After of completion of this course, a student will get:

1. Purpose and meaning of cosmetics
2. Classification and characteristics of cosmetics
3. Raw materials used to design cosmetics
4. Evaluate concept of cosmetic safety
5. Prepare various types of emulsions and suspensions
6. Identify types of emulsions
7. Identify herbal drugs used in cosmetic formulations
8. Adulteration of natural products
9. Knowledge of structure and function of skin, hair, nail, and tooth
10. Understand blood groups, bleeding time, clotting time and hemoglobin concentration of blood sample
11. Purpose of computer application
12. Able to describe purpose of statistics in research
13. acquire classification of fixatives
14. able to describe cosmetic fragrances
15. Create and evaluate skin care, hair care and body cosmetics
16. Classify colors, dyes and pigments
17. Understanding of spectrophotometry, I.R. spectroscopy
18. principles and techniques of chromatography
19. meaning of concept and perceptive of Human Resource Management
20. idea about marketing management
21. skills for production management
22. understanding of the novel drug delivery system
23. acquire about sources of raw materials and their use in formulation of perfumes
24. understand the importance of quality control in cosmetic preparations

ENGLISH

COURSE OUTCOMES (PG-LEVEL)

- Introduces them to different types of genres , dialectical differences and the major subject matter of literary works
- Connects the socio-economic conditions of the age with the literary works.
- Helps them appreciate, analyze and discuss different poems and plays and fiction in context of the literary tradition it is a part of.
- Makes them comprehend the significance of Elizabethan literature and the writers belonged and its impact on literary works produced world over.
  Make the students aware of the significance of 19th Century in the shaping of English literature.
- Enables the learners explore the legacy of 18th Century and its bearing on the 19th century especially the transition from Romantic to Victorian period.
- Helps the learners acquire the skills to enquire into the socio-political and cultural back ground of Britain.
- Gives them a comprehensive idea of drama, poetry and fiction in the Victorian England and how far the characteristics of the age have exerted its influence on these genres.
- Leads them to appreciate the literary works produced and discuss them in the light of the larger sociopolitical realities and thus critiquing the genres.
- Enhance the aesthetic and critical quality by approaching world fiction in general.
- Appreciate and understand various classical and popular novels from different countries of Europe which have been translated to English.
- Develop a wide reading habit which will include works from non English speaking countries, gaining an insight into the socio-cultural and political diversities.
- Have a comprehensive idea about the various ages in American Literary history thereby being able to place the various authors in respective periods.
- Appreciate and understand various texts and authors from American Literature
- Compare and contrast the socio, political, religious and cultural differences and transformations as it is found in literatures of different periods in America.
- Develop a critical and analytical perspective with regard to American texts and authors
- Understand the cultural legacy of colonialism and imperialism
- Realize the human consequences of the control and exploitation of colonized people and their lands

- Get acquainted with the key terms (Assimilation, Ambivalence, Mimicry, Hybridity, Other, Discourse etc..)
- Realize how language has become a site for both colonization and resistance
- Be able to compare and contrast the indigenous literature and culture with other literatures and cultures
- Develop aesthetic and critical awareness of diverse cultures and literary creations
- Develop a broader vision of the world
- Understand the factors involved in criticism like interpretation, elucidation, judgement and appreciation
- Understand different aspects of theory
- Develop critical thinking through analysis, comparison and theoretical approaches
- Develop their own critical standpoint on the theorists and their work
- Develop informed reflections on the readings
- Be able to articulate the broader ways in which literary theory applies to their own culture, and their own lives
- Develop the ability to apply various theories to works of literature and aspects of contemporary culture
- Get familiarized with major Indian writers writing in English and their works
- Understand the growth of Indian writing in English in the context of Indians' problematic relations with the English race and language
- Be able to realize the historical cultural and social context in Indian English Literature.
- Understand the role of English as a medium for political awakening and the use of English in India for creative writing

Upon successful completion of this course, students should be able to:

Identify and discuss classical Greek explanations of the purpose of literature;

explain and account for the rise of literary theory in the 20th century, and describe the place of theory in contemporary English and cultural studies; provide a brief overview of the major tenets, practitioners, and ideas stemming from the following critical and theoretical movements and/or schools: Russian formalism, New Criticism, structuralism,

post-structuralism, semiotics, deconstruction, psychoanalysis, feminism, gender theory, Marxism, reader-response paradigms, New Historicism, post-colonialism, ethnic studies, eco-criticism, chaos theory, and trauma theory; identify and discuss some of the viewpoints opposed to the practice of literary criticism; discuss contemporary cultural forces influencing some of the newly emerging trends in literary theory, such as eco-criticism, trauma theory, and chaos theory; and identify, discuss, and define some of the key theories of major literary and cultural critics and theorists, such as (in alphabetical order) Theodor W. Adorno, Aristotle, J.L. Austin, Mikhail Bakhtin, Roland Barthes, Simone de Beauvoir, Judith Butler, Hélène Cixous, Jacques Derrida, Terry Eagleton, T.S. Eliot, Stanely Fish, Michel Foucault, Sigmund Freud, Henry Louis Gates Jr., Stephen Greenblatt, Edmund Husserl, Wolfgang Iser, Fredric Jameson, Carl Jung, Julia Kristeva, Jacques Lacan, Karl Marx, Plato, Ferdinand de Saussure, Eve Kosofsky Sedgwick, and Victor Shklovsky.

Vidya Bharati Shaikshanik Mandal, Amravati's

Vidya Bharati Mahavidyalaya, Amravati

Affiliated to Sant Gadge Baba Amravati University, Amravati Maharashtra

NAAC Re-accredited with Grade “A”(CGPA 3.26-Second Cycle)
CPE Status (Third Time) by UGC,
Mentor College under Paramarsh Scheme by UGC
'Lead College' by S.G.B. Amravati University, Amravati
ISO Certification: 9001:2015 and 14001:2015

Website: vbmv.org

Attainment of PO, PSO and CO

Program Outcome Attainment

2014-15

Introduction:

Program Outcomes (PO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of Program outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year.

Attainment Leve2:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74%Students successfully completed the respective course at final year. **Attainment Level 3**:75-100%Students successfully completed the respective course at final year. Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S.N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Attainment Level
1	2	3	4	5	6
1	B.Sc.Sem VI	208	130	62.5	3
2	B.Com.III	115	88	76.52	4
3	B.A.III	72	35	48.61	2
4	B.C.A.SemVI	88	65	73.33	3
5	B.Tech.sem VIII	24	22	91.66	4
6	B.B.A.III	57	26	45.61	2
7	B.Lib.Sc.	10	5	50	3
8	M.B.A.SemIV	32	21	65.63	3
9	M.C.M.SemIV	13	8	61.54	3
10	M.I.R.P.M.Sem IV	18	5	27.78	2
11	M.Sc.PHY Sem IV	26	10	38.46	2
12	M.Sc.Chem. Sem IV	22	18	81.82	4
13	M.Sc.Bot. Sem IV	11	9	81.82	4
14	M.Sc.Zoo. Sem IV	13	12	92.31	4
15	M.C.A.SemVI	69	69	100	4
16	M.Tech.Sem IV	15	15	100	4
17	M.Lib.sci.	11	4	36.36	2

Program Specific Outcome Attainment

2014-15

Introduction:

Program Specific Outcomes (PSO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Specific Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters, the scale used to analyze the attainment of Program Specific outcomes is as under:

Parameter-I:

Attainment Level 1: 0-25% Learners succeeded in the year end examination.

Attainment Level 2:26-49%Learners succeeded in the year end examination.

Attainment Level 3:50-74%Learners succeeded in the year end examination.

Attainment Level 4:75-100%Learners succeeded in the year end examination.

Parameter-II:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with distinction.

Attainment Leve2:26-49% Learners succeeded in the year end examination with distinction.

Attainment Level 3:50-74% Learners succeeded in the year end examination with distinction.

Attainment Level 4:75-100% Learners succeeded in the year end examination with distinction.

Parameter-III:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with first class.

Attainment Leve2:26-49% Learners succeeded in the year end examination with first class.

Attainment Level 3:50-74% Learners succeeded in the year end examination with first class.

Attainment Level 4:75-100% Learners succeeded in the year end examination with first class.

Parameter-IV:

Attainment Level 4: 0-25% Learners succeeded in the year end examination with second class or below.

Attainment Leve3:26-49% Learners succeeded in the year end examination with second class or below.

Attainment Level 2:50-74% Learners succeeded in the year end examination with second class or below.

Attainment Level 1:75-100% Learners succeeded in the year end examination with second class or below.

Parameter-V:

Attainment Level 4: 0-25% Learners succeeded in the year end examination below second class.

Attainment Leve3:26-49% Learners succeeded in the year end examination below second class.

Attainment Level 2:50-74% Learners succeeded in the year end examination below second class.

Attainment Level 1:75-100% Learners succeeded in the year end examination below second class.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S. N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Pass in First Class	Pass in second Class	Pass in third Class	Distinction	Distinction (%)	Pass in First Class (%)	Pass in second Class (%)	Pass below second class (%)	Parameter-II	Parameter-III	Parameter-IV	Parameter-V	Parameter-I	Cumulated Attainment Level (Average 14-18)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	B.Sc. Sem II	340	195	57.35	133	30		32	9.41	39.12	9.41	0.29	1	2	4	4	3	2.8
2	B.Sc. Sem IV	277	139	50.18	68	48	4	19	6.86	24.55	6.86	1.44	1	1	4	4	3	2.6
3	B.Sc. Sem VI	208	130	62.5	94	10	0	26	12.50	45.19	12.50	0.00	1	2	4	4	3	2.8
4	B.Com.I	120	88	73.33	64	20	0	4	3.33	53.33	3.33	0.00	1	3	4	4	3	3
5	B.Com.II	102	69	67.65	54	9	0	6	5.88	52.94	5.88	0.00	1	3	4	4	3	3
6	B.Com.III	115	88	76.52	73	1	0	14	12.17	63.48	12.17	0.00	1	3	4	4	4	3.2
7	B.A.I	115	58	50.43	16	39	3	0	0.00	13.91	0.00	2.61	1	1	4	4	3	2.6
8	B.A.II	94	39	41.49	11	21	7	0	0.00	11.70	0.00	7.45	1	1	4	4	2	2.4
9	B.A.III	72	35	48.61	15	12	0	0	0.00	20.83	0.00	0.00	1	1	4	4	2	2.4

10	B.C.A.Sem II	106	59	55.66	46	8	1	4	3.77	43.40	3.77	0.94	1	2	4	4	3	2.8
11	B.C.A.Sem IV	85	58	68.24	40	14	0	4	4.71	47.06	4.71	0.00	1	2	4	4	3	2.8
12	B.C.A.Sem VI	88	65	73.33	50	12	1	2	2.27	57.95	2.27	1.14	1	3	4	4	3	3
13	B.Tech.Sem II	61	41	67.21	30	0	0	11	18.03	49.18	18.03	0.00	1	2	4	4	3	2.8
14	B.Tech.Sem IV	52	42	80.77	37	0	0	5	9.62	71.15	9.62	0.00	1	3	4	4	4	3.2
15	B.Tech. semVI	40	40	100	38	0	0	2	5.00	95.00	5.00	0.00	1	4	4	4	4	3.4
16	B.Tech.sem VIII	24	20	91.66	19	0	0	3	12.50	79.17	12.50	0.00	1	4	4	4	4	3.4
17	B.B.A.I	105	18	17.14	11	5	0	2	1.90	10.48	1.90	0.00	1	1	4	4	1	2.2
18	B.B.A.II	41	15	36.59	10	5	0	0	0.00	24.39	0.00	0.00	1	1	4	4	2	2.4
1	B.B.A	57	26	45.6	7	19	0	0	0.00	12.28	0.00	0.00	1	1	4	4	2	2.4

9	.III			1														
20	B.Lib. Sc.	10	5	50	5	0	0	0	0.00	50.00	0.00	0.00	1	3	4	4	3	3
21	M.B. A.Sem II	52	19	36.54	19	0	0	0	0.00	36.54	0.00	0.00	1	2	4	4	2	2.6
22	M.B. A.Sem IV	32	21	65.63	15	0	0	6	18.75	46.88	18.75	0.00	1	2	4	4	3	2.8
23	M.C. M.Sem II	17	8	47.6	7	1	0	0	0.00	41.18	0.00	0.00	1	2	4	4	2	2.6
24	M.C. M.Sem IV	13	8	61.54	8	0	0	0	0.00	61.54	0.00	0.00	1	3	4	4	3	3
25	M.I.R. P.M.Sem II	30	6	20	4	2	0	0	0.00	13.33	0.00	0.00	1	1	4	4	1	2.2
26	M.I.R. P.M.Sem IV	18	5	27.78	5	0	0	0	0.00	27.78	0.00	0.00	1	2	4	4	2	2.6
27	M.Sc. PHY II	26	15	57.69	8	4	0	3	11.54	30.77	11.54	0.00	1	2	4	4	3	2.8
2	M.Sc.	26	10	38.4	4	0	0	6	23.08	15.38	23.08	0.00	1	1	4	4	2	2.4

8	PHY IV			6														
29	M.Sc. Chem. sem II	25	15	60	10			5	20.00	40.00	20.00	4.00	1	2	4	4	3	2.8
30	M.Sc. Chem. IV	22	18	81.82	7	7	0	4	18.18	31.82	18.18	0.00	1	2	4	4	4	3
31	M.Sc. Bot. II	15	14	93.33	13	0	0	1	6.67	86.67	6.67	0.00	1	4	4	4	4	3.4
32	M.Sc. Bot. IV	11	9	81.82	7	0	0	2	18.18	63.64	18.18	0.00	1	3	4	4	4	3.2
33	M.Sc. Zoo. II	19	14	73.68	10	0	0	4	21.05	52.63	21.05	0.00	1	3	4	4	3	3
34	M.Sc. Zoo. IV	13	12	92.31	4	0	0	8	61.54	30.77	61.54	0.00	3	2	2	4	4	3
35	M.C. A.SemII	2	1	50	1	0	0	0	0.00	50.00	0.00	0.00	1	3	4	4	3	3
36	M.C. A.SemIV	69	54	78.26	54	0	0	0	0.00	78.26	0.00	0.00	1	4	4	4	4	3.4

37	M.C.A.SemVI	69	69	100	69	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	4	3.4
38	M.Tech.Sem II	13	12	92.31	10	2	0	0	0.00	76.92	0.00	0.00	1	4	4	4	4	3.4
39	M.Tech.Sem IV	15	15	100	15	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	4	3.4
40	M.Lib.Sci.	11	4	36.36	1	3	0	0	0.00	9.09	0.00	0.00	1	1	4	4	2	2.4

Course Outcome Attainment

2014-15

Introduction:

Course Outcomes (CO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college practices different methods to measure the attainment level of Course Outcomes. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of course outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74% Students successfully completed the respective course at final year. **Attainment Level 3**:75-100% Students successfully completed the respective course at final year.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is asunder:

Sr. No.	Name of Subject	No. of Students Appeared for Examination	No. Students Successfully Completed the Course	Passed Percentage	Attainment level
1.	Botany	57	38	66.67	3
2.	Chemistry	137	86	62.77	3
3.	Computer Science	53	44	83.02	4
4.	Computer Application	32	18	56.25	3
5.	Electronics	38	23	60.53	3
6.	Industrial Chemistry	12	8	66.67	3
7.	Mathematics	101	90	89.11	4
8.	Physics	133	108	81.20	4
9.	Zoology	61	47	77.05	4
10.	English	72	42	58.33	3
11.	Marathi	68	62	91.18	4
12.	Hindi	4	4	100	4
13.	Economics	18	17	94.44	4
14.	English Literature	16	13	81.25	4
15.	Marathi Literature	28	23	82.14	4
16.	History	37	31	83.78	4
17.	Political Science	48	31	64.58	3
18.	Psychology	20	16	80.00	4
19.	Sociology	49	41	83.67	4
20.	Cosmetic Technology (CTOT)	24	23	95.83	4
21.	Herbal Cosmetic (HCCT)	24	22	91.67	4

22.	Organization Management(OMCT)	24	24	100	4
23.	Perfume & Colour (PCUT)	24	21	87.5	4
24.	Plant Designing(PDCT)	24	24	100	4
25.	Quality Assurance(QATT)	24	21	87.5	4
26.	.NET using ASP	90	69	76.67	4
27.	Client Server Technology	90	76	84.44	4
28.	Multimedia & Its Application	90	86	95.56	4
29.	Software Testing	90	82	91.11	4
30.	Advanced Database management System	90	85	94.44	4
31.	Supplementary English	56	54	96.43	4
32.	Business Environment	115	110	95.65	4
33.	Business Regulatory Frame Work	115	102	88.70	4
34.	Cost and Management Account	115	104	90.43	4
35.	Essentials of e-commerce	115	113	98.26	4
36.	Internet and World Wide Web	115	104	90.43	4

LIST OF MERITORIOUS STUDENTS

Students Securing Position in the Merit List of Sant Gadge Baba Amravati University, Amravati, in summer, **2015**

S.N.	Name of the Student	Class/ Subject	University Rank
1	Ms. Pooja R. Dodani	B.Com	II
2	Ms.Sapana N. Pinjani	B.Com	III
3	Mr. Gajanan T. Rathod	B.Com	IV
4	Ms. Veena V. Bakhatar	BCA	IV
5	Ms. Ankita K. Jain	BCA	V
6	Ms. Sherya S. Khabia	BCA	IX
7	Ms.Christina G. Maikal	M.Sc.Botany	I
8	Mr. Irfan Ahmad Parrey	M.Sc Zoology	I Gold Medal
9	Mr. IrshadAjij Malik	M.Sc Zoology	III
10	Mr. Gaurav S. Choudhary	M.Sc Physics	II
11	Ms. Ashwini N. Bijave	M.Sc Physics	II
12	Ms. Priya S. Saini	M.Sc Physics	V
13	Mr.Ashish N. Shelki	M.Sc Chemistry	IV
14	Ms.Kanchan A. Asekar	M.Sc.Chemistry	VIII
15	Ms. Snehal D. Jare	M.Sc.Chemistry	IX
16	Ms. Shefali P. Gahi	MCA	V
17	Mr.ShekharM.Bhavik	MBA	V
18	Ms. Sheetal D. Tidake	MCM	II
19	DhirajVijayraoJunghare	M.Lib&InfSci	II
20	PankajSureshraoWankhade	M.Lib&InfSci	IV
21	Aditi Anilkumar Rathi	B.Tech.	I

2.6.2 Attainment of PO, PSO and CO

Program Outcome Attainment

2015-16

Introduction:

Program Outcomes (PO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of

Program outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74%Students successfully completed the respective course at final year. **Attainment Level 3**:75-100%Students successfully completed the respective course at final year. Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S.N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Attainment Level
1	B.Sc.Sem VI	244	170	69.67	3
2	B.Com.III	101	83	82.18	4
3	B.A.III	80	38	47.5	2
4	B.C.A.SemVI	88	72	81.82	4
5	B.Tech.semVIII	39	39	100	4
6	B.B.A.III	44	11	25	2
7	M.B.A.SemIV	60	48	80	4
8	M.C.M.SemIV	18	12	69.33	3
9	M.H.R.D.Sem IV	25	19	76	4
10	M.Sc.PHY Sem IV	21	14	66.67	3
11	M.Sc.Chem. Sem IV	25	15	60	3
12	M.Sc.Bot. Sem IV	14	14	100	4
13	M.Sc.Zoo. Sem IV	19	16	84.21	4
14	M.C.A.SemVI	70	70	100	4
15	M.Tech.Sem IV	13	13	100	4

Program Specific Outcome Attainment

2015-16

Introduction:

Program Specific Outcomes (PSO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Specific Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters, the scale used to analyze the attainment of Program Specific outcomes is as under:

Parameter-I:

Attainment Level 1: 0-25% Learners succeeded in the year end examination.

Attainment Level 2:26-49%Learners succeeded in the year end examination.

Attainment Level 3:50-74%Learners succeeded in the year end examination.

Attainment Level 4:75-100%Learners succeeded in the year end examination.

Parameter-II:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with distinction.

Attainment Leve2:26-49% Learners succeeded in the year end examination with distinction.

Attainment Level 3:50-74% Learners succeeded in the year end examination with distinction.

Attainment Level 4:75-100% Learners succeeded in the year end examination with distinction.

Parameter-III:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with first class.

Attainment Leve2:26-49% Learners succeeded in the year end examination with first class.

Attainment Level 3:50-74% Learners succeeded in the year end examination with first class.

Attainment Level 4:75-100% Learners succeeded in the year end examination with first class.

Parameter-IV:

Attainment Level 4: 0-25% Learners succeeded in the year end examination with second class or below.

Attainment Leve3:26-49% Learners succeeded in the year end examination with second class or below.

Attainment Level 2:50-74% Learners succeeded in the year end examination with second class or below.

Attainment Level 1:75-100% Learners succeeded in the year end examination with second class or below.

Parameter-V:

Attainment Level 4: 0-25% Learners succeeded in the year end examination below second class.

Attainment Leve3:26-49% Learners succeeded in the year end examination below second class.

Attainment Level 2:50-74% Learners succeeded in the year end examination below second class.

Attainment Level 1:75-100% Learners succeeded in the year end examination below second class.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S. N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Pass in First Class	Pass in second Class	Pass in third Class	Distinction	Distinction (%)	Pass in First Class (%)	Pass in second Class (%)	Pass below second class (%)	Parameter-II	Parameter-III	Parameter-IV	Parameter-V	Parameter-I	Cumulated Attainment Level (Average 14-18)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	B.Sc.Sem II	327	242	74.01	131	92	0	19	5.81	40.06	28.13	0	1	2	3	4	3	2.6
2	B.Sc.Sem IV	270	181	57.83	108	27	0	46	17.04	40.00	10.00	0	1	2	4	4	3	2.8
3	B.Sc.Sem VI	244	170	69.67	97	9	0	23	9.43	39.75	3.69	0	1	2	4	4	3	2.8
4	B.Com.I	122	103	84.42	82	17	0	0	0.00	67.21	13.93	0	1	3	4	4	4	3.2
5	B.Com.II	123	94	76.42	84	8	0	15	12.20	68.29	6.50	0	1	3	4	4	4	3.2
6	B.Com.III	101	83	82.18	66	15	0	2	1.98	65.35	14.85	0	1	3	4	4	4	3.2
7	B.A.I	112	61	54.46	18	20	23	0	0.00	16.07	17.86	20.54	1	1	4	4	3	2.6
8	B.A.II	95	51	53.68	12	30	9	0	0.00	12.63	31.58	9.47	1	1	3	4	3	2.4
9	B.A.III	80	38	47.5	8	17	13	0	0.00	10.00	21.25	16.25	1	1	4	4	2	2.4
10	B.C.A. Sem II	106	66	62.26	48	10	0	8	7.55	45.28	9.43	0	1	2	4	4	3	2.8
11	B.C.A. Sem	117	76	70.37	48	22	0	6	5.13	41.03	18.80	0	1	2	4	4	3	2.8

	IV																	
12	B.C.A. SemVI	88	72	81.82	50	14	0	8	9.09	56.82	15.91	0	1	3	4	4	4	3.2
13	B.Tech .SemII	64	47	73.44	39	0	0	8	12.50	60.94	0.00	0	1	3	4	4	3	3
14	B.Tech .SemIV	50	44	88	38	0	0	6	12.00	76.00	0.00	0	1	4	4	4	4	3.4
15	B.Tech . semVI	56	47	83.93	38	0	0	7	12.50	67.86	0.00	0	1	3	4	4	4	3.2
16	B.Tech .semVIII	39	39	100	37	2	0	0	0.00	94.87	5.13	0	1	4	4	4	4	3.4
17	B.B.A. I	105	15	14.29	9	5	0	1	0.95	8.57	4.76	0	1	1	4	4	1	2.2
18	B.B.A. II	55	27	49.09	9	17	0	1	1.82	16.36	30.91	0	1	1	3	4	2	2.2
19	B.B.A. III	44	11	25	4	5	0	0	0.00	9.09	11.36	0	1	1	4	4	2	2.4
20	M.B.A .SemII	55	7	12.73	7	0	0	0	0.00	12.73	0.00	0	1	1	4	4	1	2.2
21	M.B.A .SemIV	60	48	80	20	4	0	24	40.00	33.33	6.67	0	2	2	4	4	4	3.2
22	M.C.M .SemII	24	16	66.67	15	0	0	0	0.00	62.50	0.00	0	1	3	4	4	3	3

23	M.C.M.SemIV	18	15	83.33	13	0	0	2	11.11	72.22	0.00	0	1	3	4	4	4	3.2
24	M.I.R.P.M.SemII	17	13	76.47	12	1	0	0	0.00	70.59	5.88	0	1	3	4	4	4	3.2
25	M.I.R.P.M.Sem IV	25	19	76	15	4	0	0	0.00	60.00	16.00	0	1	3	4	4	4	3.2
26	M.SC. PHY II	25	9	36	9	0	0	0	0.00	36.00	0.00	0	1	2	4	4	2	2.6
27	M.SC. PHY IV	21	14	66.67	9	0	0	5	23.81	42.86	0.00	0	1	2	4	4	3	2.8
28	M.SC. Chem. sem II	27	14	51.85	12	0	0	2	7.41	44.44	0.00	0	1	2	4	4	3	2.8
29	M.SC. Chem. IV	25	15	60	11	2	0	2	8.00	44.00	8.00	0	1	2	4	4	3	2.8
30	M.SC. Bot. II	17	11	64.71	9	0	0	2	11.76	52.94	0.00	0	1	3	4	4	3	3
31	M.SC. Bot. IV	14	14	100	6	0	0	8	57.14	42.86	0.00	0	3	2	4	4	4	3.4
32	M.SC. Zoo. II	19	13	68.42	13	0	0	0	0.00	68.42	0.00	0	1	3	4	4	3	3

33	M.Sc. Zoo. Sem IV	19	16	84.21	11	0	0	5	26.32	57.89	0.00	0	2	3	4	4	4	3.4
34	M.C.A .SemII	23	15	65.21	13	0	0	2	8.70	56.52	0.00	0	1	3	4	4	3	3
35	M.C.A .SemIV	1	1	100	0	0	0	0	0.00	0.00	0.00	0	1	1	4	4	4	2.8
36	M.C.A .SemVI	70	70	100	69	0	0	1	1.43	98.57	0.00	0	1	4	4	4	4	3.4
37	M.Tech.Sem II	19	9	47.37	0	0	0	9	47.37	0.00	0.00	0	2	1	4	4	2	2.6
38	M.Tech.Sem IV	13	13	100	3	0	0	10	76.92	23.08	0.00	0	3	1	4	4	4	3.2

Course Outcome Attainment

2015-16

Introduction:

Course Outcomes (CO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college practices different methods to measure the attainment level of Course Outcomes. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of course outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74% Students successfully completed the respective course at final year. **Attainment Level 3**:75-100% Students successfully completed the respective course at final year.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is asunder:

Sr. No.	Name of Subject	No. of Students Appeared for Examination	No. Students Successfully Completed the Course	Passed Percentage	Attainment level
1.	Botany	78	75	96.15	4
2.	Chemistry	168	135	80.36	4
3.	Computer Science	54	48	88.89	4
4.	Computer Application	42	22	52.38	3
5.	Electronics	36	33	91.67	4
6.	Industrial Chemistry	20	16	80	4
7.	Mathematics	110	97	88.18	4
8.	Physics	144	121	84.03	4
9.	Zoology	80	58	72.50	3
10.	English	66	80	82.5	4
11.	Marathi	74	79	93.67	4
12.	Hindi	1	1	100	4
13.	Economics	16	17	94.12	4
14.	English Literature	12	30	40	2
15.	Marathi Literature	21	22	95.45	4
16.	History	36	43	83.72	4
17.	Political Science	36	53	67.92	3
18.	Psychology	19	24	79.17	4
19.	Sociology	41	51	80.39	4
20.	Cosmetic Technology-VIII	39	39	100	4
21.	Perfume & Colour –VI	39	39	100	

22.	Herbal Cosmetic-VI	39	39	100	4
23.	Cosmetic Jurisprudence	39	39	100	4
24.	Cosmetic Engineering-IV	39	39	100	4
25.	.NET using ASP	88	76	86.36	4
26.	Client Server Technology	88	83	94.32	4
27.	Multimedia & Its Application	88	85	96.59	4
28.	Software Testing	88	83	94.32	4
29.	Advanced Database management System	88	78	88.64	4
30.	Supplementary English	49	47	95.92	4
31.	Business Environment	101	89	88.12	4
32.	Business Regulatory Frame Work	101	97	96.04	4
33.	Cost and Management Account	101	95	94.06	4
34.	Essentials of e-commerce	101	97	96.04	4
35.	Internet and World Wide Web	101	94	93.07	4

LIST OF MERITORIOUS STUDENTS

Students Securing Position in the Merit List of Sant Gadge Baba Amravati University, Amravati, in summer, **2016**

S.N.	Name of the Student	Class/ Subject	University Rank
1	Mr. Pawan Batra	MBA	I (2 Gold Medals)
2	Ms. Nadiya Shaikh	MBA	II
3	Mr. Prashant Zade	MBA	V
4	Ms. Roshani Khandelwal	MBA	VII
5	Ms.Kanchan B.Chawai	B.Tech.	I (Gold Medal)
6	Mr.Vaibhav P.Tidke	B.Tech	II
7	Ms.Diptee P.Mohod	B.Tech	III
8	Ms.Anuradha D. Kadu	BCA	I
9	Ms. Shruti S. Bakshi	BCA	VI
10	Mr. Saurabh C. Shende	BCA	X
11	Ms. Vushali T.Bhuyar	B.Sc.	IV
12	Ms. Shrutika Joshi	BBA	II
13	Mr. Saleek Ahmad	BBA	IV
14	Mr. Hilal Ahmad Mir	M.Sc Botany	II
15	Mr. Shahid Husain Mir	M.Sc Zoology	V
16	Ms. Riya R. Tekade	M.Sc Physics	III
17	Ms. Minal K.Pawar	M.Sc Physics	IV
18	Ms. Fatema Y. Saifee	MCA	III
19	Mr. Tejaskumar R. Singwi	MCA	V
20	Ms.Kalyani S.Pohokar	MCA	VI
21	Ms. Monika S. Sharma	MCA	VII
22	Ms. Rupali S. Yadav	M.Tech.(Cosmetics)	II
23	Ms.Divya Nawlani	MCM	II

2.6.2 Attainment of PO, PSO and CO

Program Outcome Attainment

2016-17

Introduction:

Program Outcomes (PO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of

Program outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74%Students successfully completed the respective course at final year. **Attainment Level 3**:75-100%Students successfully completed the respective course at final year. Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S.N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Attainment Level
1	2	3	4	5	6
1	B.Sc.Sem VI	275	204	74.18	3
2	B.Com.III	115	98	85.22	4
3	B.A.III	98	56	57.14	3
4	B.C.A.SemVI	106	84	79.25	4
5	B.Tech.semVIII	55	55	100	4
6	B.B.A.III	44	19	43.18	2
7	M.B.A.SemIV	44	27	61.36	3
8	M.C.M.SemIV	19	17	89.47	4
9	MHRD.Sem IV	13	12	92.31	4
10	M.Sc. PHY Sem IV	25	20	80	4
11	M.Sc. Chem. Sem IV	27	17	62.96	3
12	M.Sc. Bot. Sem IV	18	14	77.78	4
13	M.Sc. Zoo. Sem IV	18	13	72.22	3
14	M.C.A.SemVI	2	2	100	4
15	M.Tech.Sem IV	15	13	86.67	4

Program Specific Outcome Attainment

2016-17

Introduction:

Program Specific Outcomes (PSO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Specific Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters, the scale used to analyze the attainment of Program Specific outcomes is as under:

Parameter-I:

Attainment Level 1: 0-25% Learners succeeded in the year end examination.

Attainment Level 2:26-49%Learners succeeded in the year end examination.

Attainment Level 3:50-74%Learners succeeded in the year end examination.

Attainment Level 4:75-100%Learners succeeded in the year end examination.

Parameter-II:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with distinction.

Attainment Leve2:26-49% Learners succeeded in the year end examination with distinction.

Attainment Level 3:50-74% Learners succeeded in the year end examination with distinction.

Attainment Level 4:75-100% Learners succeeded in the year end examination with distinction.

Parameter-III:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with first class.

Attainment Leve2:26-49% Learners succeeded in the year end examination with first class.

Attainment Level 3:50-74% Learners succeeded in the year end examination with first class.

Attainment Level 4:75-100% Learners succeeded in the year end examination with first class.

Parameter-IV:

Attainment Level 4: 0-25% Learners succeeded in the year end examination with second class or below.

Attainment Leve3:26-49% Learners succeeded in the year end examination with second class or below.

Attainment Level 2:50-74% Learners succeeded in the year end examination with second class or below.

Attainment Level 1:75-100% Learners succeeded in the year end examination with second class or below.

Parameter-V:

Attainment Level 4: 0-25% Learners succeeded in the year end examination below second class.

Attainment Leve3:26-49% Learners succeeded in the year end examination below second class.

Attainment Level 2:50-74% Learners succeeded in the year end examination below second class.

Attainment Level 1:75-100% Learners succeeded in the year end examination below second class.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S. N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Pass in First Class	Pass in second Class	Pass in third Class	Distinction	Distinction (%)	Pass in First Class (%)	Pass in second Class (%)	Pass below second class (%)	Parameter-II	Parameter-III	Parameter-IV	Parameter-V	Parameter-I	Cumulated Attainment Level (Average 14-18)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	B.Sc.Sem II	330	230	69.7	123	73	0	34	10.30	37.27	22.12	0.00	1	2	4	4	3	2.8
2	B.Sc.Sem IV	307	194	63.19	123	48	0	23	7.49	40.07	15.64	0.00	1	2	4	4	3	2.8
3	B.Sc.Sem VI	275	204	74.18	95	5	0	42	15.27	34.55	1.82	0.00	1	2	4	4	3	2.8
4	B.Com.I	120	105	87.5	95	9	1	16	13.33	79.17	7.50	0.83	1	4	4	4	4	3.4
5	B.Com.II	121	79	65.28	57	18	0	9	7.44	47.11	14.88	0.00	1	2	4	4	3	2.8
6	B.Com.III	115	98	85.22	76	10	0	4	3.48	66.09	8.70	0.00	1	3	4	4	4	3.2
7	B.A.I	116	38	32.76	19	21	0	0	0.00	16.38	18.10	0.00	1	1	4	4	2	2.4
8	B.A.II	87	55	63.22	12	38	0	0	0.00	13.79	43.68	0.00	1	1	2	4	3	2.2
9	B.A.III	98	56	57.14	14	25	2	0	0.00	14.29	25.51	2.04	1	1	3	4	3	2.4

10	B.C.A. Sem II	114	65	57.02	46	14	0	5	4.39	40.35	12.28	0.00	1	2	4	4	3	2.8
11	B.C.A. Sem IV	102	70	68.63	55	12	0	3	2.94	53.92	11.76	0.00	1	3	4	4	3	3
12	B.C.A. SemVI	106	84	79.25	61	18	0	5	4.72	57.55	16.98	0.00	1	3	4	4	4	3.2
13	B.Tech .SemII	79	50	63.29	45	1	0	5	6.33	56.96	1.27	0.00	1	3	4	4	3	3
14	B.Tech .SemIV	60	55	91.66	49	0	0	6	10.00	81.67	0.00	0.00	1	4	4	4	4	3.4
15	B.Tech . semVI	45	38	84.44	26	0	0	12	26.67	57.78	0.00	0.00	2	3	4	4	4	3.4
16	B.Tech .semVIII	55	55	100	18	0	0	37	67.27	32.73	0.00	0.00	3	2	4	4	4	3.4
17	B.B.A. I	111	15	13.51	12	3	0	0	0.00	10.81	2.70	0.00	1	1	4	4	1	2.2
18	B.B.A. II	47	18	38.3	10	7	0	1	2.13	21.28	14.89	0.00	1	1	4	4	2	2.4
1	B.B.A.	44	19	43.	12	6	0	1	2.27	27.27	13.64	0.00	1	2	4	4	2	2.6

9	III			18														
20	M.B.A. SemII	40	0	0	0	0	0	0	0.00	0.00	0.00	0.00	1	1	4	4	1	2.2
21	M.B.A. SemIV	44	27	61.36	20	0	0	7	15.91	45.45	0.00	0.00	2	2	4	4	3	3
22	M.C.M .SemII	18	9	50	7	1	0	1	5.56	38.89	5.56	0.00	1	3	4	4	3	3
23	M.C.M .SemI V	19	17	89.47	7	7	0	3	15.79	36.84	36.84	0.00	1	3	3	4	4	3
24	MHRD .SemII	27	18	66.67	15	1	0	2	7.41	55.56	3.70	0.00	1	3	4	4	3	3
25	MHRD .Sem IV	13	12	92.31	12	0	0	0	0.00	92.31	0.00	0.00	1	3	4	4	4	3.2
26	M.SC. PHY II	25	14	56	12	1	0	1	4.00	48.00	4.00	0.00	1	2	4	4	3	2.8
27	M.SC. PHY IV	25	20	80	16	0	0	4	16.00	64.00	0.00	0.00	1	2	4	4	4	3
28	M.SC. Chem.sem II	25	7	28	6	0	0	1	4.00	24.00	0.00	0.00	1	2	4	4	2	2.6

29	M.SC. Chem. IV	27	17	62.96	16	0	0	1	3.70	59.26	0.00	0.00	1	2	4	4	3	2.8
30	M.SC. Bot. II	19	18	94.74	18	0	0	3	15.79	94.74	0.00	0.00	1	3	4	4	4	3.2
31	M.SC. Bot. IV	18	14	77.78	6	0	0	8	44.44	33.33	0.00	0.00	3	2	4	4	4	3.4
32	M.SC. Zoo. II	22	8	36.36	7	0	0	1	4.55	31.82	0.00	0.00	1	3	4	4	2	2.8
33	M.SC. Zoo. IV	18	13	72.22	11	0	0	2	11.11	61.11	0.00	0.00	2	2	4	4	3	3
34	M.C.A. Sem II	24	12	50	12	0	0	0	0.00	50.00	0.00	0.00	3	1	4	4	2	2.8
35	M.C.A. Sem IV	22	14	64	11	0	0	3	13.64	50.00	0.00	0.00	3	1	4	4	3	3
36	M.C.A. Sem VI	2	2	100	0	0	0	2	100.00	0.00	0.00	0	4	1	4	4	4	3.4
37	M.Tech.Sem II	15	14	100	14	0	0	0	0	93.33	0	0	2	1	4	4	4	3
3	M.Tec	15	13	86.	11	2	0	0	0	73.33	13.33	0	3	1	4	4	4	3.2

8	h.Sem IV			67													

Course Outcome Attainment

2016-17

Introduction:

Course Outcomes (CO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college practices different methods to measure the attainment level of Course Outcomes. Some of these methods have been listed below:

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3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of course outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74% Students successfully completed the respective course at final year. **Attainment Level 3**:75-100% Students successfully completed the respective course at final year.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is asunder:

Sr. No.	Name of Subject	No. of Students Appeared for Examination	No. Students Successfully Completed the Course	Passed Percentage	Attainment level
1.	Botany	84	65	77.38	4
2.	Chemistry	190	139	73.16	3
3.	Computer Science	63	51	80.95	4
4.	Computer Application	35	26	74.29	3
5.	Electronics	45	38	84.44	4
6.	Industrial Chemistry	29	23	79.31	4
7.	Mathematics	121	117	96.69	4
8.	Physics	173	155	89.60	4
9.	Zoology	85	69	81.18	4
10.	English	74	98	75.51	4
11.	Marathi	90	92	97.83	4
12.	Hindi	6	6	100	4
13.	Economics	33	35	94.29	4
14.	English Literature	21	24	87.5	4
15.	Marathi Literature	31	37	83.78	4
16.	History	38	49	77.55	4
17.	Political Science	41	55	74.55	3
18.	Psychology	25	31	80.64	4
19.	Sociology	51	63	80.95	4
20.	Cosmetic Technology-VIII	55	55	100	4
21.	Perfume & Colour –VI	55	55	100	4

22.	Herbal Cosmetic-VI	55	55	100	4
23.	Cosmetic Jurisprudence	55	55	100	4
24.	Cosmetic Engineering-IV	55	55	100	4
25.	.NET using ASP	105	96	91.42	4
26.	Client Server Technology	106	93	87.73	4
27.	Multimedia & Its Application	106	97	91.50	4
28.	Software Testing	106	93	87.73	4
29.	Advanced Database management System	106	91	85.84	4
30.	Supplementary English	40	39	97.50	4
31.	Business Environment	115	110	95.65	4
32.	Business Regulatory Frame Work	115	110	95.65	4
33.	Cost and Management Account	115	107	93.04	4
34.	Essentials of e-commerce	115	110	95.65	4
35.	Internet and World Wide Web	115	105	91.30	4

LIST OF MERITORIOUS STUDENTS

Students Securing Position in the Merit List of Sant Gadge Baba Amravati University, Amravati, in summer, **2017**

S.N.	Name of the Student	Class	University Rank
1	Ku.Tejal Vijay Punse	B.Com.	I (4 Gold Medals)
2	Ku.Disha Manoharlal Nebhnani	B.Sc.	VII
3	Ku.Kirti Manohar Motwani	B.Sc.	VIII
4	Mr.Shubham Sudhakar Kale	B.Sc.	X
5	Ku.Surbhi Laxmikant Dhoot	BCA	II
6	Mr.Sagar Jagdish Godhwani	BCA	III
7	Ku.Shubhangi Vasantrao Chiwarkar	BCA	VII
8	Ku.Rakshanda Raju Kale	BCA	X
9	Ku.Ishwari Manoj Saoji	B.Tech.	I
10	Ku.Roshni Brijlal Keshwani	B.Tech.	II
11	Mr.Shaikh Anam Fatema Zawed Ahmad	B.Tech.	III
12	Ku.Roshni Gaur	M.Tech.	I
13	Ku.Tejaswini Sakhare	M.Tech.	II
14	Ku. Princika Waskar	M.Tech.	III
15	Ku.Trupti K.Chavan	M.Sc.(Bot)	III
16	Ku.Sakshi Sudhir Sathe	BBA	II
17	Mr.Shubham Vijayrao Dhoke	BBA	V
18	Ku.Radhika Nandkishor Kale	MCM	I
19	Mr.Faraharuddin Najimoddin	MCM	II

2.6.2 Attainment of PO, PSO and CO

Program Outcome Attainment

2017-18

Introduction:

Program Outcomes (PO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of

Program outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74%Students successfully completed the respective course at final year. **Attainment Level 3**:75-100%Students successfully completed the respective course at final year. Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S.N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Attainment Level
1	2	3	4	5	6
1	B.Sc.Sem VI	311	222	71.38	3
2	B.Com.III	116	93	80.17	4
3	B.A.III	76	33	43.42	2
4	B.C.A.SemVI	104	82	78.85	4
5	B.Tech.semVIII	46	45	97.83	4
6	B.B.A.III	43	23	53.49	3
7	M.B.A.SemIV	28	17	60.71	3
8	M.C.M.SemIV	12	9	75	4
9	MHRD.Sem IV	21	21	100	4
10	M.Sc.PHY Sem IV	25	19	76	4
11	M.Sc.Chem. Sem IV	24	20	83.33	4
12	M.Sc.Bot. Sem IV	19	18	94.74	4
13	M.Sc.Zoo. Sem IV	24	15	62.5	3
14	M.C.A.SemVI	22	22	100	4
15	M.Tech.Sem IV	16	15	93.75	4

Program Specific Outcome Attainment

2017-18

Introduction:

Program Specific Outcomes (PSO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Specific Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters, the scale used to analyze the attainment of Program Specific outcomes is as under:

Parameter-I:

Attainment Level 1: 0-25% Learners succeeded in the year end examination.

Attainment Level 2:26-49%Learners succeeded in the year end examination.

Attainment Level 3:50-74%Learners succeeded in the year end examination.

Attainment Level 4:75-100%Learners succeeded in the year end examination.

Parameter-II:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with distinction.

Attainment Leve2:26-49% Learners succeeded in the year end examination with distinction.

Attainment Level 3:50-74% Learners succeeded in the year end examination with distinction.

Attainment Level 4:75-100% Learners succeeded in the year end examination with distinction.

Parameter-III:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with first class.

Attainment Leve2:26-49% Learners succeeded in the year end examination with first class.

Attainment Level 3:50-74% Learners succeeded in the year end examination with first class.

Attainment Level 4:75-100% Learners succeeded in the year end examination with first class.

Parameter-IV:

Attainment Level 4: 0-25% Learners succeeded in the year end examination with second class or below.

Attainment Leve3:26-49% Learners succeeded in the year end examination with second class or below.

Attainment Level 2:50-74% Learners succeeded in the year end examination with second class or below.

Attainment Level 1:75-100% Learners succeeded in the year end examination with second class or below.

Parameter-V:

Attainment Level 4: 0-25% Learners succeeded in the year end examination below second class.

Attainment Leve3:26-49% Learners succeeded in the year end examination below second class.

Attainment Level 2:50-74% Learners succeeded in the year end examination below second class.

Attainment Level 1:75-100% Learners succeeded in the year end examination below second class.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S. N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Pass in First Class	Pass in second Class	Pass in third Class	Distinction	Distinction (%)	Pass in First Class (%)	Pass in second Class (%)	Pass below second class (%)	Parameter-II	Parameter-III	Parameter-IV	Parameter-V	Parameter-I	Cumulated Attainment Level (Average 14-18)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	B.Sc. Sem II	331	221	66.76	135	60	0	26	7.85	40.79	18.13	0.00	1	2	4	4	3	2.8
2	B.Sc. Sem IV	312	202	64.74	126	46	0	30	9.62	40.38	14.74	0.00	1	2	4	4	3	2.8
3	B.Sc. Sem VI	311	222	71.38	42	1	0	7	2.25	13.50	0.32	0.00	1	1	4	4	3	2.6
4	B.Com.I	125	80	64	72	8	0	17	13.60	57.60	6.40	0.00	1	3	4	4	3	3
5	B.Com.II	116	88	75.86	84	4	0	5	4.31	72.41	3.45	0.00	1	3	4	4	4	3.2
6	B.Com.III	116	93	80.17	69	4	0	6	5.17	59.48	3.45	0.00	1	3	4	4	4	3.2
7	B.A.I	115	56	48.69	9	22	2	3	2.61	7.83	19.13	1.74	1	1	4	4	2	2.4

8	B.A.II	86	26	30.23	2	19	5	0	0.00	2.33	22.09	5.81	1	1	4	4	2	2.4
9	B.A.III	76	33	43.42	9	22	1	3	3.95	11.84	28.95	1.32	1	1	3	4	2	2.2
10	B.C.A.Sem II	120	54	45	27	22	4	1	0.83	22.50	18.33	3.33	1	1	4	4	2	2.4
11	B.C.A.Sem IV	109	62	56.88	31	29	0	2	1.83	28.44	26.61	0.00	1	2	3	4	3	2.6
12	B.C.A.SemVI	104	82	78.85	53	13	14	2	1.92	50.96	12.50	13.46	1	3	4	4	4	3.2
13	B.Tech.SemII	86	48	55.81	37	0	0	11	12.79	43.02	0.00	0.00	1	2	4	4	3	2.8
14	B.Tech.SemIV	78	63	78.75	53	0	0	10	12.82	67.95	0.00	0.00	1	3	4	4	4	3.2
15	B.Tech. semVI	60	51	85	35	0	0	16	26.67	58.33	0.00	0.00	2	3	4	4	4	3.4

16	B.Tech.sem VIII	46	45	97.83	11	0	0	34	73.91	23.91	0.00	0.00	3	1	4	4	4	3.2
17	B.B.A.I sem II	109	54	49.54	29	25	0	0	0.00	26.61	22.94	0.00	1	2	4	4	2	2.6
18	B.B.A.II	71	21	29.58	13	8	0	0	0.00	18.31	11.27	0.00	1	1	4	4	2	2.4
19	B.B.A.III	43	23	53.49	13	10	0	0	0.00	30.23	23.26	0.00	1	2	4	4	3	2.8
1	M.B.A.SemIV	28	17	60.71	10	1	0	4	14.29	35.71	3.57	0.00	1	2	4	4	3	2.8
2	M.C.M.SemII	20	8	40	8	0	0	0	0.00	40.00	0.00	0.00	1	3	4	4	2	2.8
3	M.C.M.SemII	20	8	40	8	0	0	0	0.00	40.00	0.00	0.00	1	3	4	4	2	2.8
4	M.C.M.SemIV	12	9	75	7	2	0	0	0.00	58.33	16.67	0.00	1	3	4	4	4	3.2

5	MHRD.SemII	25	14	56	8	6	0	0	0.00	32.00	24.00	0.00	1	2	4	4	3	2.8
6	MHRD.Sem IV	21	21	100	16	5	0	0	0.00	76.19	23.81	0.00	4	2	4	4	4	3.6
7	M.SC. PHY II	27	19	70.37	19	0	0	0	0.00	70.37	0.00	0.00	1	3	4	4	3	3
8	M.SC. PHY IV	25	19	76	16	3	0	0	0.00	64.00	12.00	0.00	1	3	4	4	4	3.2
9	M.SC. Chem.sem II	23	13	56.52	12	1	0	0	0.00	52.17	4.35	0.00	1	3	4	4	3	3
10	M.SC. Chem. IV	24	20	83.33	16	0	0	4	16.67	66.67	0.00	0.00	1	3	4	4	4	3.2

11	M.Sc. Bot. II	25	24	88	21	0	0	3	12.00	84.00	0.00	0.00	1	4	4	4	4	3.4
12	M.Sc. Bot. IV	19	18	94.74	9	0	0	9	47.37	47.37	0.00	0.00	2	2	4	4	4	3.2
13	M.Sc. Zoo. II	24	13	54.17	11	0	0	2	8.33	45.83	0.00	0.00	1	2	4	4	3	2.8
14	M.Sc. Zoo. IV	24	15	62.5	10	0	0	5	20.83	41.67	0.00	0.00	1	2	4	4	3	2.8
15	M.C.A.SemII	22	18	82	16	2	0	0	0.00	72.73	9.09	0.00	1	3	4	4	4	3.2
16	M.C.A.SemIV	26	18	69	16	2	0	0	0.00	61.54	7.69	0.00	1	3	4	4	3	3
17	M.C.A.SemVI	22	22	100	22	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	4	3.4
18	M.Tech.Se	22	12	54.54	12	0	0	0	0.00	54.55	0.00	0.00	1	3	4	4	3	3

	m II																
19	M.Tech.Sem IV	16	15	93.75	3	0	0	12	75.00	18.75	0.00	0.00	4	1	4	4	4	3.4

Course Outcome Attainment

2017-18

Introduction:

Course Outcomes (CO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college practices different methods to measure the attainment level of Course Outcomes. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of course outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74% Students successfully completed the respective course at final year. **Attainment Level 3**:75-100% Students successfully completed the respective course at final year.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is asunder:

Sr. No.	Name of Subject	No. of Students Appeared for Examination	No. Students Successfully Completed the Course	Passed Percentage	Attainment level
1.	Botany	90	65	72.22	3
2.	Chemistry	225	176	78.22	4
3.	Computer Science	55	40	72.73	3
4.	Computer Application	57	47	82.46	4
5.	Electronics	48	39	81.25	4
6.	Industrial Chemistry	24	19	79.17	4
7.	Mathematics	148	140	94.59	4
8.	Physics	189	154	81.48	4
9.	Zoology	97	83	85.57	4
10.	English	50	76	66.79	3
11.	Marathi	67	73	91.78	4
12.	Hindi	3	3	100	4
13.	Economics	18	20	90	4
14.	English Literature	7	20	35	2
15.	Marathi Literature	22	23	95.65	4
16.	History	30	42	71.43	3
17.	Political Science	50	55	90.91	3
18.	Psychology	14	16	87.5	4
19.	Sociology	46	52	88.46	4
20.	Cosmetic Technology-VIII	46	45	97.83	4
21.	Perfume & Colour –VI	46	46	100	4

22.	Herbal Cosmetic-VI	46	45	97.83	4
23.	Cosmetic Jurisprudence	46	45	97.83	4
24.	Cosmetic Engineering-IV	46	46	100	4
25.	.Net Using ASP	104	99	95	4
26.	Client Server Technology	104	91	87.50	4
27.	Multimedia & Its Application	104	91	87.50	4
28.	Software Testing	104	99	95	4
29.	Advanced Database Management System	104	100	96.15	4
30.	Supplementary English	55	54	98.18	4
31.	Business Environment	116	113	97.41	4
32.	Business Regulatory Frame Work	116	114	98.28	4
33.	Cost and Management Account	116	96	82.70	4
34.	Essentials of e-commerce	116	113	97.41	4
35.	Internet and World Wide Web	116	109	93.97	4

MERITORIOUS STUDENTS

Students Securing Position in the Merit List of Sant Gadge Baba Amravati University, Amravati, in summer, **2018**

S. N.	Name of student	Class	University Rank
1.	Ms. SarvatAsma Zia Ahmad	M.Sc.II (Chemistry)	I (2Gold medals & 1 Silver Medal)
2.	Ms. Rashmi Ajay Darda	BBA III	I (Gold Medal)
3.	Ms.Alfia Shadaf Abdul Zameer	M.Sc.II (Chemistry)	X
4.	Mr. Jaypalsing M. Ingale	M.Sc.II (Chemistry)	X
5.	Ms. Ashwini G. Sangle	M.Tech (Cosmetics)	I
6.	Mr. Harshal R. Sawie	M.Tech (Cosmetics)	I
7.	Ms. Diptee P. Mohod	M.Tech (Cosmetics)	II
8.	Ms. Shivani A. Kedia	M.Tech (Cosmetics)	III
9.	Ms. Pranjali E. Mhatarmare	MCA	IV
10.	Ms. NishaDonode	BBA III	III
11.	Ms. Twinkle Batra	BBA III	V
12.	Mr. Shubham D. Mandavgade	BCA	III
13.	Ms. Neethu M.Vennamattathil	BCA	VI
14.	Ms. Kushbu Islam Ibtesham	B.Tech (Cosmetics)	I
15.	Mr. Karmesh R. Kothari	B.Tech (Cosmetics)	II
16.	Ms. Shewta V. Pande	B.Tech (Cosmetics)	III
17.	Radhika Nandkishor Kale	M.C.M	I
18.	Farhanoddin Najimoddin	M.C.M	II
19.	Simran Manohar Basantwani	M.H.R.D.	I
20.	Pratiksha N. Sonparate	M.H.R.D.	II
21.	Jyoti Jaykumar Pakharani	M.H.R.D.	III
22.	Asma Mumtaz Khan	M.Sc. (Botany)	V

2.6.2 Attainment of PO, PSO and CO

Program Outcome Attainment

2018-19

Introduction:

Program Outcomes (PO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of

Program outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74%Students successfully completed the respective course at final year. **Attainment Level 3**:75-100%Students successfully completed the respective course at final year. Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S.N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Attainment Level
1	2	3	4	5	6
1	B.Sc.Sem VI	293	223	76.1	4
2	B.Com.III	118	95	80.51	4
3	B.A.III	79	39	49.37	2
4	B.C.A.SemVI	101	80	79.21	4
5	B.Tech.semVIII	60	54	90	4
6	B.B.A.III	75	26	34.67	2
7	M.B.A.SemIV	51	29	56.86	3
8	M.C.M.SemIV	12	10	83.33	4
9	MHRD.Sem IV	15	11	73.33	3
10	M.Sc. PHY Sem IV	28	21	76	4
11	M.Sc. Chem. Sem IV	24	12	50	3
12	M.Sc. Bot. Sem IV	25	23	92	4
13	M.Sc. Zoo. Sem IV	23	10	43.48	2
14	M.C.A.SemVI	22	22	100	4
15	M.Tech.Sem IV	21	21	100	4

Program Specific Outcome Attainment

2018-19

Introduction:

Program Specific Outcomes (PSO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college uses a variety of methods to measure the attainment level of Program Specific Outcomes of the learners. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters, the scale used to analyze the attainment of

Program Specific outcomes is as under:

Parameter-I:

Attainment Level 1: 0-25% Learners succeeded in the year end examination.

Attainment Level 2:26-49%Learners succeeded in the year end examination.

Attainment Level 3:50-74%Learners succeeded in the year end examination.

Attainment Level 4:75-100%Learners succeeded in the year end examination.

Parameter-II:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with distinction.

Attainment Leve2:26-49% Learners succeeded in the year end examination with distinction.

Attainment Level 3:50-74% Learners succeeded in the year end examination with distinction.

Attainment Level 4:75-100% Learners succeeded in the year end examination with distinction.

Parameter-III:

Attainment Level 1: 0-25% Learners succeeded in the year end examination with first class.

Attainment Leve2:26-49% Learners succeeded in the year end examination with first class.

Attainment Level 3:50-74% Learners succeeded in the year end examination with first class.

Attainment Level 4:75-100% Learners succeeded in the year end examination with first class.

Parameter-IV:

Attainment Level 4: 0-25% Learners succeeded in the year end examination with second class or below.

Attainment Leve3:26-49% Learners succeeded in the year end examination with second class or below.

Attainment Level 2:50-74% Learners succeeded in the year end examination with second class or below.

Attainment Level 1:75-100% Learners succeeded in the year end examination with second class or below.

Parameter-V:

Attainment Level 4: 0-25% Learners succeeded in the year end examination below second class.

Attainment Leve3:26-49% Learners succeeded in the year end examination below second class.

Attainment Level 2:50-74% Learners succeeded in the year end examination below second class.

Attainment Level 1:75-100% Learners succeeded in the year end examination below second class.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is as under:

S. N.	Class	Appeared for Exam.	Pass in Final Exam.	% of Result	Pass in First Class	Pass in second Class	Pass in third Class	Distinction	Distinctio n (%)	Pass in First Class (%)	Pass in second Class (%)	Pass below second class (%)	Parameter-II	Parameter-III	Parameter-IV	Parameter-V	Parameter-I	Cumulated Attainment Level (Average 14-18)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	B.Sc.Sem II	316	191	60.44	97	69	2	23	12.04	50.79	36.13	1.05	1	3	3	4	3	2.8
2	B.Sc.Sem IV	325	188	57.85	135	36	0	17	9.04	71.81	19.15	0.00	1	3	4	4	3	3
3	B.Sc.Sem VI	293	223	76.1	140	14	0	49	21.97	62.78	6.28	0.00	1	3	4	4	4	3.2
4	B.Com.Isem-II	121	79	65.28	67	7	0	67	84.81	84.81	8.86	0.00	4	4	4	4	3	3.8
5	B.Com.IISem IV	129	85	65.89	59	5	0	21	24.71	69.41	5.88	0.00	1	3	4	4	3	3
6	B.Com.III	118	95	80.51	75	1	0	7	7.37	78.95	1.05	0.00	1	4	4	4	4	3.4
7	B.Com I(A and F) Sem-II	112	45	40.18	26	13	0	6	13.33	57.78	28.89	0.00	1	3	3	4	2	2.6
8	B.A.I Sem II	113	41	36.28	25	15	0	1	2.44	60.98	36.59	0.00	1	3	3	4	2	2.6
9	B.A.II Sem	91	37	40.	25	12	0	0	0.00	67.57	32.43	0.00	1	3	3	4	2	2.6

	IV			65														
10	B.A.III	79	39	49.37	2	15	1	0	0.00	5.13	38.46	2.56	1	1	3	4	2	2.2
11	B.C.A.Sem II	131	34	25.79	19	14	0	1	2.94	55.88	41.18	0.00	1	3	3	4	2	2.6
12	B.C.A.Sem IV	114	50	48.25	35	20	0	0	0.00	70.00	40.00	0.00	1	3	3	4	3	2.8
13	B.C.A.SemVI	101	80	79.21	56	23	0	1	1.25	70.00	28.75	0.00	1	3	3	4	4	3
14	B.Tech. SemII	88	41	46.59	27	0	0	14	34.15	65.85	0.00	0.00	2	3	4	4	2	3
15	B.Tech. SemIV	79	64	81.01	44	0	0	20	31.25	68.75	0.00	0.00	2	3	4	4	4	3.4
16	B.Tech. semVI	82	61	74.39	49	0	0	12	19.67	80.33	0.00	0.00	1	4	4	4	3	3.2
17	B.Tech.semVIII	60	54	90	24	0	0	30	55.56	44.44	0.00	0.00	3	2	4	4	4	3.4
18	B.B.A.I sem II	125	54	43.2	25	29	0	0	0.00	46.30	53.70	0.00	1	2	2	4	2	2.2
19	B.B.A.II Sem IV	75	45	51.14	13	32	0	0	0.00	28.89	71.11	0.00	1	2	2	4	3	2.4
20	B.B.A.III	75	26	34.67	15	11	0	0	0.00	41.67	30.56	0.00	1	2	3	4	2	2.4

21	B.-Voc (Cosmetic Technology) Sem II	18	14	77.78	7	0	0	7	50.00	50.00	0.00	0.00	3	3	4	4	4	3.6
22	M.B.A.SemII	58	15	25.86	15	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	2	3
23	M.B.A.SemIV	51	29	56.86	19	0	0	10	34.48	65.52	0.00	0.00	2	3	4	4	3	3.2
24	M.C.M.SemII	24	10	41.67	7	1	0	2	8.33	70.00	10.00	0.00	1	3	4	4	2	2.8
25	M.C.M.SemIV	12	10	83.33	9	0	0	1	8.33	90.00	0.00	0.00	1	4	4	4	4	3.4
26	MHRD.SemII	27	21	77.78	20	1	0	0	0.00	95.24	4.76	0.00	1	4	4	4	4	3.4
27	MHRD.Sem IV	15	11	73.33	6	5	0	0	0.00	54.55	45.45	0.00	1	3	3	4	3	2.8
28	M.SC. PHY II	32	11	34.38	8	3	0	0	0.00	72.73	27.27	0.00	1	3	3	4	2	2.6
29	M.SC. PHY IV	28	21	75	20	1	0	0	0.00	95.24	4.76	0.00	1	4	4	4	4	3.4
30	M.SC. Chem.sem II	32	13	40.63	12	0	0	0	0.00	92.31	0.00	0.00	1	4	4	4	2	3
3	M.SC. Chem.	24	12	50	10	0	0	0	0.00	83.33	0.00	0.00	1	4	4	4	3	3.2

1	IV																	
32	M.SC. Bot. II	33	12	36.36	12	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	2	3
33	M.SC. Bot. IV	25	23	92	15	0	0	8	32.00	65.22	0.00	0.00	2	3	4	4	4	3.4
34	M.SC. Zoo. II	33	16	48.48	15	1	0	0	0.00	93.75	6.25	0.00	1	4	4	4	2	3
35	M.SC. Zoo. IV	23	10	43.48	10	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	2	3
36	M.C.A.SemII	19	12	63.15	12	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	3	3.2
37	M.C.A.SemIV	61	33	54.09	26	7	0	0	0.00	78.79	21.21	0.00	1	4	4	4	3	3.2
38	M.C.A.SemVI	22	22	100	22	0	0	0	0.00	100.00	0.00	0.00	1	4	4	4	4	3.4
39	M.Tech.Sem II	22	15	68.18	4	0	0	11	50.00	26.67	0.00	0.00	3	2	4	4	3	3.2
40	M.Tech.Sem IV	21	21	100	2	0	0	19	90.48	9.52	0.00	0.00	4	1	4	4	4	3.4
41	M.SC.Math. II	54	19	35.19	6	13	0	0	0.00	31.58	68.42	0.00	1	2	2	4	2	2.2
42	M.Com. I Sem II	29	12	41.38	10	2	0	0	0.00	83.33	16.67	0.00	1	4	4	4	2	3

43	M. Sc. Comp. Sem II	23	23	100	21	0	0	0	0.00	91.30	0.00	0.00	1	4	4	4	4	3.4
44	M. A. English Sem II	26	2	7.69	0	2	0	0	0.00	0.00	100.00	0.00	1	1	1	4	1	1.6

Course Outcome Attainment

2018-19

Introduction:

Course Outcomes (CO) of various programs offered by the college are measured on the basis of performance of the learners in different curricular and co-curricular activities. Depending on the nature of the programme, the college practices different methods to measure the attainment level of Course Outcomes. Some of these methods have been listed below:

1. Continuous monitoring of students while doing regular practicals and handling different instruments to evaluate modern tool usage.
2. Use of continuous internal evaluation through unit tests, assignments, seminars, and other participative learning methods to evaluate subject knowledge.
3. Participation of learners in different elocution, debate, seminar and sports competitions to assess individual and team work.
4. Use of question-answer methodology to check communication skills and critical thinking of learners.
5. Project based work in PG classes to evaluate the efficiency to conduct investigations of complex problems and design/development of solutions.
6. Participation of students in different activities like *Yuva Mahotsav*, Trade Fair, college annual gathering to assess individual and team work, finance management skills, social interaction and effective citizenship.
7. Students' involvement in different activities like tree-plantation, rain water harvesting, NSS, etc. to evaluate his/her responsibilities toward environment protection and sustainability.
8. Effective use of ICT techniques by the learners to acquire modern tool usage and employability skills.
9. Learner's involvement in group discussions, field visits and study tours are used to assess social interaction and effective communication as well as effective citizenship and social and professional ethics in a student.

Beside this, learners are evaluated constantly based on their regularity, their responsiveness, participation in class discussions, and participation in co-curricular activities and the overall quality of their conduct. In addition to above parameters the scale used to analyze the attainment of course outcomes is as under:

Attainment Level 1: 0-25% Students successfully completed the respective course at final year. **Attainment Leve2**:26-49%Students successfully completed the respective course at final year. **Attainment Level 3**:50-74% Students successfully completed the respective course at final year. **Attainment Level 3**:75-100% Students successfully completed the respective course at final year.

Based on the above parameters the attainment level of Program Specific outcomes of the program offered by the college is asunder:

Sr. No.	Name of Subject	No. of Students Appeared for Examination	No. Students Successfully Completed the Course	Passed Percentage	Attainment level
1.	Botany	86	68	79.07	4
2.	Chemistry	211	175	82.94	4
3.	Computer Science	59	46	77.97	4
4.	Computer Application	34	29	85.29	4
5.	Electronics	36	22	61.11	3
6.	Industrial Chemistry	36	34	94.44	4
7.	Mathematics	137	113	82.48	4
8.	Physics	187	152	81.28	4
9.	Zoology	92	79	85.87	4
10.	English	79	50	63.29	3
11.	Marathi	77	72	93.51	4
12.	Hindi	2	2	100	4
13.	Economics	29	27	93.1	4
14.	English Literature	18	13	72.22	3
15.	Marathi Literature	20	17	85	4
16.	History	55	46	83.64	4
17.	Political Science	53	42	79.29	4
18.	Psychology	17	15	88.24	4
19.	Sociology	45	33	73.33	3
20.	Cosmetic Technology-VIII	60	54	90	4

21.	Perfume & Colour –VI	60	58	96.67	4
22.	Herbal Cosmetic-VI	60	59	98.33	4
23.	Cosmetic Jurisprudence	60	59	98.33	4
24.	Cosmetic Engineering-IV	60	60	100	4
25.	.Net Using ASP	101	85	84%	4
26.	Client Server Technology	101	95	94.00%	4
27.	Multimedia & Its Application	101	97	96.04%	4
28.	Software Testing	101	94	93%	4
29.	Advanced Database Management System	101	83	82.18%	4
30.	Supplementary English	64	59	92.19	4
31.	Business Environment	118	106	89.83	4
32.	Business Regulatory Frame Work	118	109	92.37	4
33.	Cost and Management Account	118	110	93.22	4
34.	Essentials of e-commerce	118	113	95.76	4
35.	Internet and World Wide Web	118	110	93.22	4

LIST OF MERITORIOUS STUDENTS

Students Securing Position in the Merit List of Sant Gadge Baba Amravati University, Amravati, in summer, **2019**

S.N.	Name of the Student	Class	University Rank
1	Ms. Sweta Prakash Khedkar	MCM	I
2	Ankita Dilipkumar Shivnani	MHRD	I
3	Ms. Ruchi Sushilkumar Chawala	MHRD	II
4	Ms. Kushbu Anil Jain	M. Tech. (Cosmetic)	I
5	Ms. Bhagyashri Vijayrao Gulhane	M.Tech. (Cosmetic)	I
6	Ms. Roshni Brijlal Keshwani	M.Tech. (Cosmetic)	II
7	Ms. Nisha Deepak Sharma	B. Tech. (Cosmetic)	II
8	Ms. Nisha Deepak Patel	B. Tech. (Cosmetic)	III
9	Ms. Radha Ravindrasingh Thakur	B. Tech. (Cosmetic)	V
10	Ms. Sonu Dallaram Sutar	B.C.A	I
11	Ms. Nidhi Murlidhar Mantri	B.C.A	IV
12	Ms. Disha Pradeep Kediya	B.C.A	VIII
13	Mr. Kartik Sanjay Jayaswal	M.B.A	III
14	Mr. Sanket Rajesh Gupta	B.B.A	II
15	Ms. Radhika Sanjay Chandak	B.B.A	VIII
16	Shoeb Ahmad Ekbal Ahamad	B.B.A	X

Report on Attainment of Learning Outcomes

2018-19

Simply preparing, and communicating the learning outcomes (Programme Outcomes and Course Outcomes) is not sufficient unless there is a strong and structured mechanism for evaluating their attainment as it provides a yardstick to measure as to what extent the institution has succeeded in accomplishing its goals in consonance with its vision and mission. The IQAC has developed an effective and proper mechanism for the attainment of learning outcomes duly approved by the Governing Body. The attainment of learning outcomes is a significant aspect to enhance quality and mend the system to fulfil the need for common good of students, institution and society. Consequently, in 2018-19, the attainment of learning outcomes was given due importance by the college. In order to understand the level of attainment of learning outcomes for various courses, a questionnaire comprising 18 multiple choice questions was devised and uploaded on the institutional website. The details of this survey are as follow:

Survey/Feedback Type : Online
Website address : vbmv.org
Direct Link URL: https://vbmv.org/sss-attainment.php
Total number of questions attempted: 18
Total number of students in final year examination: 944
Number students participated: 878

The following are the observations on attainment of learning outcomes:

1. The students expressed their satisfaction about the display and communication of learning outcome for the courses.
2. The students revealed that they acquired expected competencies after completion of the program.
3. The students agreed that the college provided ample opportunities to learn all the skills that they expected.
4. The students revealed their satisfaction for adequate number of equipments and facilities as well as knowledge of teachers.
5. The students suggested to increase the use of online classrooms such as Google Classrooms.

Action taken:

1. The teachers have enhanced the use of online classrooms such as Google Classrooms.

2. The administration of college has upgraded the Wi-Fi and internet facility to enhance the use of ICT techniques in teaching-learning.

3. The college has upgraded the IT infrastructure.

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance Cell
Vidya Bharati Mahavidyalaya
Camp, Amravati-444 602 (M.S.)

Vidya Bharati Mahavidyalaya College Amravati

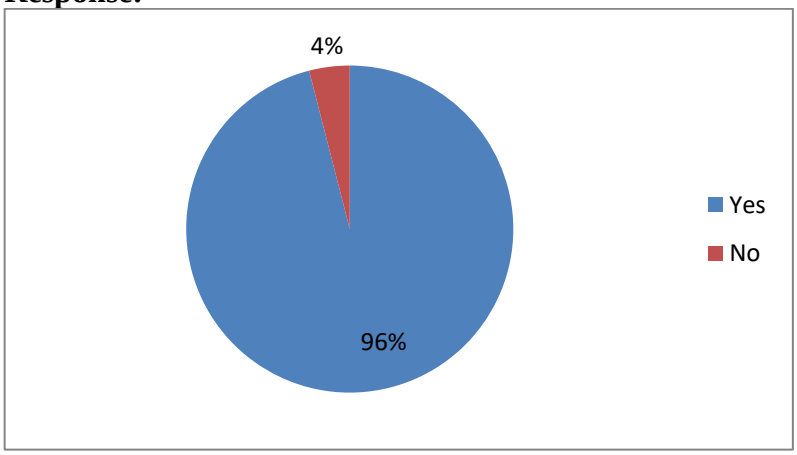
PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI.

Response to questionnaire to assess attainment of PO, PSO and CO: 2018-19

Q1. Is the information available through website and information brochure about the program?

- Yes
- No

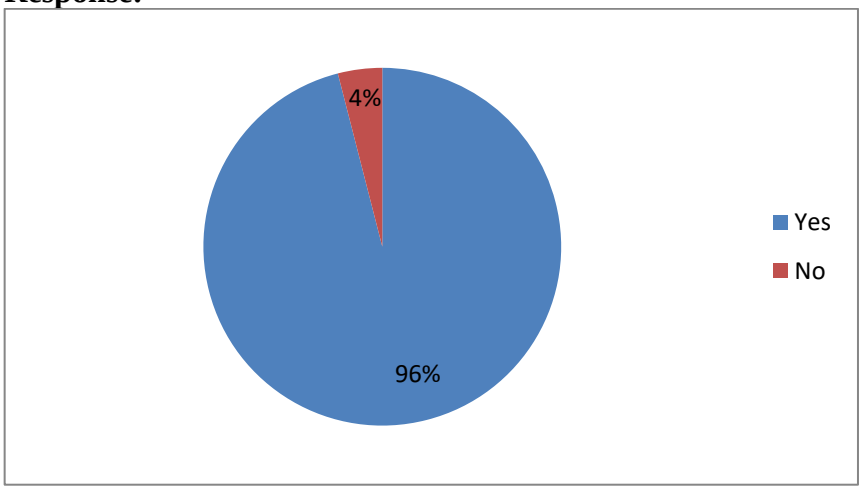
Response:



Q2. Are the learning outcomes (Programme Outcomes and Course Outcomes) displayed on college website?

- Yes
- No

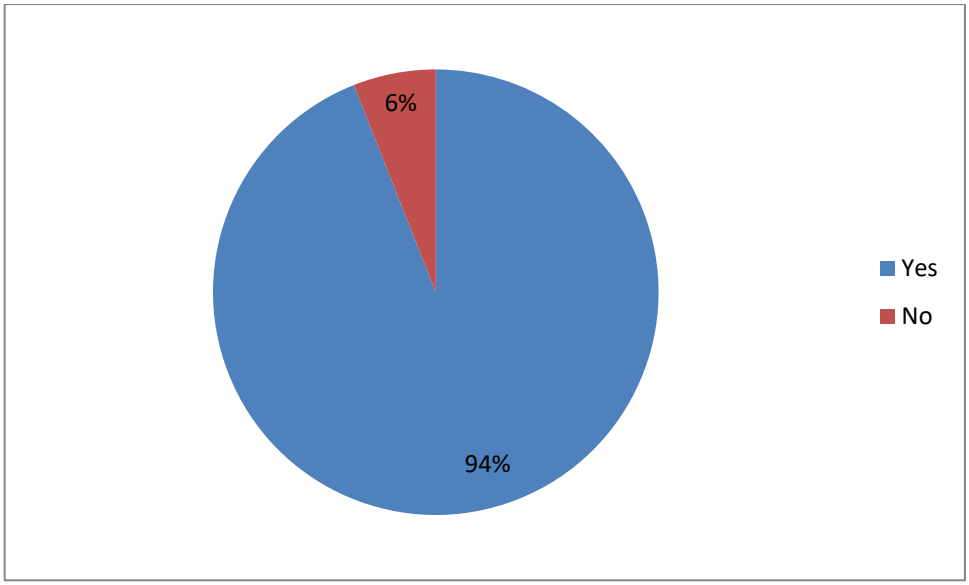
Response:



Q3. Did you read the outcomes of the programme before taking admission?

- Yes
- No

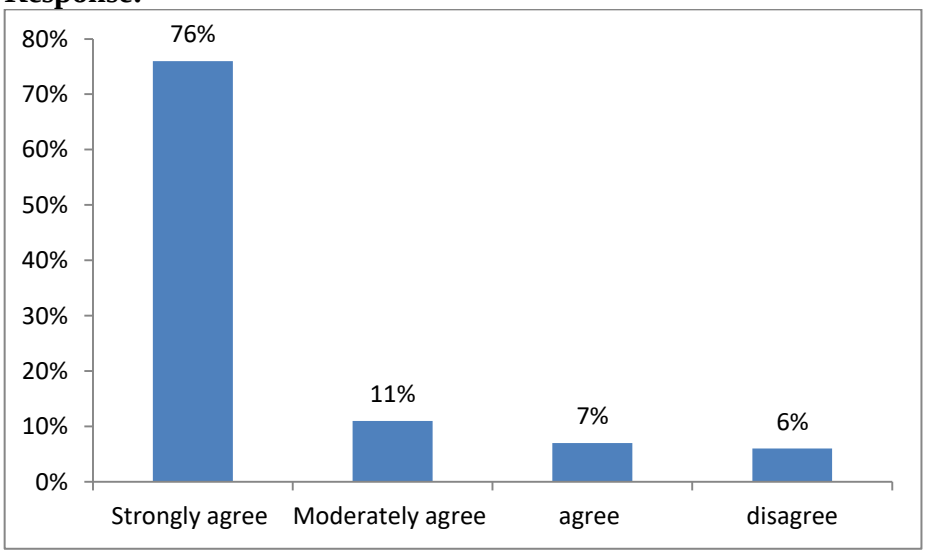
Response:



Q4. I have learned what I expected from the program

- Strongly agree
- Moderately agree
- agree
- disagree

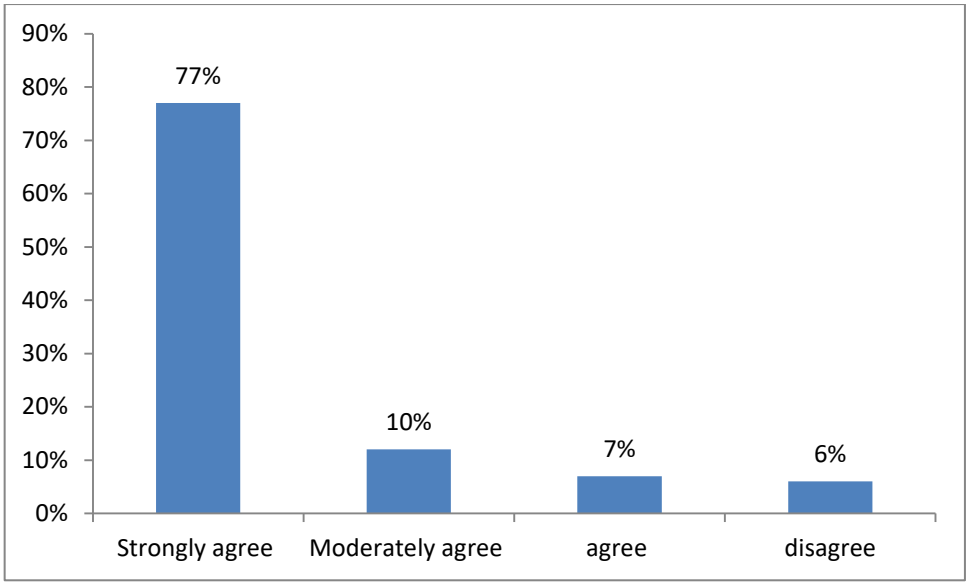
Response:



Q5. The college provided ample opportunities to learn all the skills that you expected

- Strongly agree
- Moderately agree
- agree
- disagree

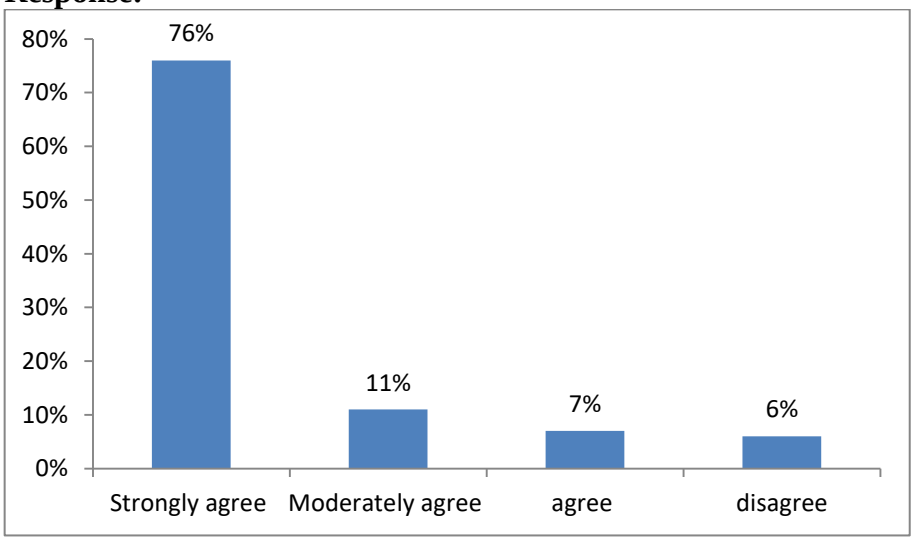
Response:



Q6. The college has adequate number of equipments and facilities and are well maintained

- Strongly agree
- Moderately agree
- agree
- disagree

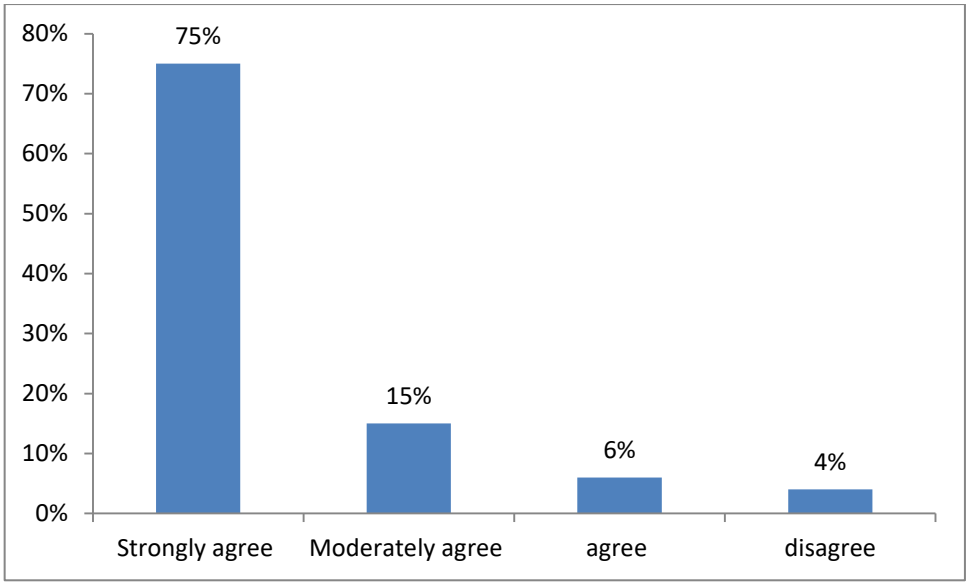
Response:



Q7. The teachers provide sufficient knowledge to develop skills

- Strongly agree
- Moderately agree
- agree
- disagree

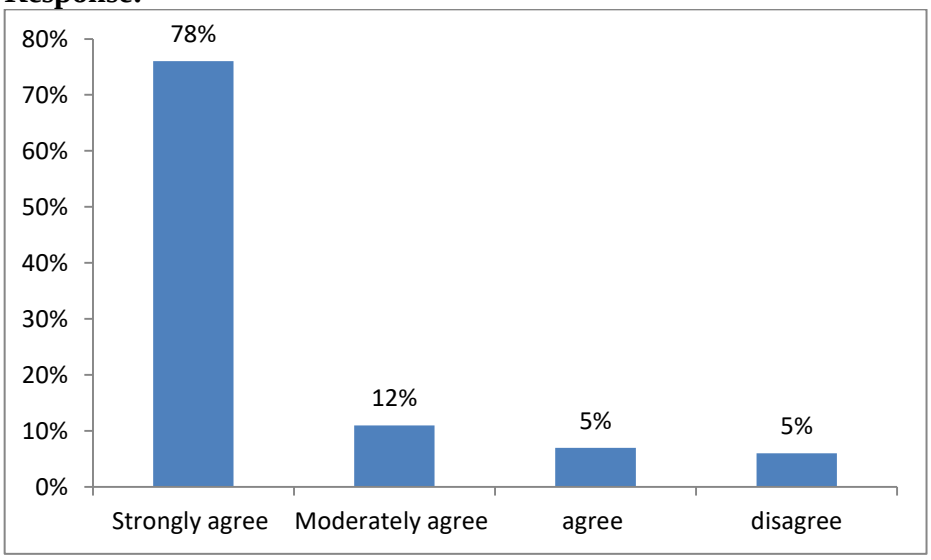
Possible Response:



Q8. Do you have idea of what jobs you might be able to get after completing the program

- Strongly agree
- Moderately agree
- agree
- disagree

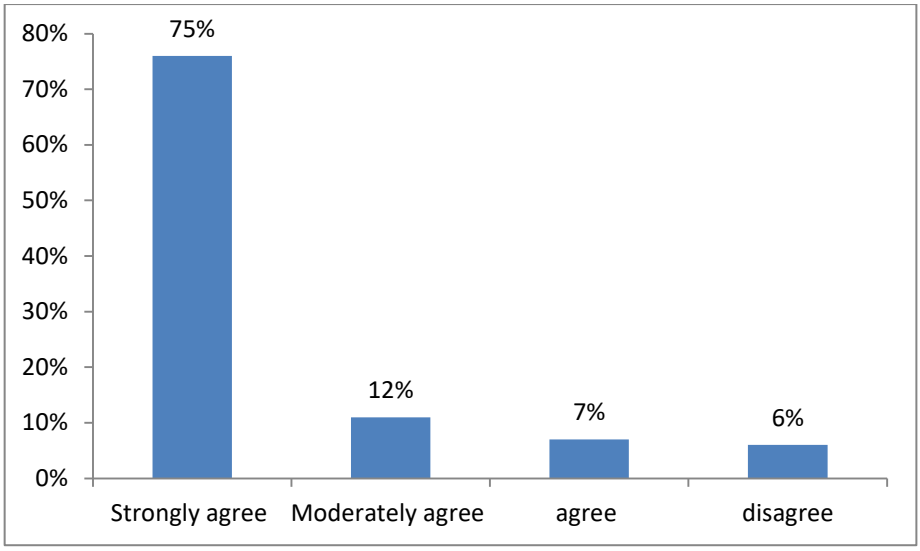
Response:



Q9. Support services such as tutoring and counselling were adequate and helped me succeed in the program

- Strongly agree
- Moderately agree
- agree
- disagree

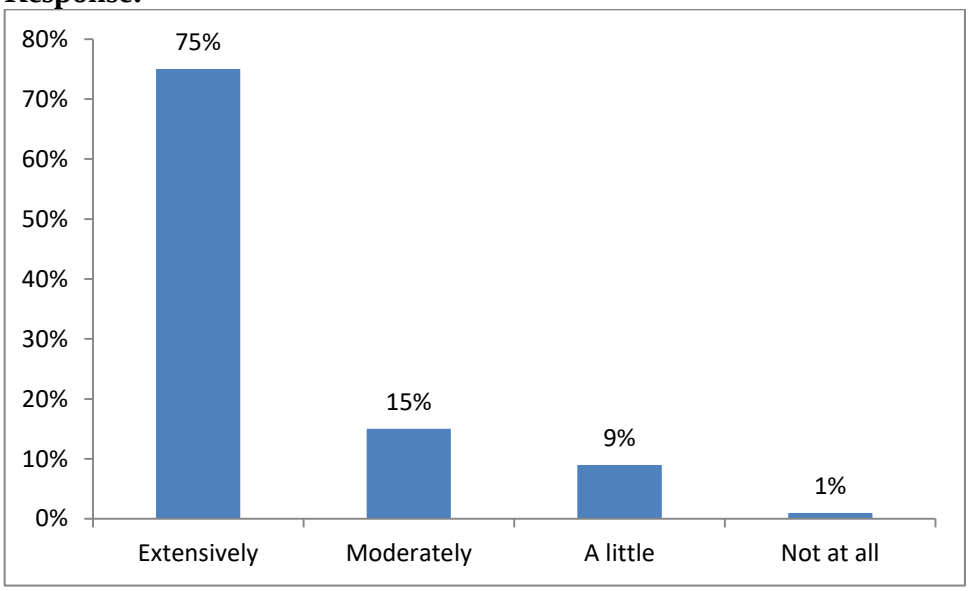
Response:



Q10. How much did you write (assignments, tutorials, activities) in your program?

- Extensively
- Moderately
- A little
- Not at all

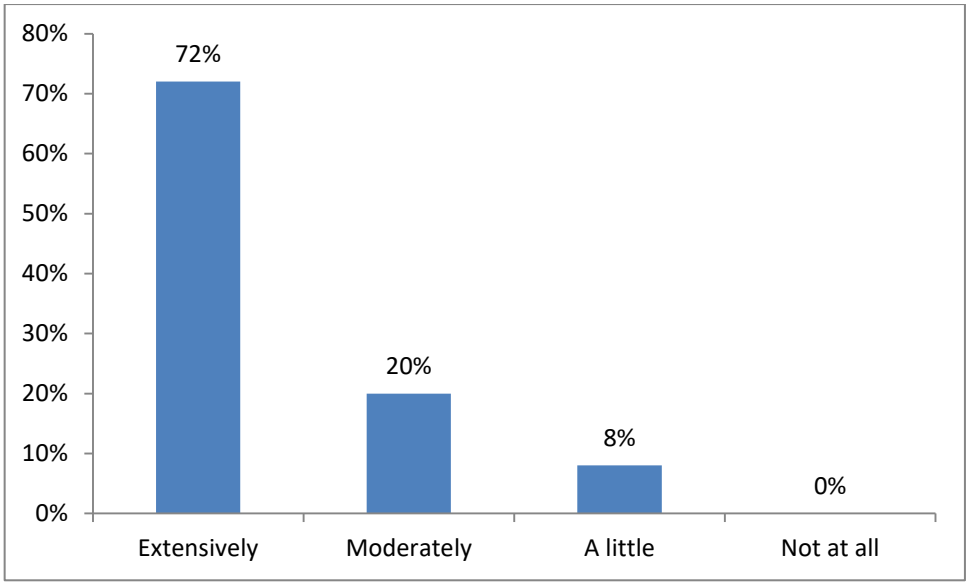
Response:



Q11. Did your program contain activities to increase information technology literacy?

- Extensively
- Moderately
- A little
- Not at all

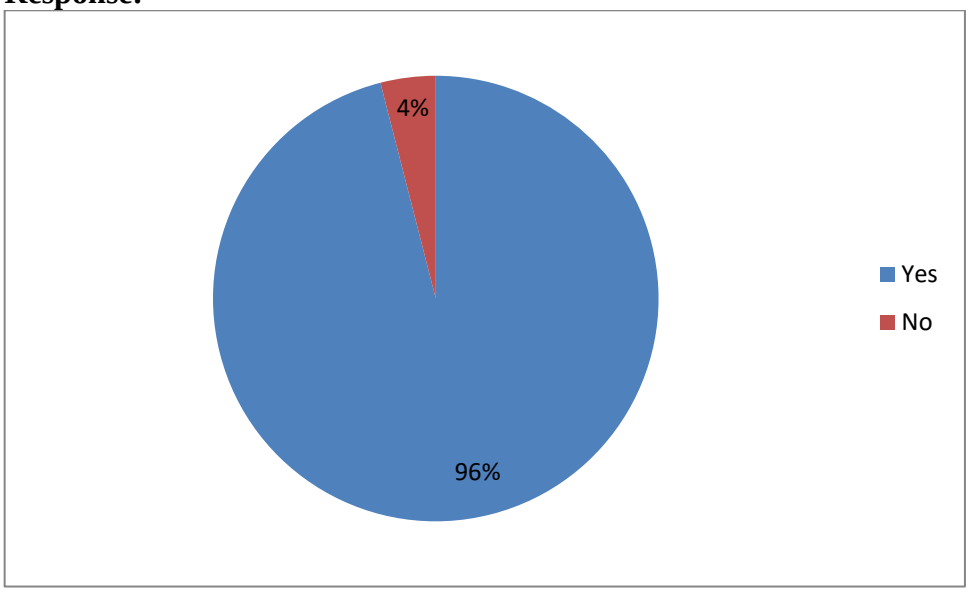
Response:



Q12. Did your program include modes of critical thinking?

- Yes
- No

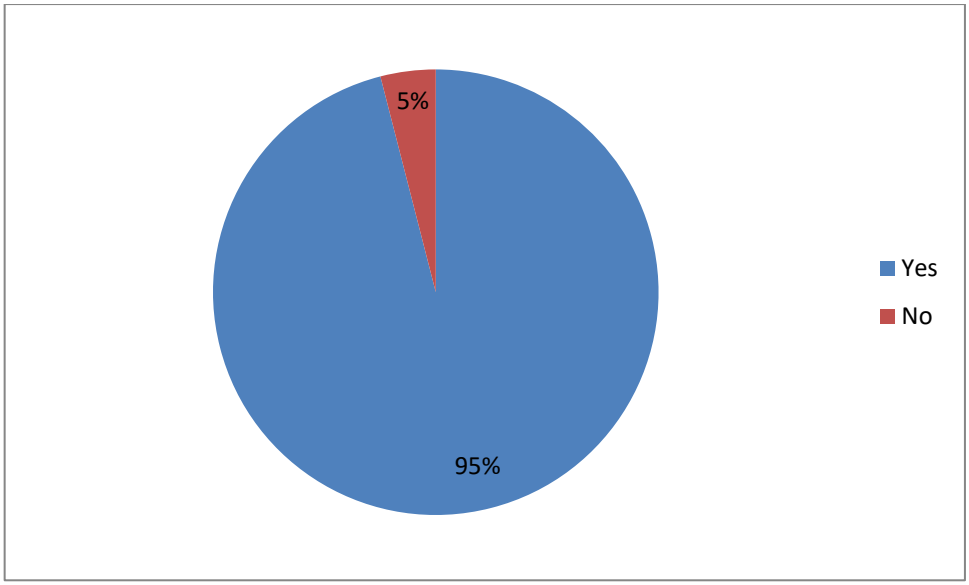
Response:



Q13. Did your program include project work?

- Yes
- No

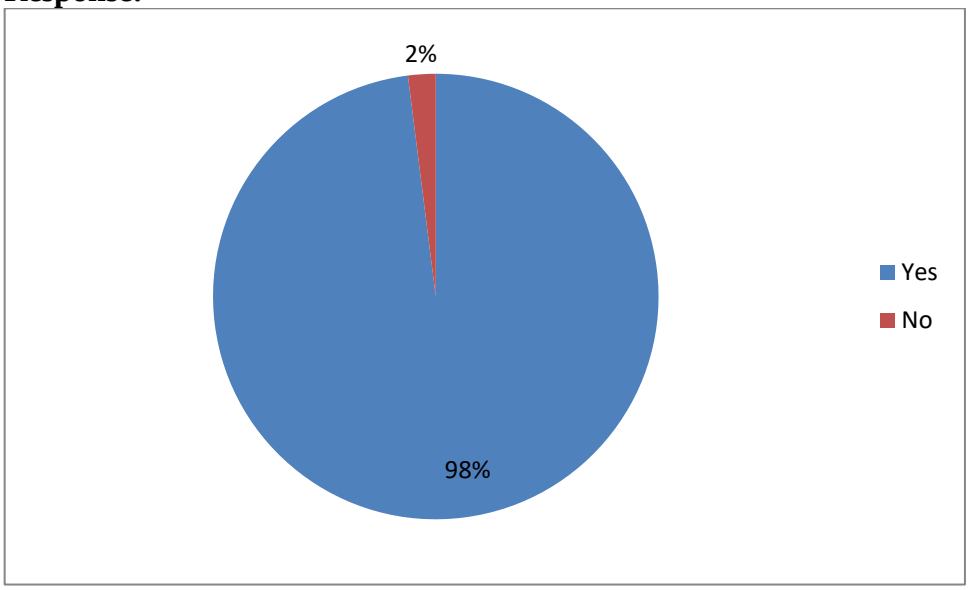
Response:



Q14. Did you participate in community based projects or service learning activities (NSS, NCC)?

- Yes
- No

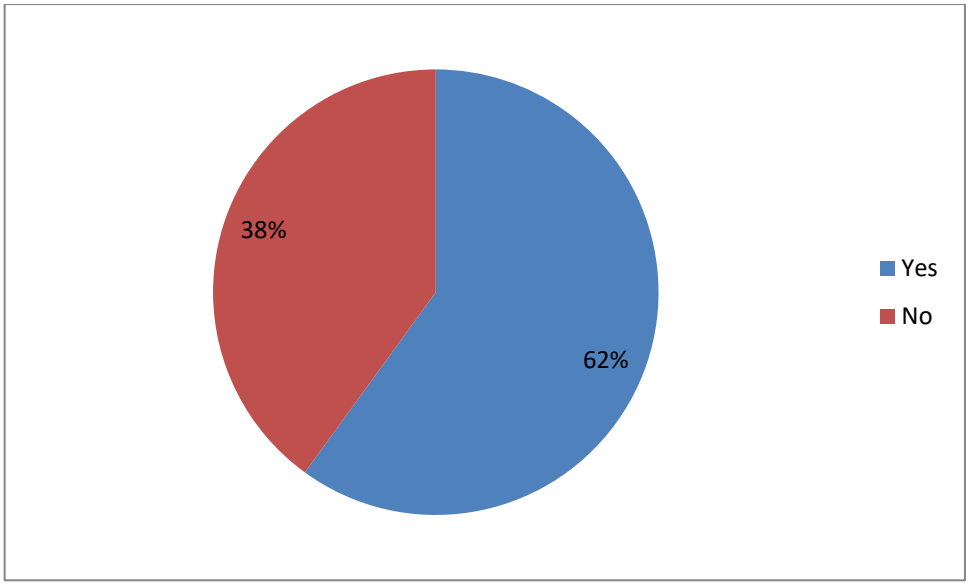
Response:



Q15. Did your program include internship programs and exposure to industry as a part of syllabus?

- Yes
- No

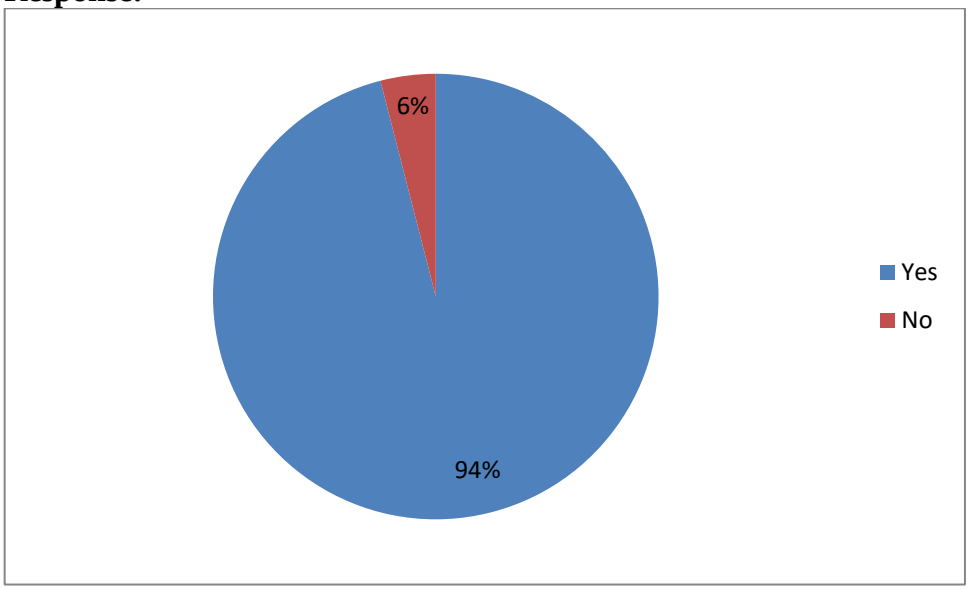
Response:



Q16. Will you recommend this programme to other students?

- Yes
- No

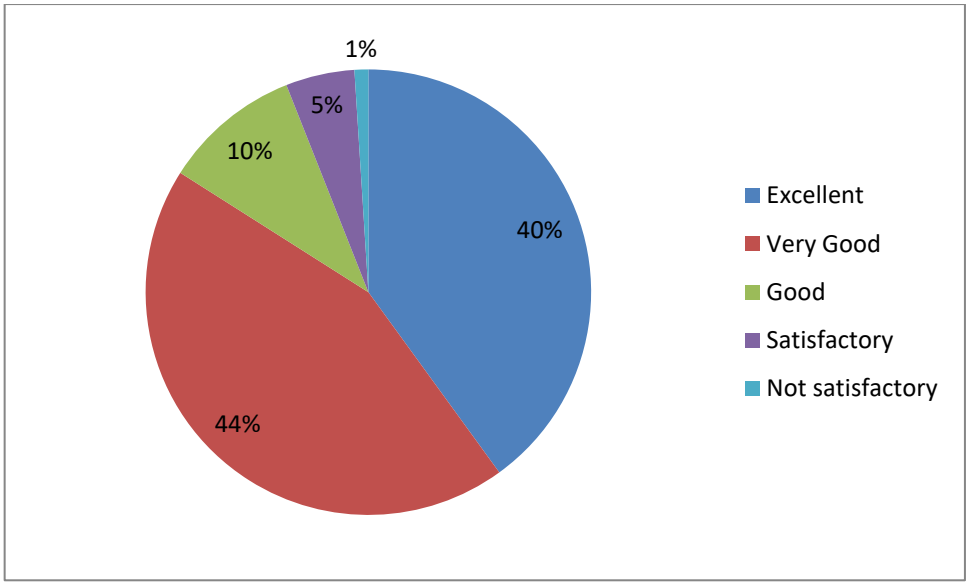
Response:



Q17. Rating overall quality of learning experience in this college

- Excellent
- Very Good
- Good
- Satisfactory
- Not satisfactory

Response:


1%
5%
10%
40%
44%
Excellent
Very Good
Good
Satisfactory
Not satisfactory

Report on Attainment of Learning Outcomes

2017-18

The college believes that preparation and communication of learning outcomes (Programme Outcomes and Course Outcomes) is not enough. There is a need of robust and organized mechanism for evaluating their attainment as it offers a yardstick to quantify as to what extent the institution has thrived in achieving its goals in consonance with its vision and mission. The IQAC has devised an efficient and suitable mechanism for the attainment of learning outcomes duly approved by the Governing Body. The attainment of learning outcomes is an important aspect to improve the quality and mend the system to accomplish the need of students, institution and society. Accordingly, in 2017-18, the attainment of learning outcomes was given prodigious significance by the college. In order to understand the level of attainment of learning outcomes for various courses, a questionnaire encompassing 18 multiple choice questions was developed and uploaded on the institutional website. The details of this survey are as follow:

Survey/Feedback Type : Online
Website address : vbmv.org
Direct Link URL: https://vbmv.org/sss-attainment.php
Total number of questions attempted: 18
Total number of students in final year examination: 887
Number students participated: 842

The following are the observations on attainment of learning outcomes:

1. The students revealed their satisfaction about the display and communication of learning outcome for the courses.
2. The students expressed that they assimilated expected competencies after completion of the program.
3. The students pointed out that the institution provided sufficient opportunities to learn all the skills that they expected.
4. The students revealed their satisfaction regarding knowledge of teachers.
5. The students agreed with the fact that the laboratories are good but there is a scope to increase this facility.

Action taken:

1. The college has renovated and upgraded the laboratories of different departments like Chemistry, Physics, etc.
2. The college procured a good number of equipments.

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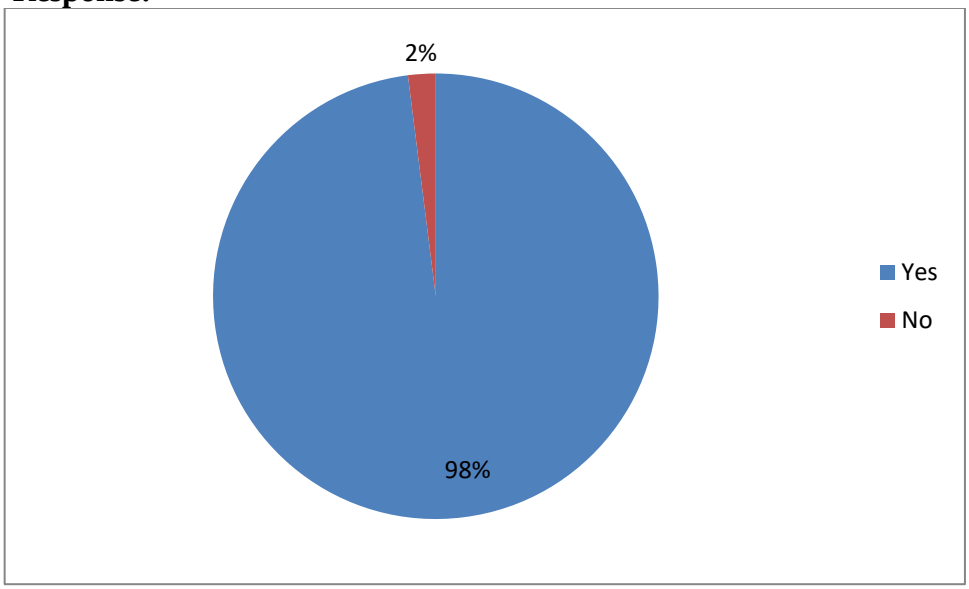
PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI.

Response to questionnaire to assess attainment of PO, PSO and CO: 2017-18

Q1. Is the information available through website and information brochure about the program?

- Yes
- No

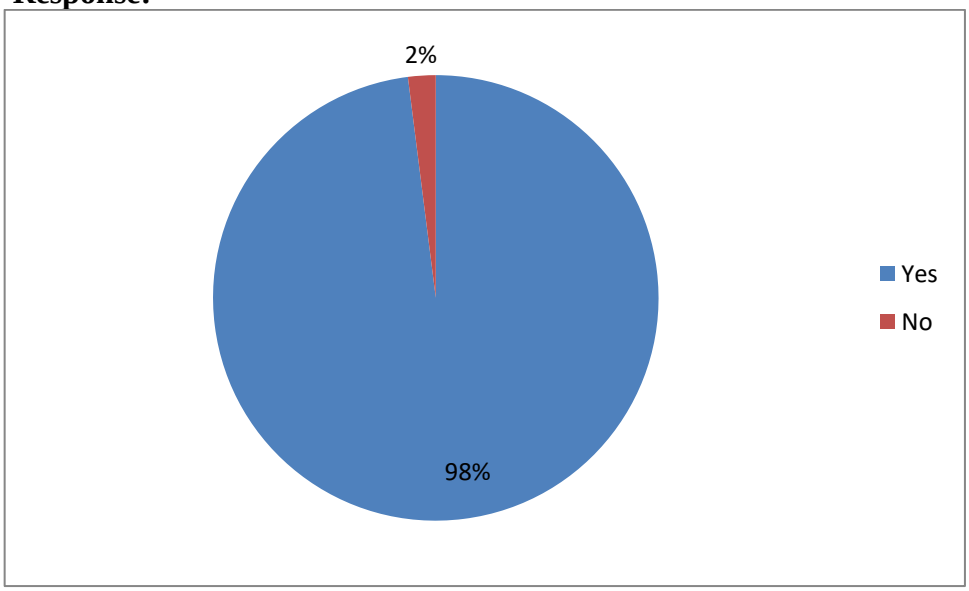
Response:



Q2. Are the learning outcomes (Programme Outcomes and Course Outcomes) displayed on college website?

- Yes
- No

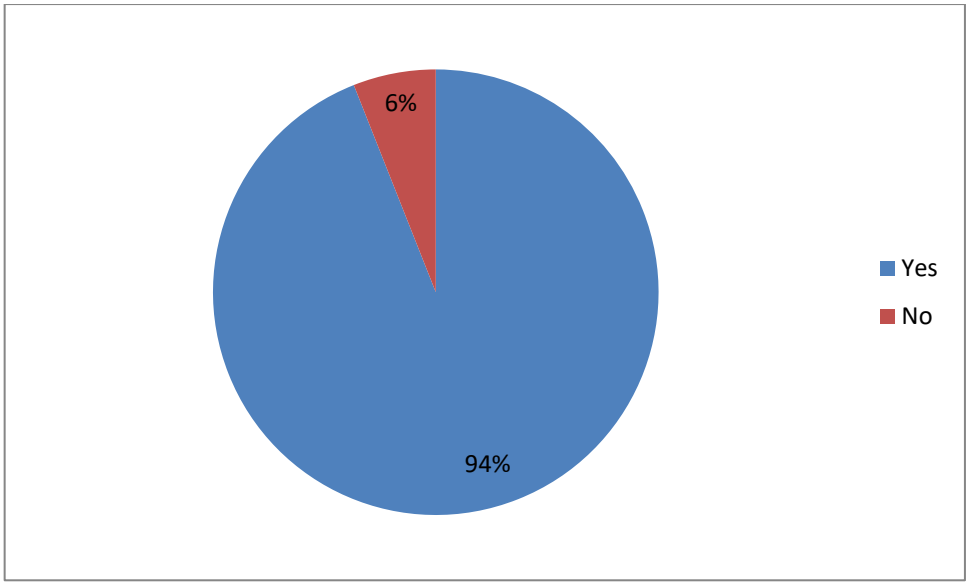
Response:



Q3. Did you read the outcomes of the programme before taking admission?

- Yes
- No

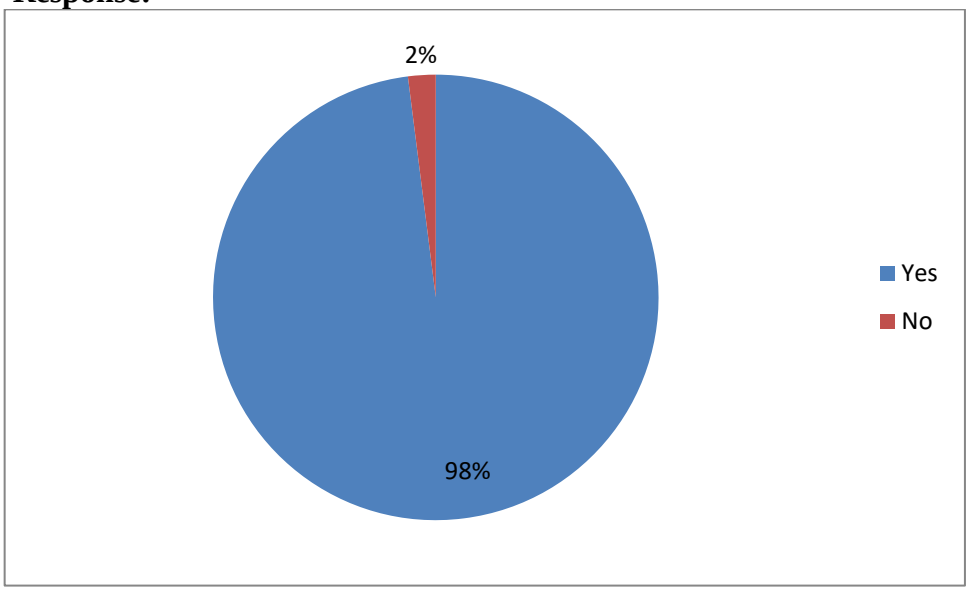
Response:



Q4. I have learned what I expected from the program

- Strongly agree
- Moderately agree
- agree
- disagree

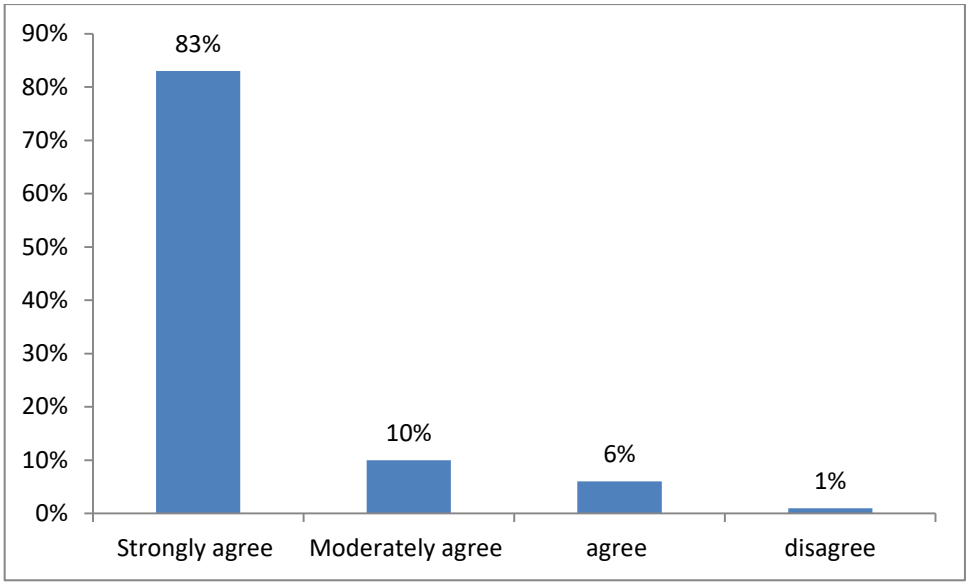
Response:



Q5. The college provided ample opportunities to learn all the skills that you expected

- Strongly agree
- Moderately agree
- agree
- disagree

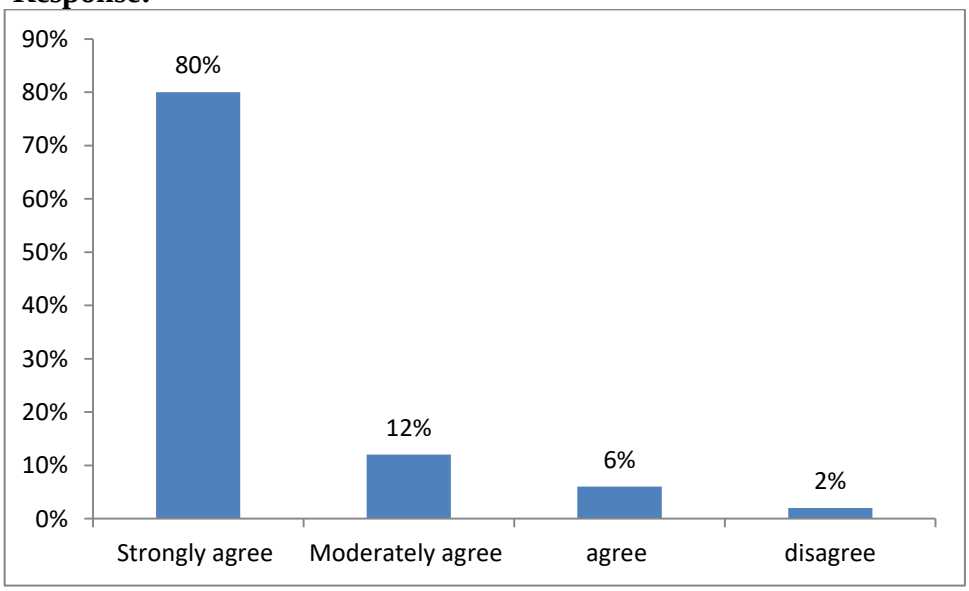
Response:



Q6. The college has adequate number of equipments and facilities and are well maintained

- Strongly agree
- Moderately agree
- agree
- disagree

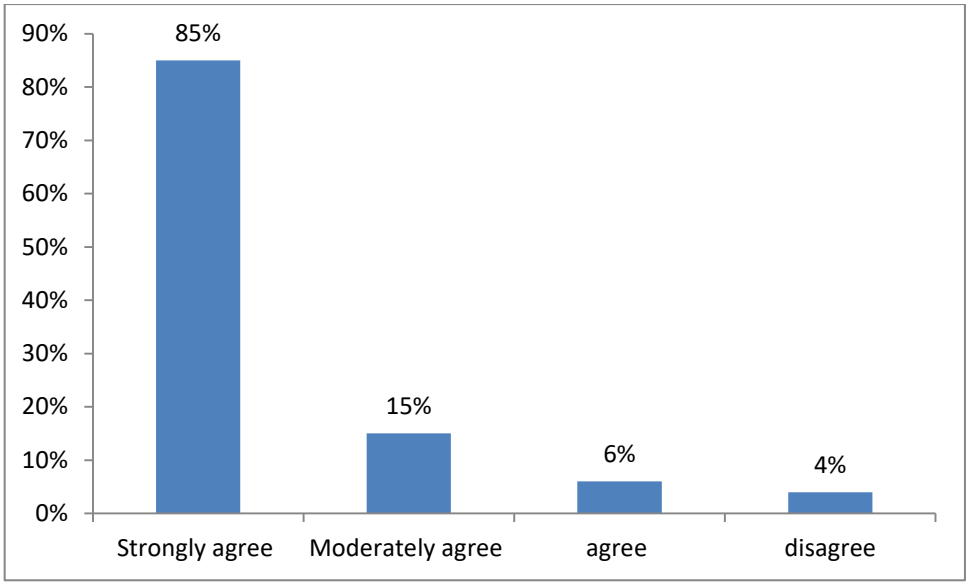
Response:



Q7. The teachers provide sufficient knowledge to develop skills

- Strongly agree
- Moderately agree
- agree
- disagree

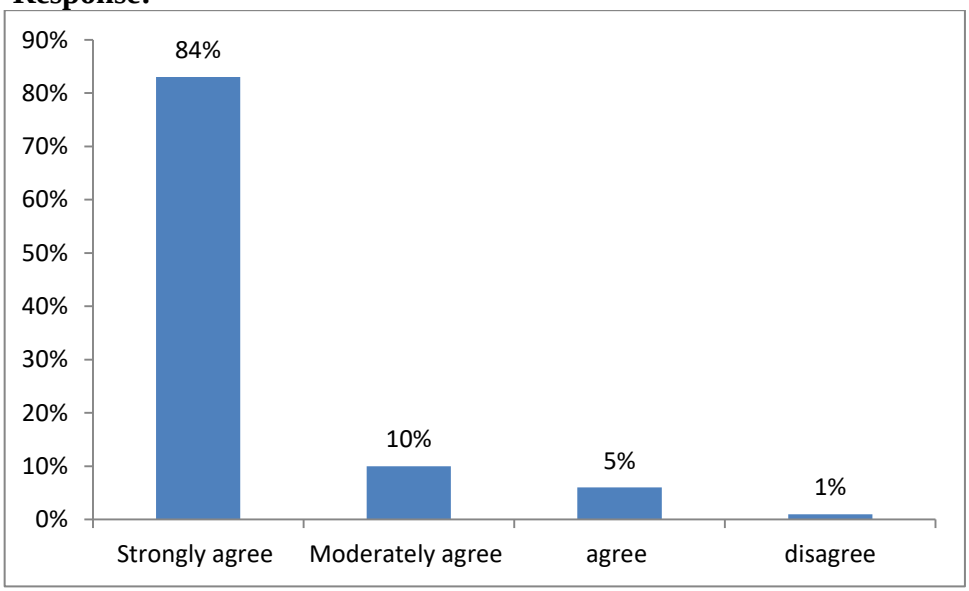
Response:



Q8. Do you have idea of what jobs you might be able to get after completing the program

- Strongly agree
- Moderately agree
- agree
- disagree

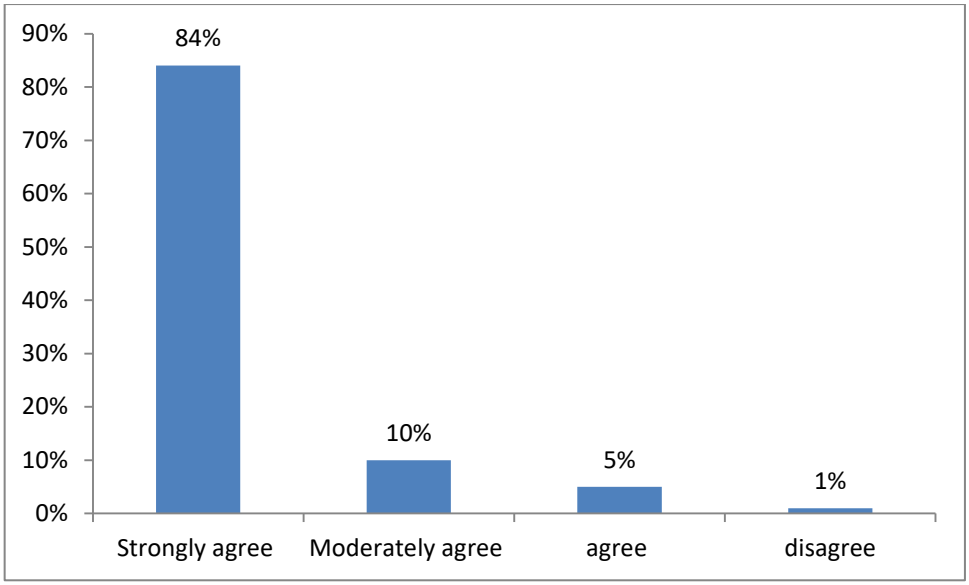
Response:



Q9. Support services such as tutoring and counselling were adequate and helped me succeed in the program

- Strongly agree
- Moderately agree
- agree
- disagree

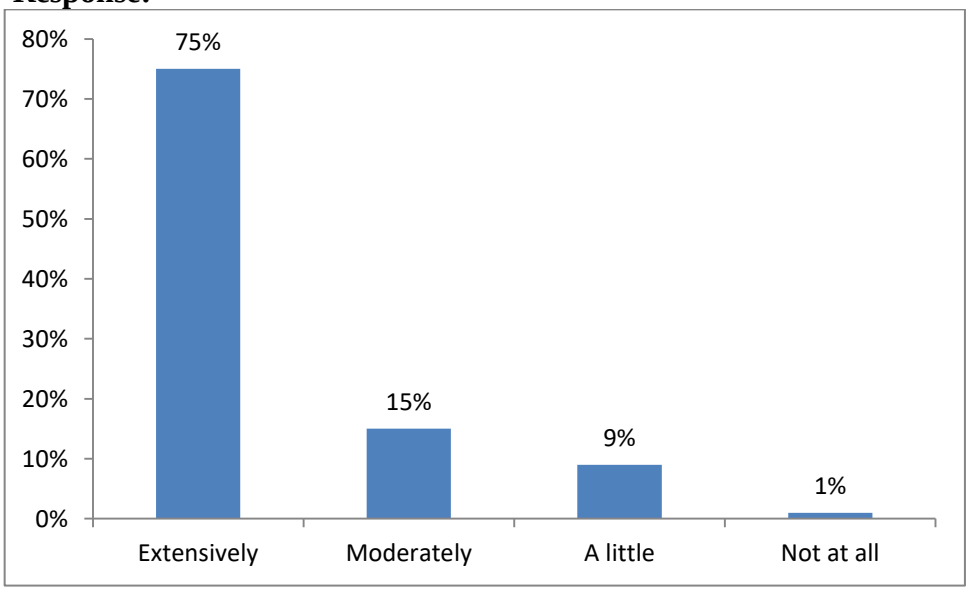
Response:



Q10. How much did you write (assignments, tutorials, activities) in your program?

- Extensively
- Moderately
- A little
- Not at all

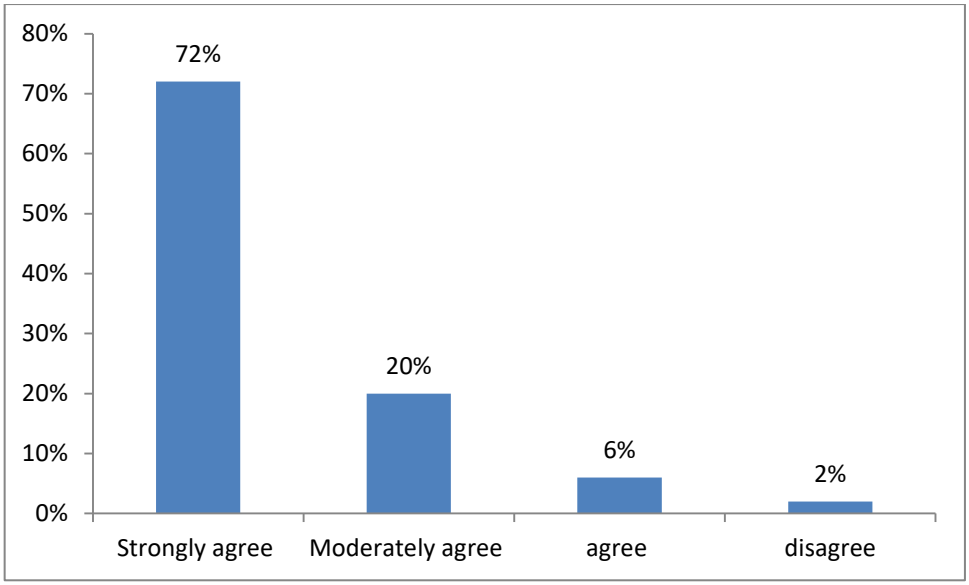
Response:



Q11. Did your program contain activities to increase information technology literacy?

- Extensively
- Moderately
- A little
- Not at all

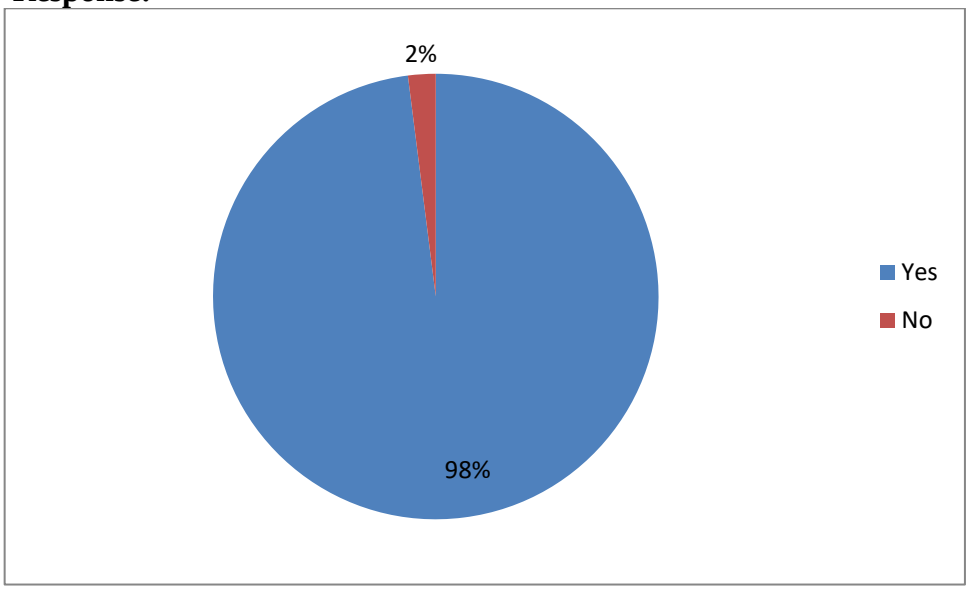
Response:



Q12. Did your program include modes of critical thinking?

- Yes
- No

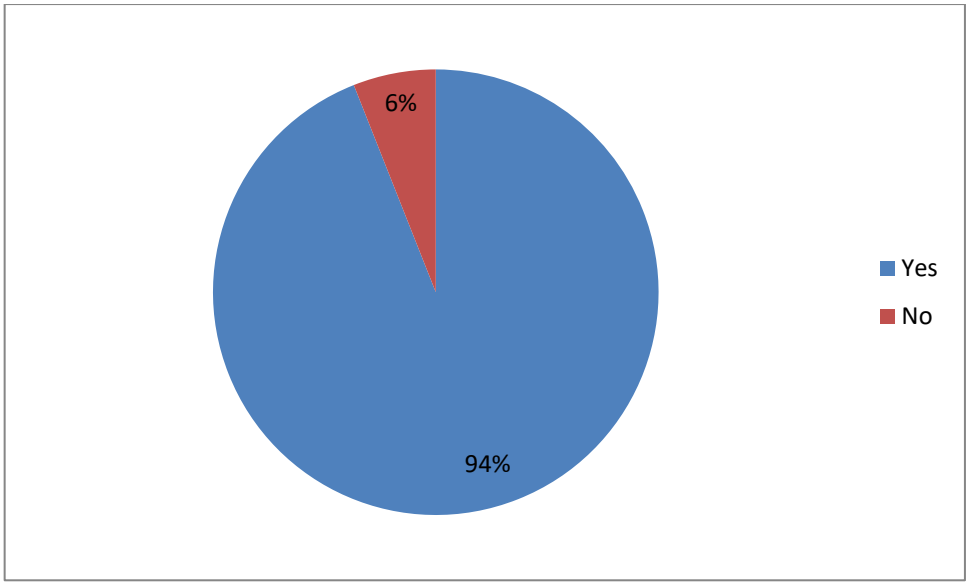
Response:



Q13. Did your program include project work?

- Yes
- No

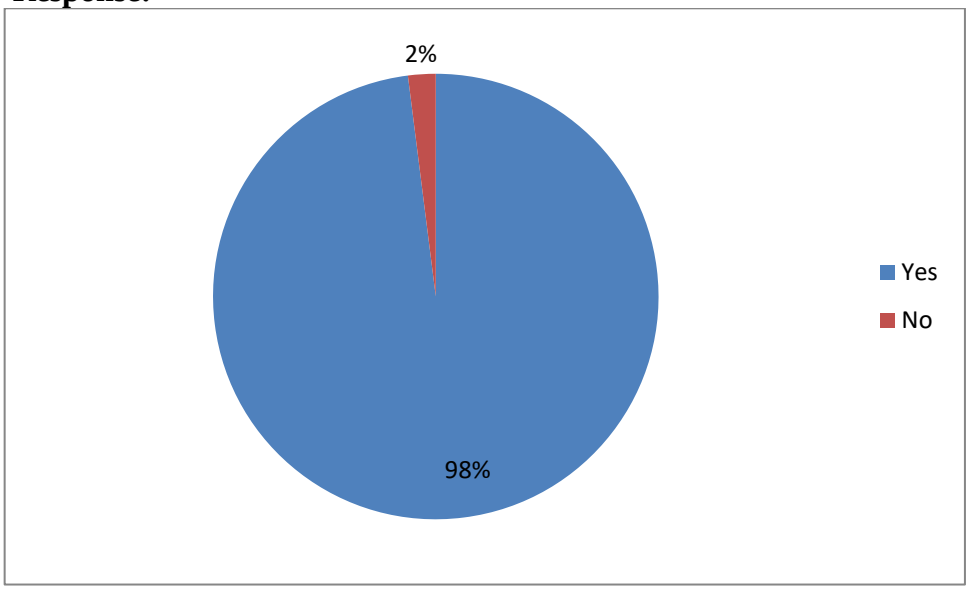
Response:



Q14. Did you participate in community based projects or service learning activities (NSS, NCC)?

- Yes
- No

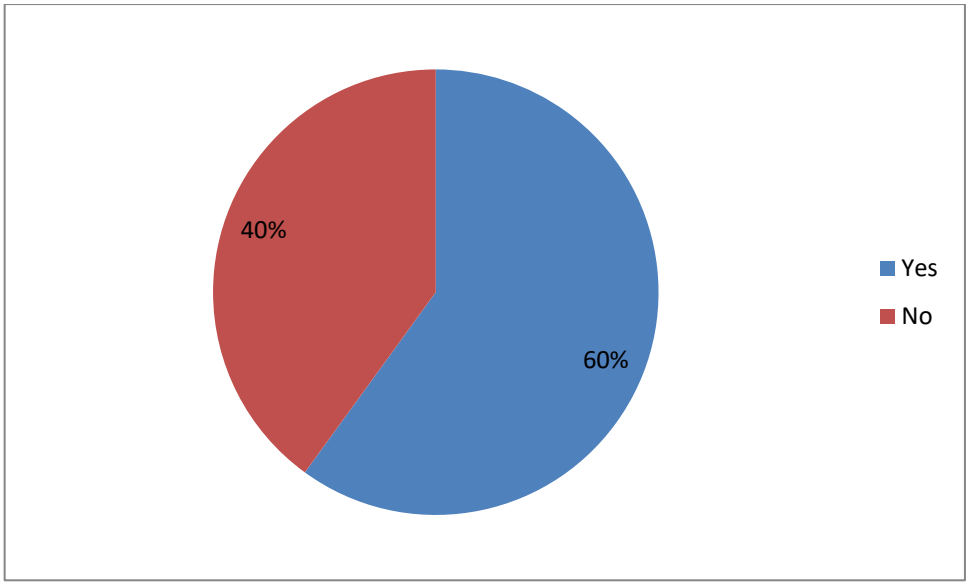
Response:



Q15. Did your program include internship programs and exposure to industry as a part of syllabus?

- Yes
- No

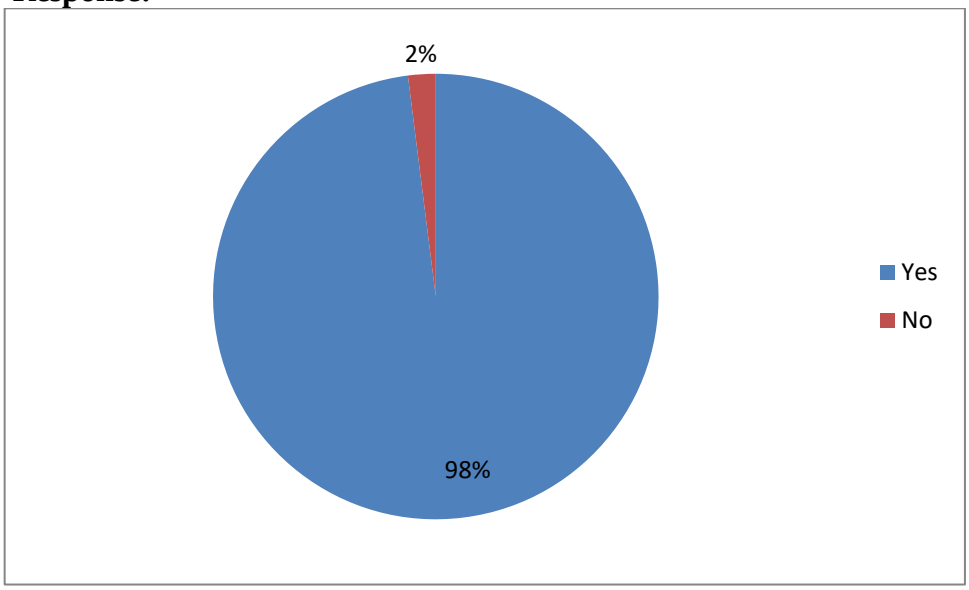
Response:



Q16. Will you recommend this programme to other students?

- Yes
- No

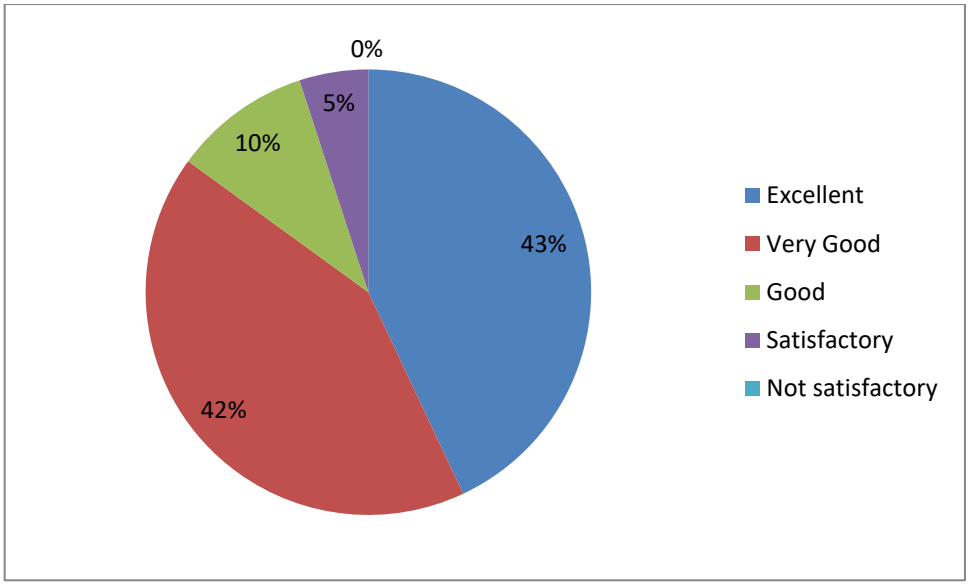
Response:



Q17. Rating overall quality of learning experience in this college

- Excellent
- Very Good
- Good
- Satisfactory
- Not satisfactory

Response:


0%
5%
10%
43%
42%
Excellent
Very Good
Good
Satisfactory
Not satisfactory

Report on Attainment of Learning Outcomes

2016-17

The college considers that only preparation and communication of learning outcomes (Programme Outcomes and Course Outcomes) is not sufficient. There is a need of strong and structured mechanism for evaluating their attainment as it offers a benchmark to measure as to what extent the institution has succeeded in achieving its goals in consonance with its vision and mission. The IQAC has devised an efficient and suitable mechanism for the attainment of learning outcomes duly approved by the Governing Body. The attainment of learning outcomes is an important aspect to improve the quality and mend the system to accomplish the need of students, institution and society. Accordingly, in 2016-17, the attainment of learning outcomes was given high significance by the college. In order to understand the level of attainment of learning outcomes for various courses, a questionnaire encompassing 18 multiple choice questions was developed and uploaded on the institutional website. The details of this survey are as follow:

Survey/Feedback Type : Online
Website address : vbmv.org
Direct Link URL: https://vbmv.org/sss-attainment.php
Total number of questions attempted: 18
Total number of students in final year examination: 874
Number students participated: 795

The following are the observations on attainment of learning outcomes:

1. The students have shown their satisfaction about the display and communication of learning outcome for the courses.
2. The students revealed that they acquired expected competencies after completion of the program.
3. The students pointed out that the institution provided sufficient opportunities to learn all the skills that they expected.
4. The students revealed their satisfaction regarding knowledge of teachers.
5. The students agreed with the fact that the college is conducting a good number of co-curricular activities but there is a need to organize more co- and extra-curricular activities.

Action taken:

1. General Events & Management Society (GEMS) has been established to organize the activities like ‘Trade Fair’, Josh (annual Gathering), visits to various NGOs, Old aged home and orphanage, a few to mention.

2. The college also organized a good number of activities by means of SOEC, PWSC, NSS, NCC, etc.

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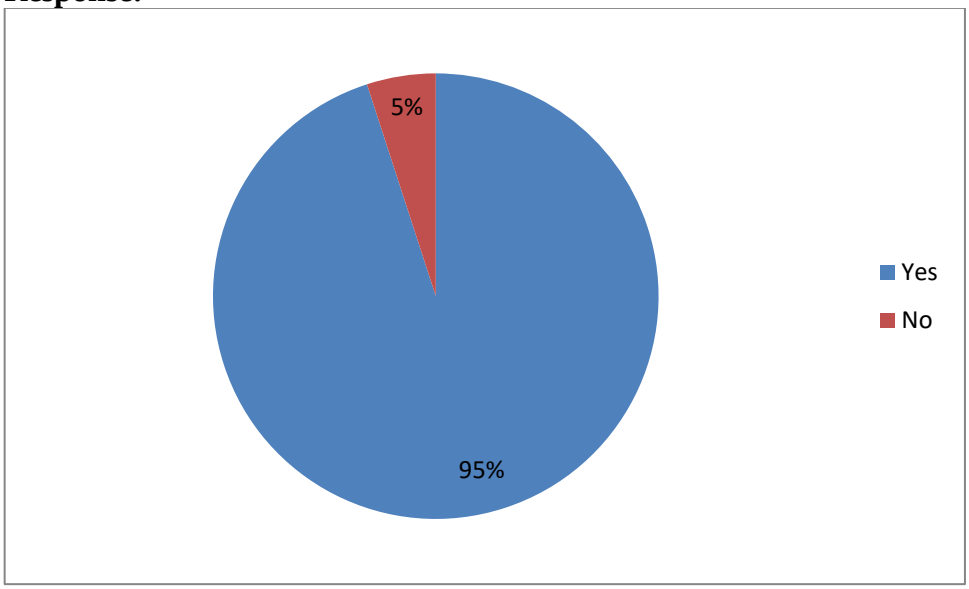
AMRAVATI.

Response to questionnaire to assess attainment of PO, PSO and CO: 2016-17

Q1. Is the information available through website and information brochure about the program?

- Yes
- No

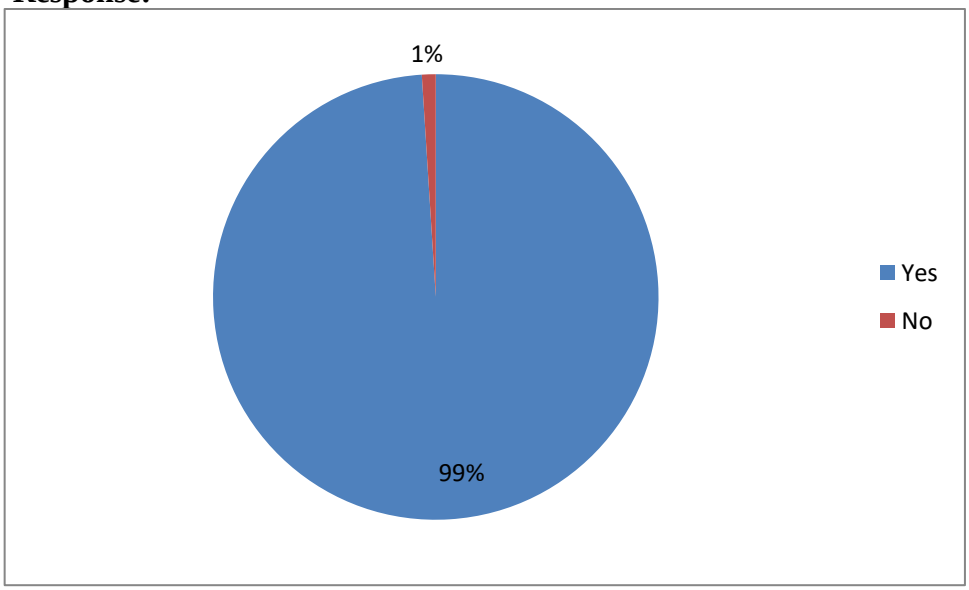
Response:



Q2. Are the learning outcomes (Programme Outcomes and Course Outcomes) displayed on college website?

- Yes
- No

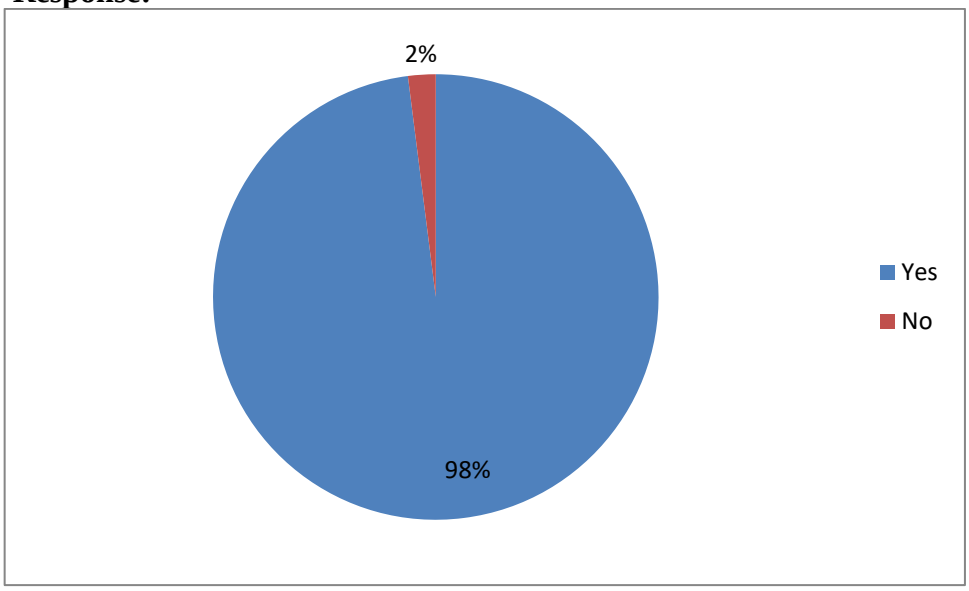
Response:



Q3. Did you read the outcomes of the programme before taking admission?

- Yes
- No

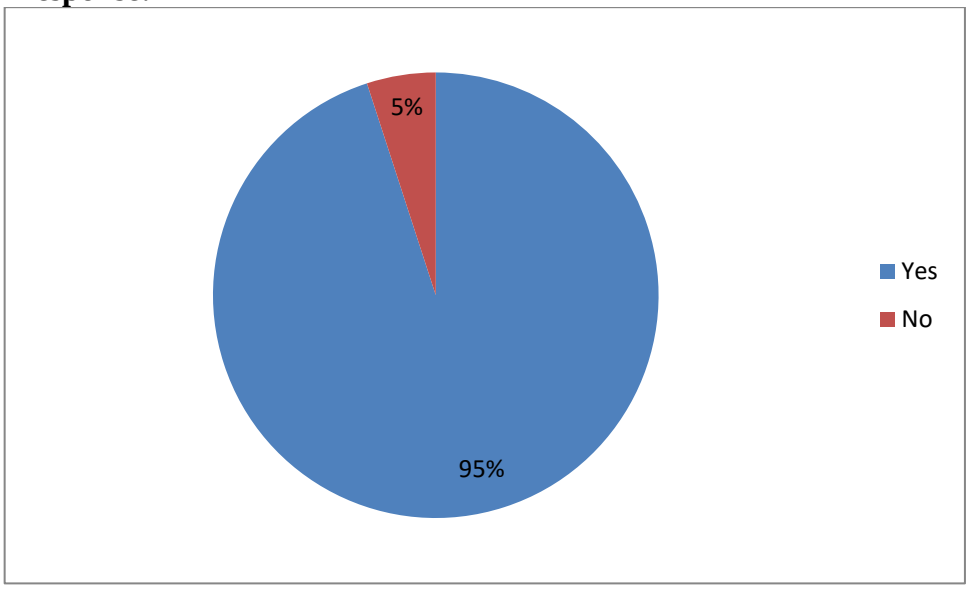
Response:



Q4. I have learned what I expected from the program

- Strongly agree
- Moderately agree
- agree
- disagree

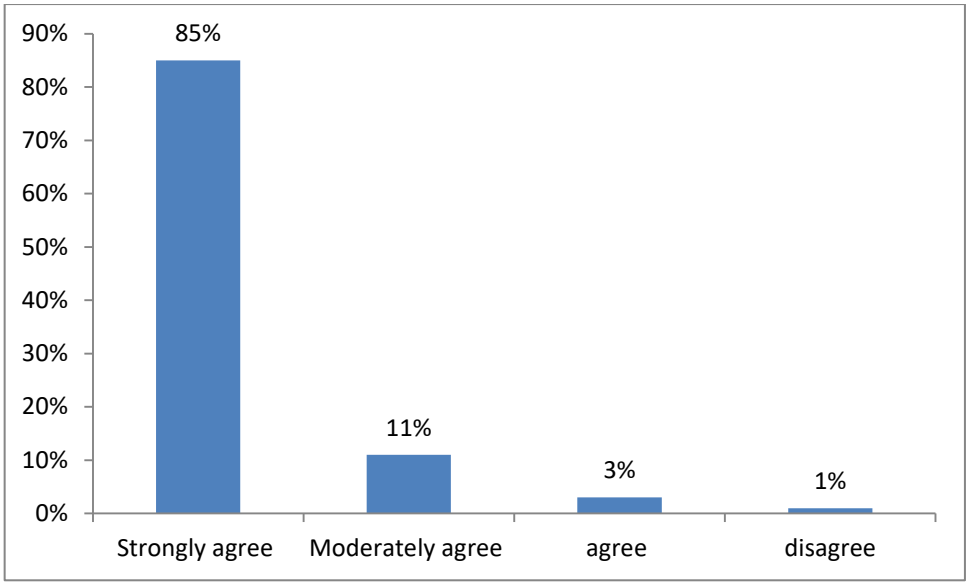
Response:



Q5. The college provided ample opportunities to learn all the skills that you expected

- Strongly agree
- Moderately agree
- agree
- disagree

Response:



Q6. The college has adequate number of equipments and facilities and are well maintained

- Strongly agree
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- agree
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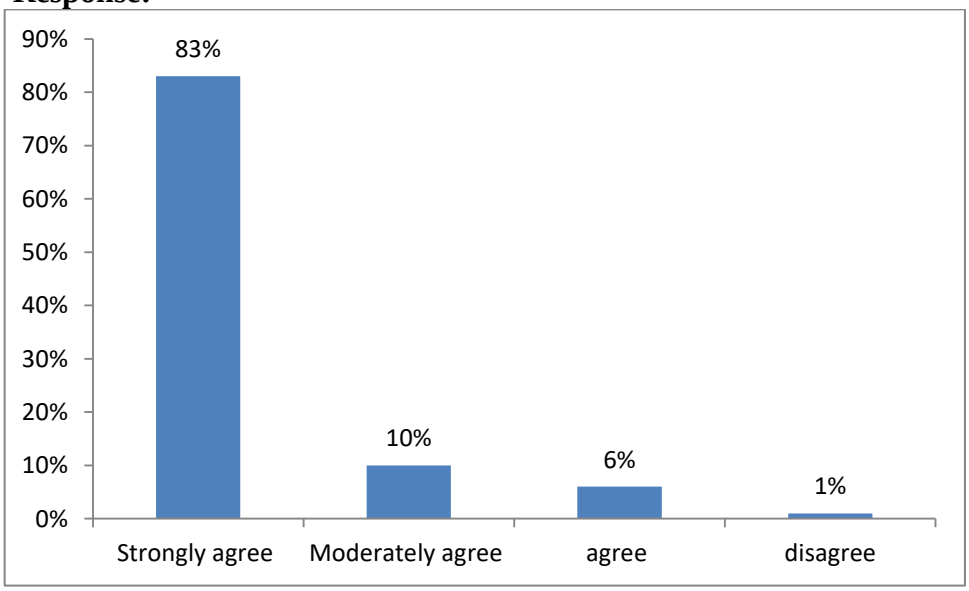
Response:



Q7. The teachers provide sufficient knowledge to develop skills

- Strongly agree
- Moderately agree
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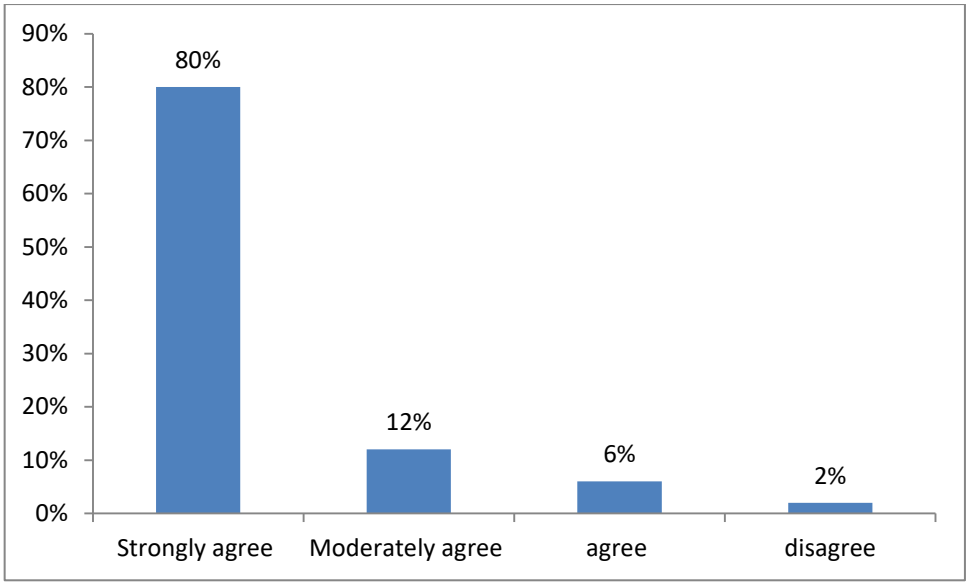
Response:



Q8. Do you have idea of what jobs you might be able to get after completing the program

- Strongly agree
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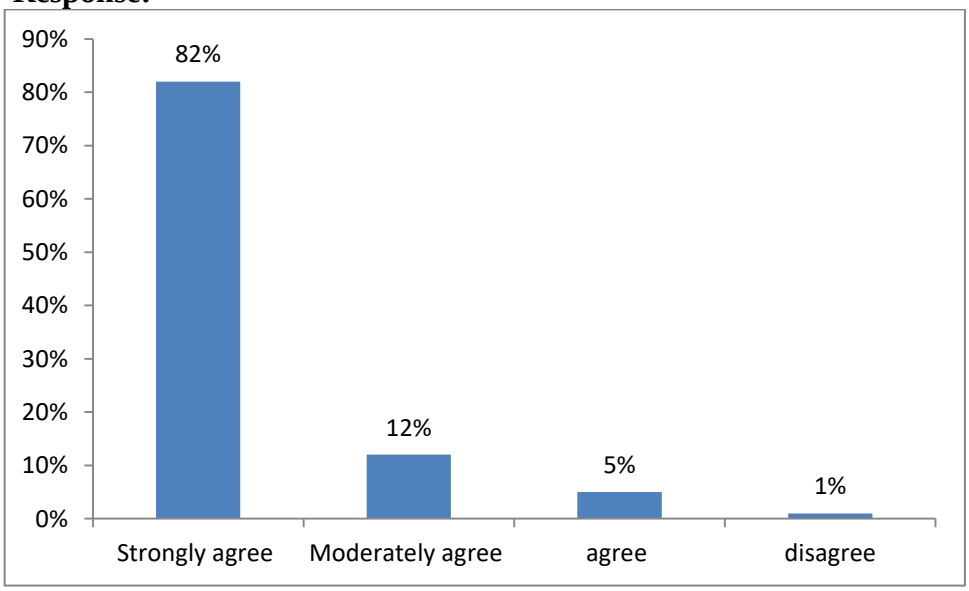
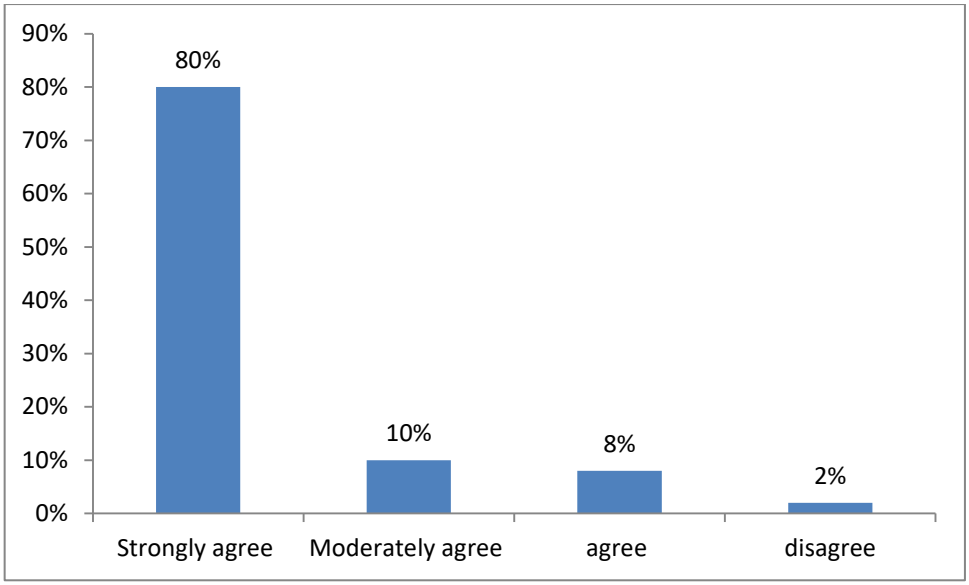
Response:



Q9. Support services such as tutoring and counselling were adequate and helped me succeed in the program

- Strongly agree
- Moderately agree
- agree
- disagree

Response:



Q10. How much did you write (assignments, tutorials, activities) in your program?

- Extensively
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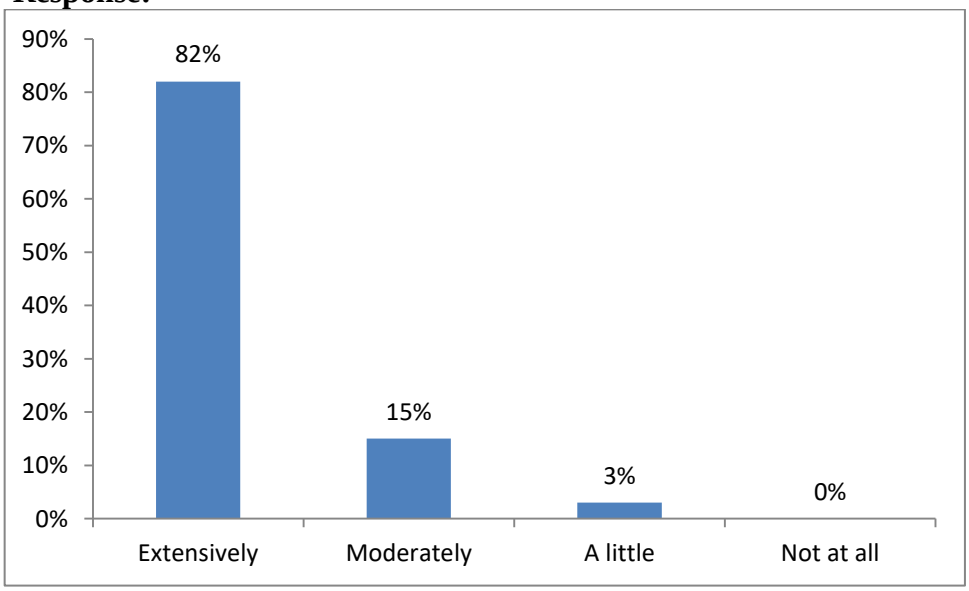
Response:



Q11. Did your program contain activities to increase information technology literacy?

- Extensively
- Moderately
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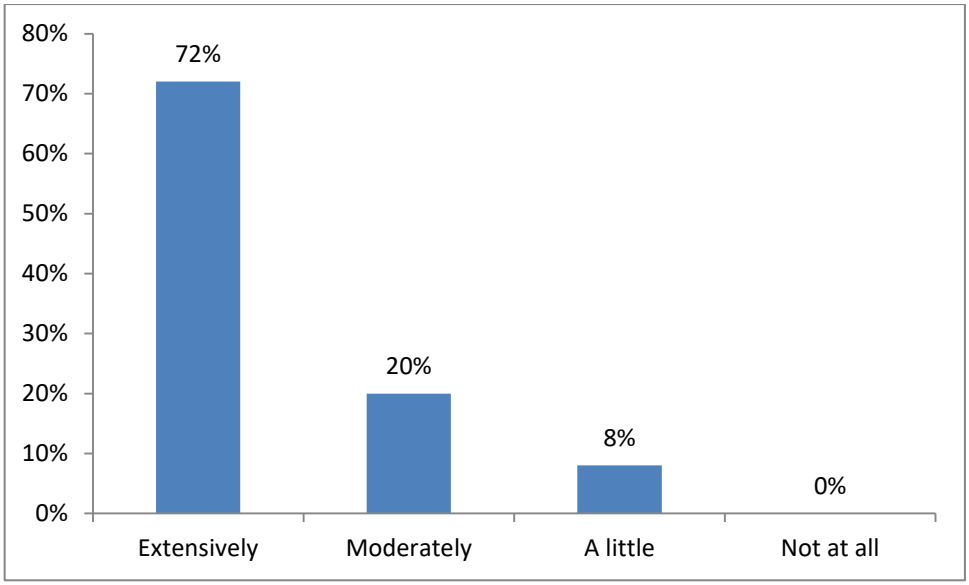
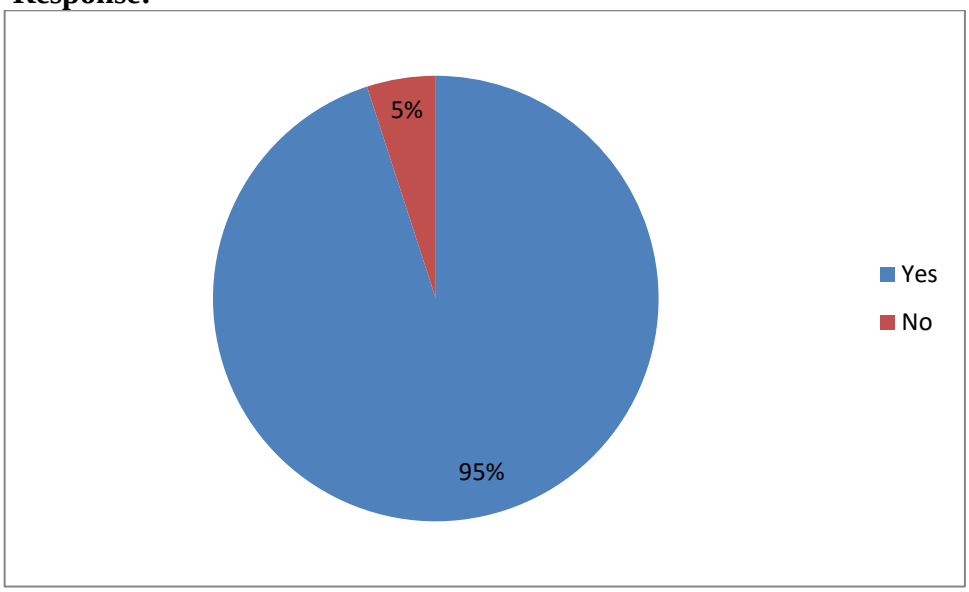
Response:



Q12. Did your program include modes of critical thinking?

- Yes
- No

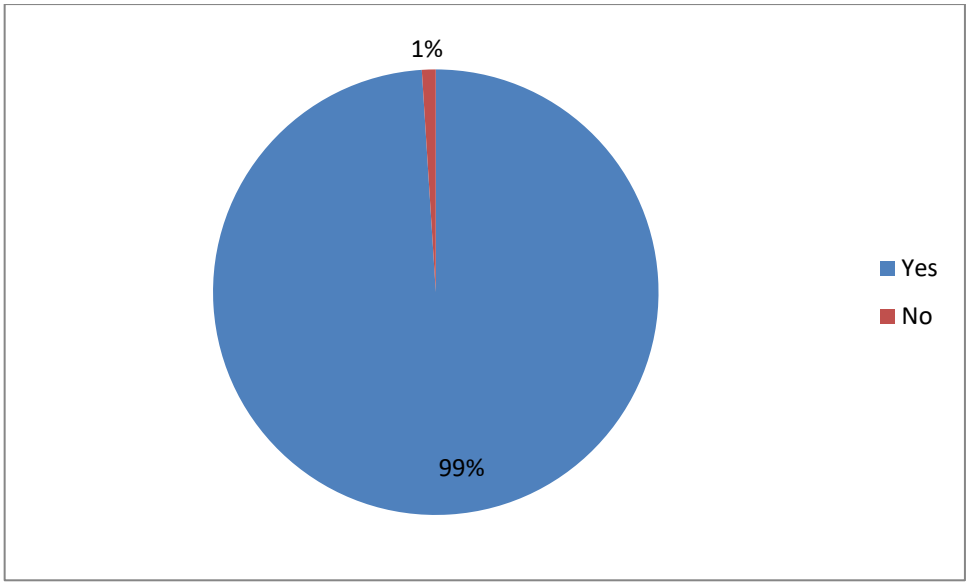
Response:



Q13. Did your program include project work?

- Yes
- No

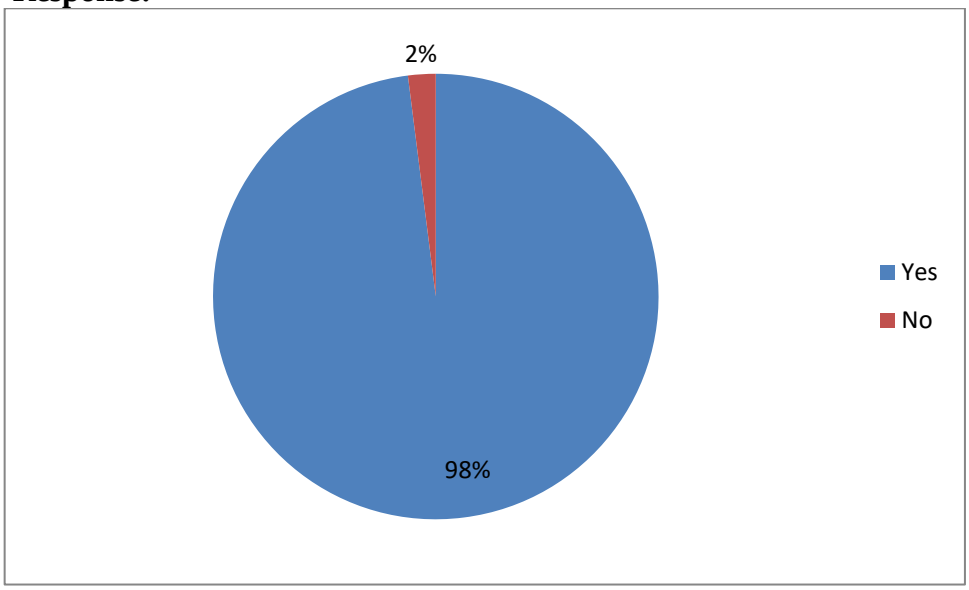
Response:



Q14. Did you participate in community based projects or service learning activities (NSS, NCC)?

- Yes
- No

Response:



Q15. Did your program include internship programs and exposure to industry as a part of syllabus?

- Yes
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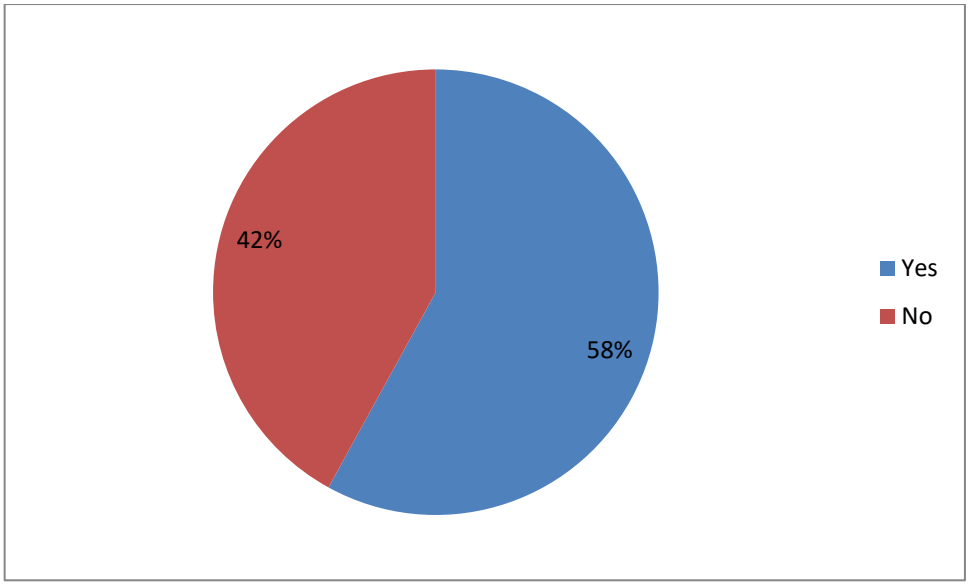
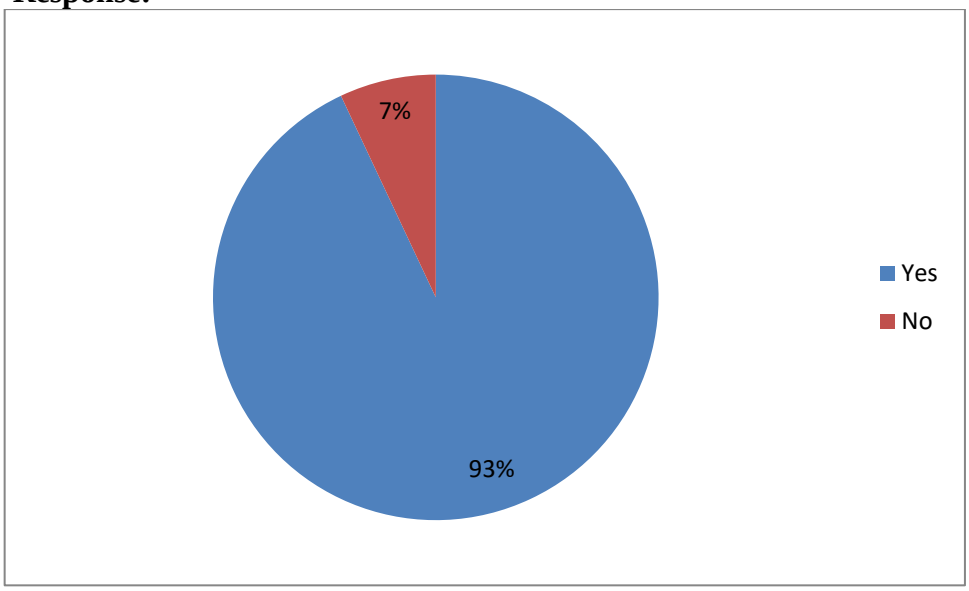
Response:



Q16. Will you recommend this programme to other students?

- Yes
- No

Response:



Q17. Rating overall quality of learning experience in this college

- Excellent
- Very Good
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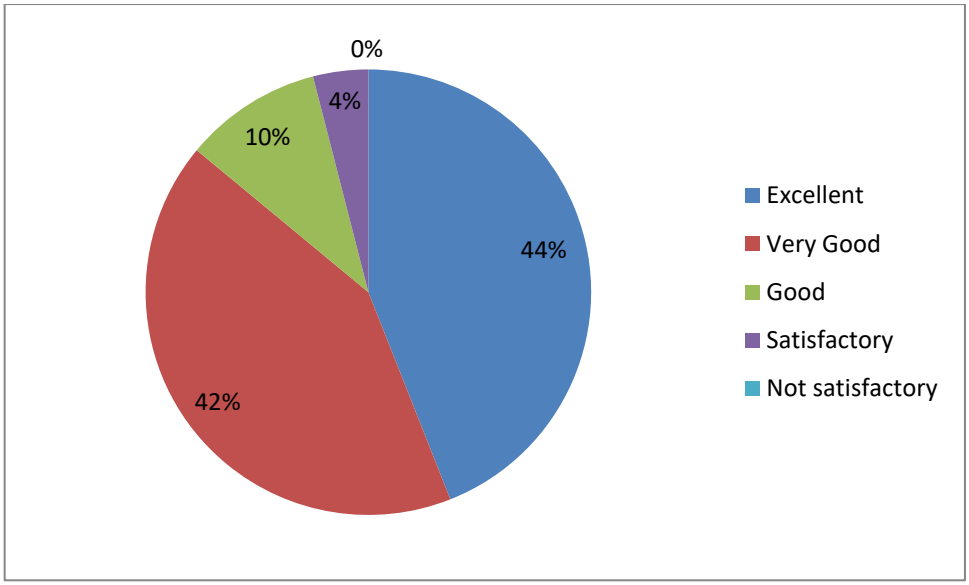
Response:


0%
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Excellent
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Good
Satisfactory
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Report on Attainment of Learning Outcomes

2015-16

The institution believes that simply preparing, and communicating the learning outcomes (Programme Outcomes and Course Outcomes) is not satisfactory unless there is a good and structured mechanism for evaluating their attainment as it provides a benchmark to measure as to what extent the institution has succeeded in accomplishing its goals in consonance with its vision and mission. The IQAC has developed an effective and proper mechanism for the attainment of learning outcomes duly approved by the Governing Body. The attainment of learning outcomes is a significant aspect to enhance quality and mend the system to fulfil the need for common good of students, institution and society. Consequently, in 2015-16, the attainment of learning outcomes was given due importance by the college. In order to understand the level of attainment of learning outcomes for various courses, a questionnaire comprising 18 multiple choice questions was devised and uploaded on the institutional website. The details of this survey are as follow:

Survey/Feedback Type : Online
Website address : vbmv.org
Direct Link URL: https://vbmv.org/sss-attainment.php
Total number of questions attempted: 18
Total number of students in final year examination: 861
Number students participated: 821

The following are the observations on attainment of learning outcomes:

1. The students expressed their satisfaction about the display and communication of learning outcome for the courses.
2. The students revealed that they acquired expected competencies after completion of the program.
3. The students agreed that the college provided ample opportunities to learn all the skills that they expected.
4. The students revealed their satisfaction for adequate number of equipments and facilities as well as knowledge of teachers.
5. The students suggested to increase social awareness programs.

Action taken:

1. Social Outreach and Enabling Centre (SOEC) is established to inculcate social responsibilities among the students.
2. Social Outreach and Enabling Centre has adopted Village ‘Karala’ to conduct various activities as a part of extension services.

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Vidya Bharati Mahavidyalaya College Amravati

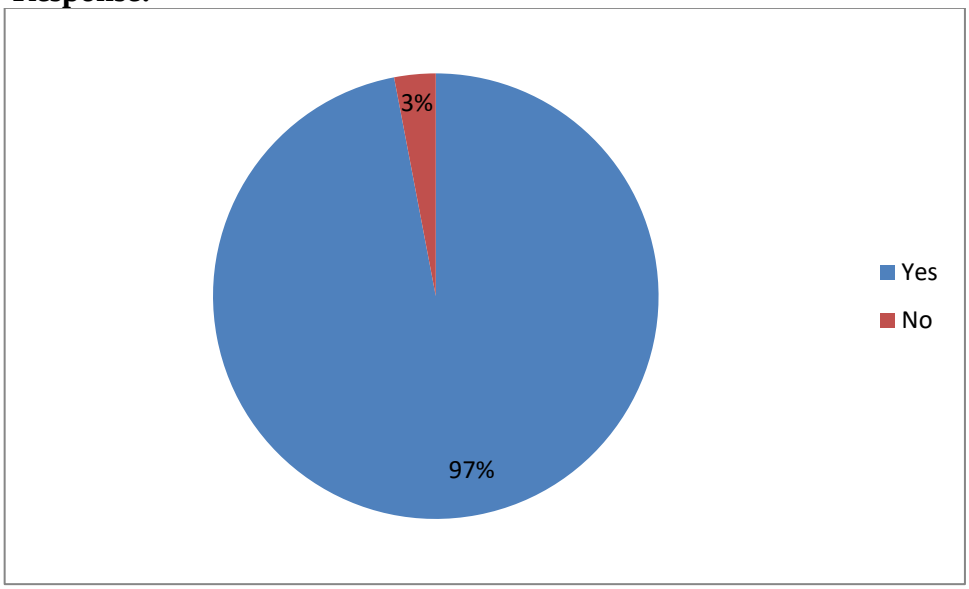
PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI.

Response to questionnaire to assess attainment of PO, PSO and CO: 2015-16

Q1. Is the information available through website and information brochure about the program?

- Yes
- No

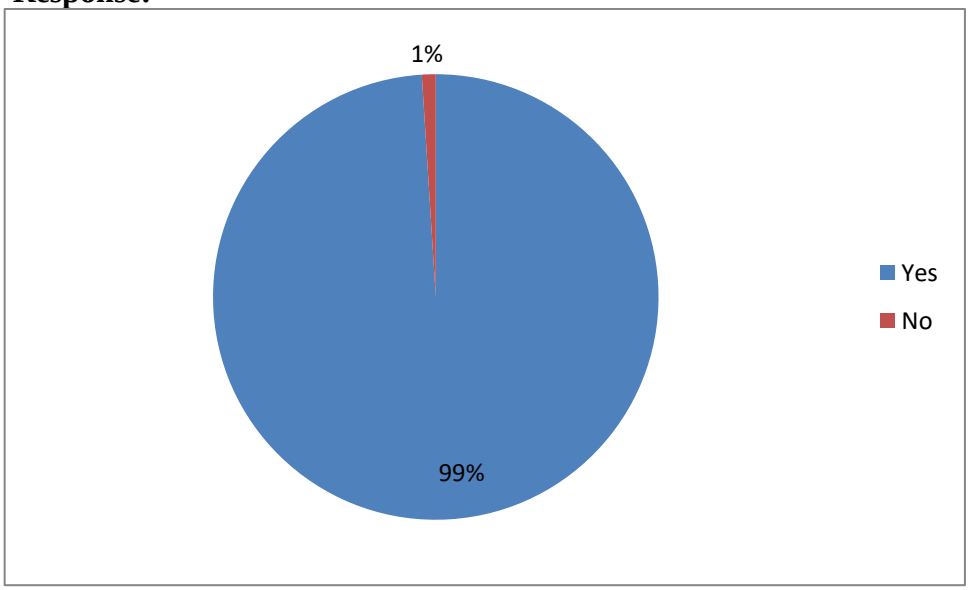
Response:



Q2. Are the learning outcomes (Programme Outcomes and Course Outcomes) displayed on college website?

- Yes
- No

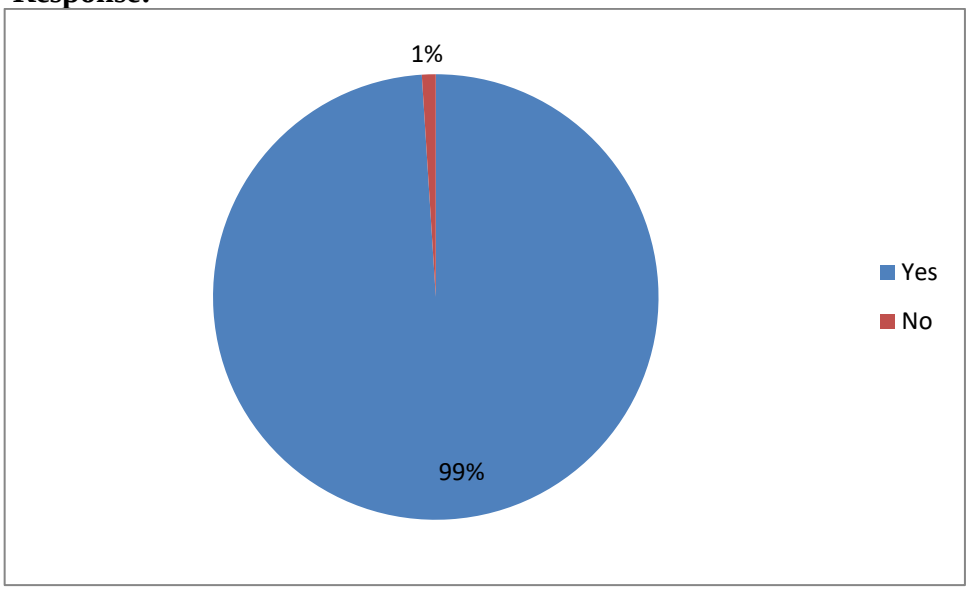
Response:



Q3. Did you read the outcomes of the programme before taking admission?

- Yes
- No

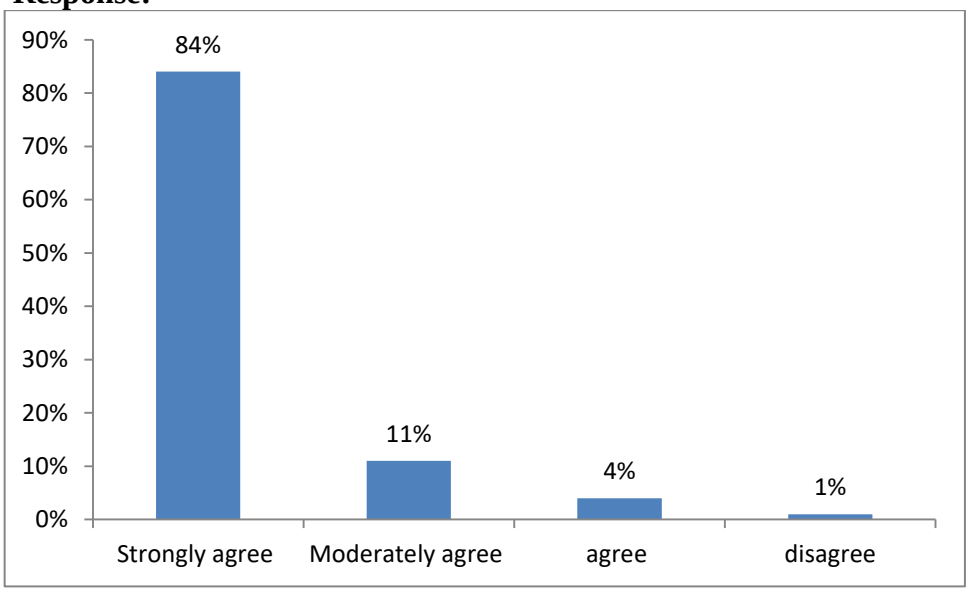
Response:



Q4. I have learned what I expected from the program

- Strongly agree
- Moderately agree
- agree
- disagree

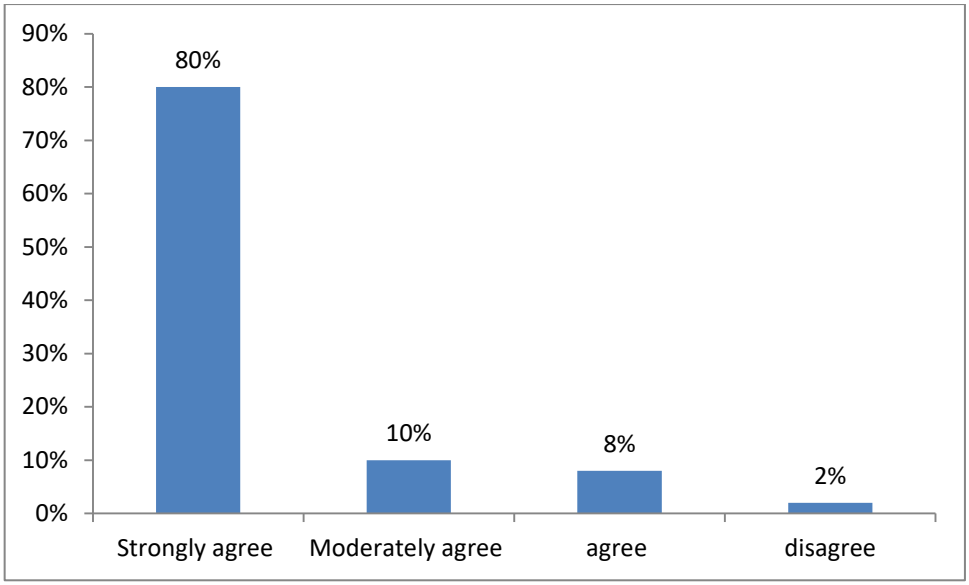
Response:



Q5. The college provided ample opportunities to learn all the skills that you expected

- Strongly agree
- Moderately agree
- agree
- disagree

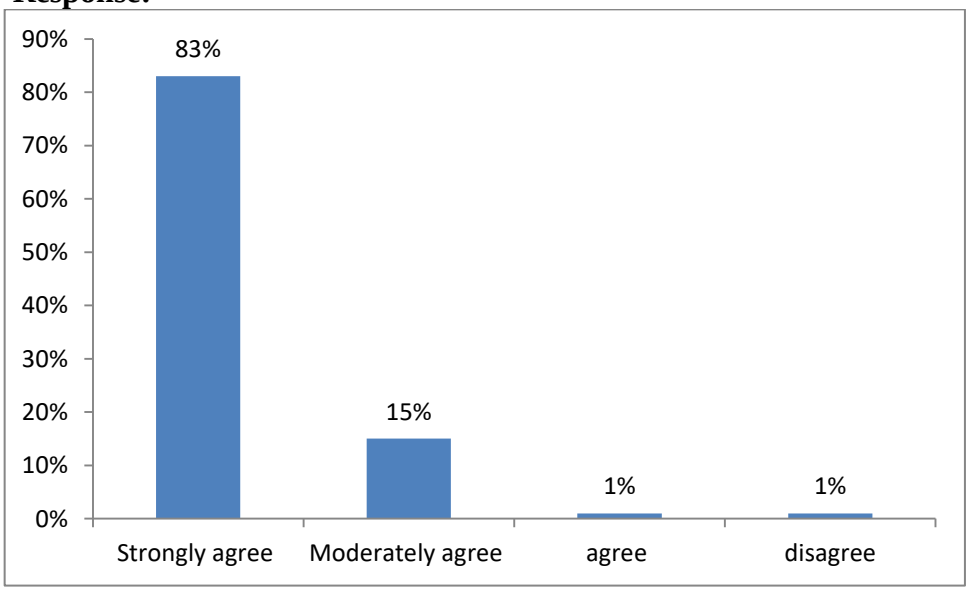
Response:



Q6. The college has adequate number of equipments and facilities and are well maintained

- Strongly agree
- Moderately agree
- agree
- disagree

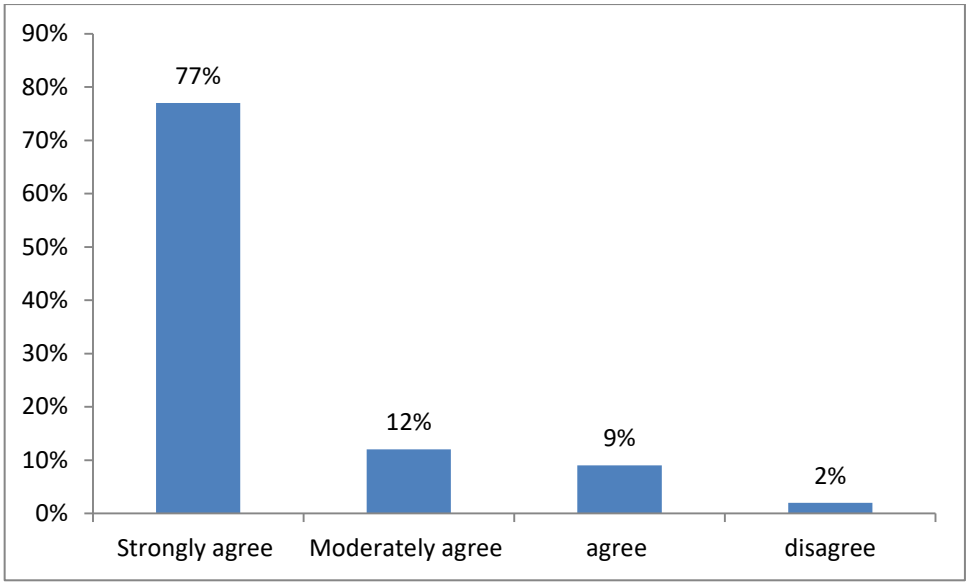
Response:



Q7. The teachers provide sufficient knowledge to develop skills

- Strongly agree
- Moderately agree
- agree
- disagree

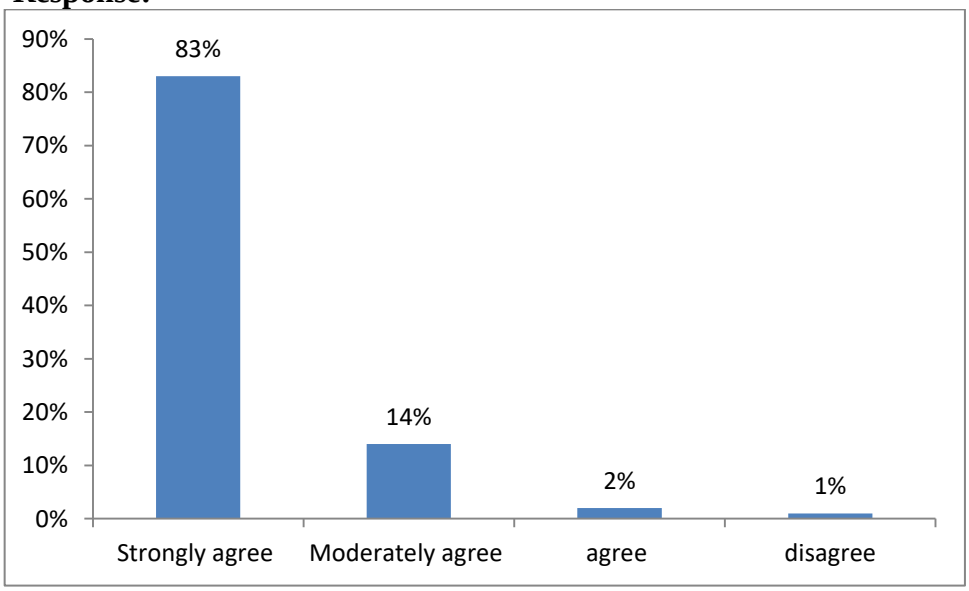
Response:



Q8. Do you have idea of what jobs you might be able to get after completing the program

- Strongly agree
- Moderately agree
- agree
- disagree

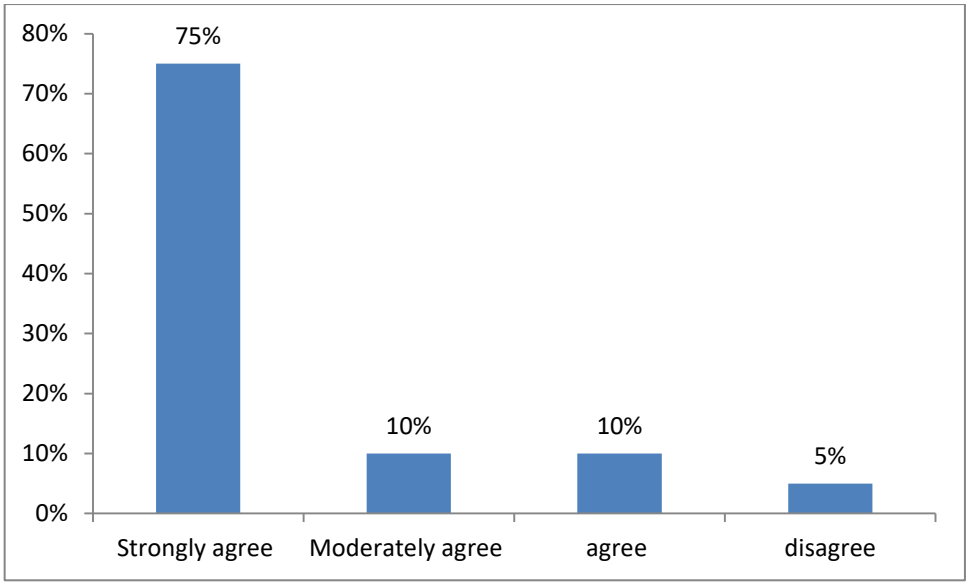
Response:



Q9. Support services such as tutoring and counselling were adequate and helped me succeed in the program

- Strongly agree
- Moderately agree
- agree
- disagree

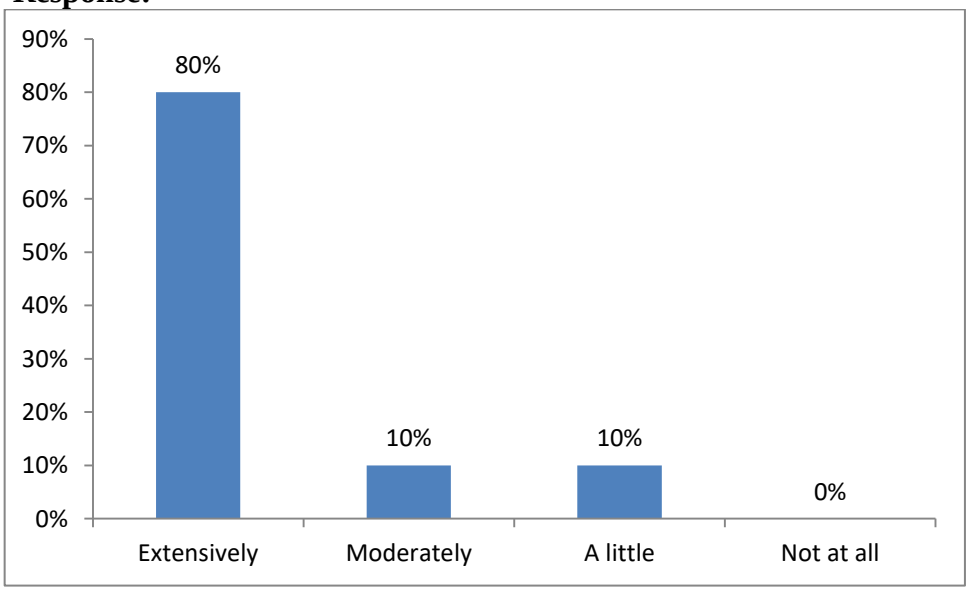
Response:



Q10. How much did you write (assignments, tutorials, activities) in your program?

- Extensively
- Moderately
- A little
- Not at all

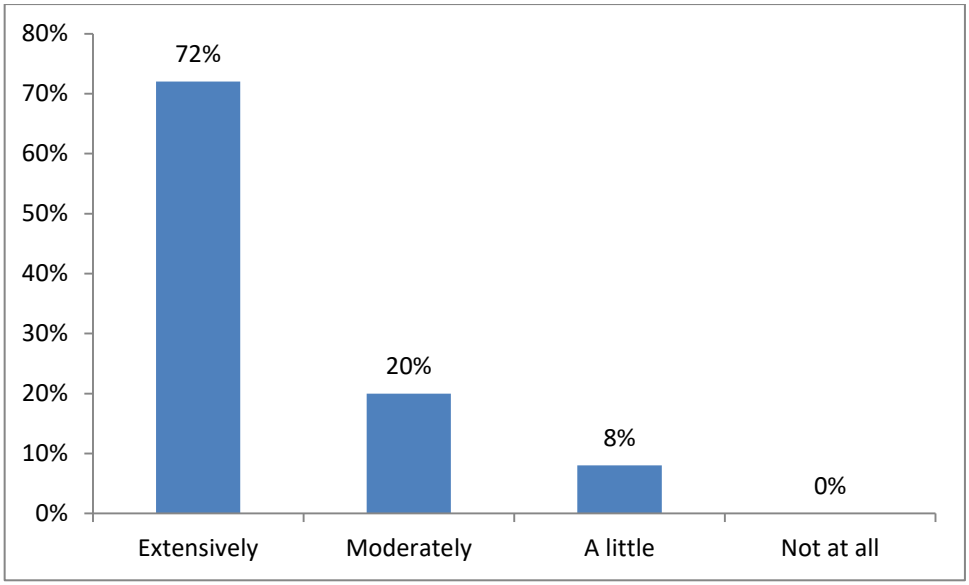
Response:



Q11. Did your program contain activities to increase information technology literacy?

- Extensively
- Moderately
- A little
- Not at all

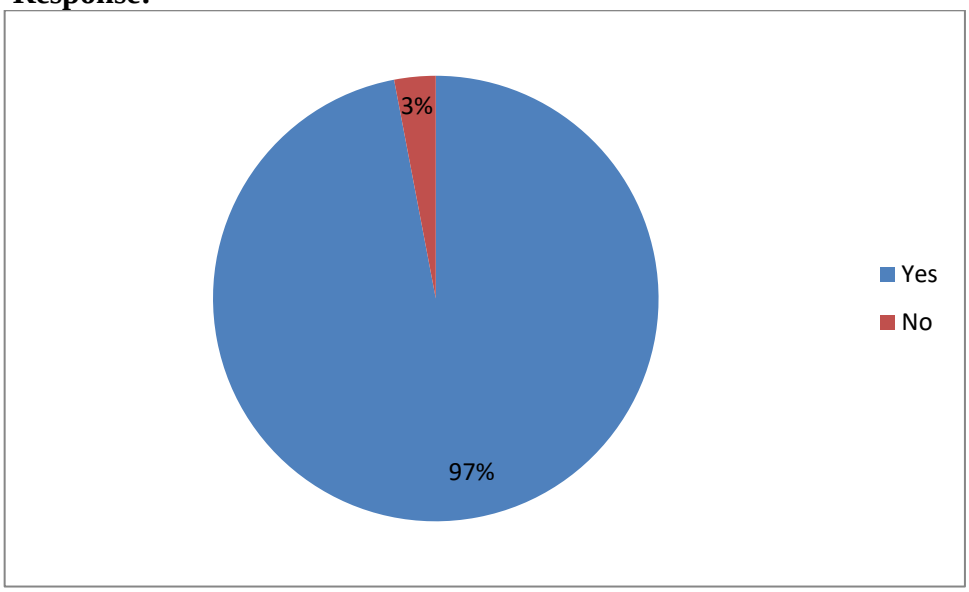
Response:



Q12. Did your program include modes of critical thinking?

- Yes
- No

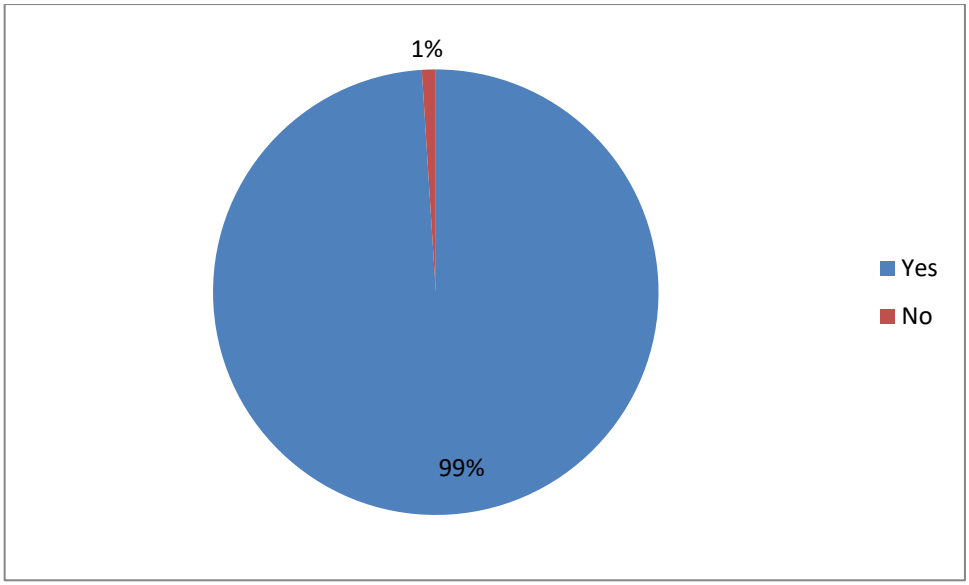
Response:



Q13. Did your program include project work?

- Yes
- No

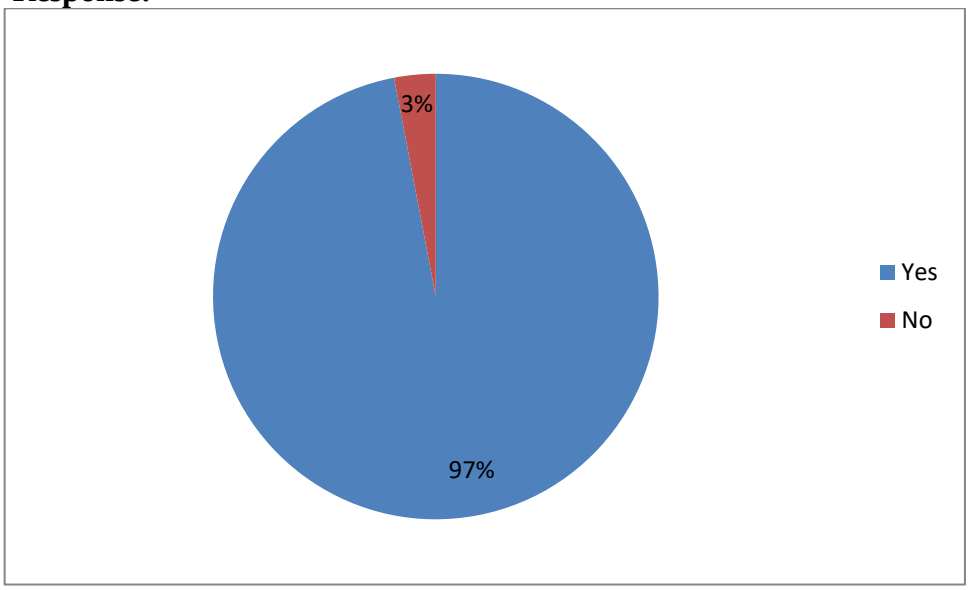
Response:



Q14. Did you participate in community based projects or service learningactivities (NSS, NCC)?

- Yes
- No

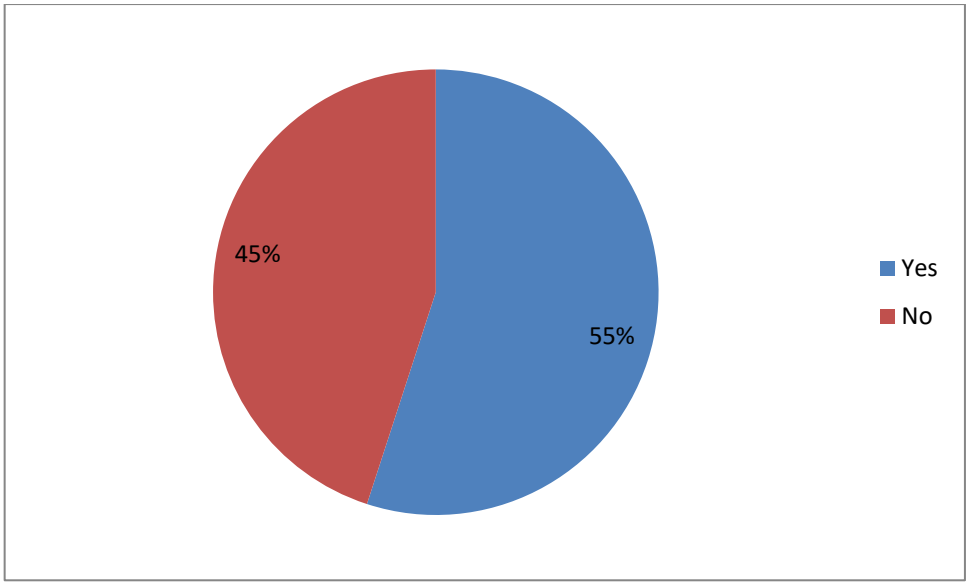
Response:



Q15. Did your program include internship programs and exposure to industry as a part of syllabus?

- Yes
- No

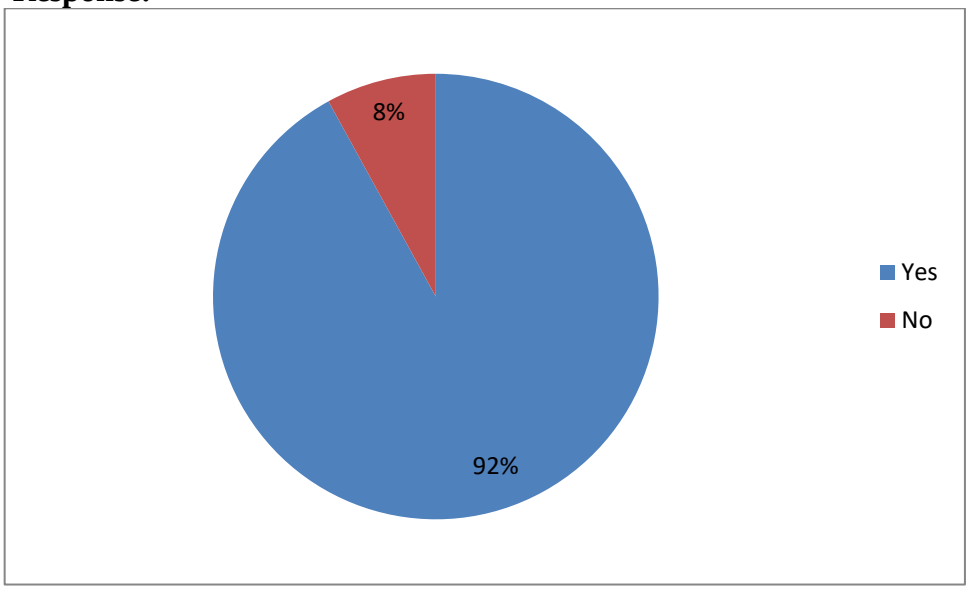
Response:



Q16. Will you recommend this programme to other students?

- Yes
- No

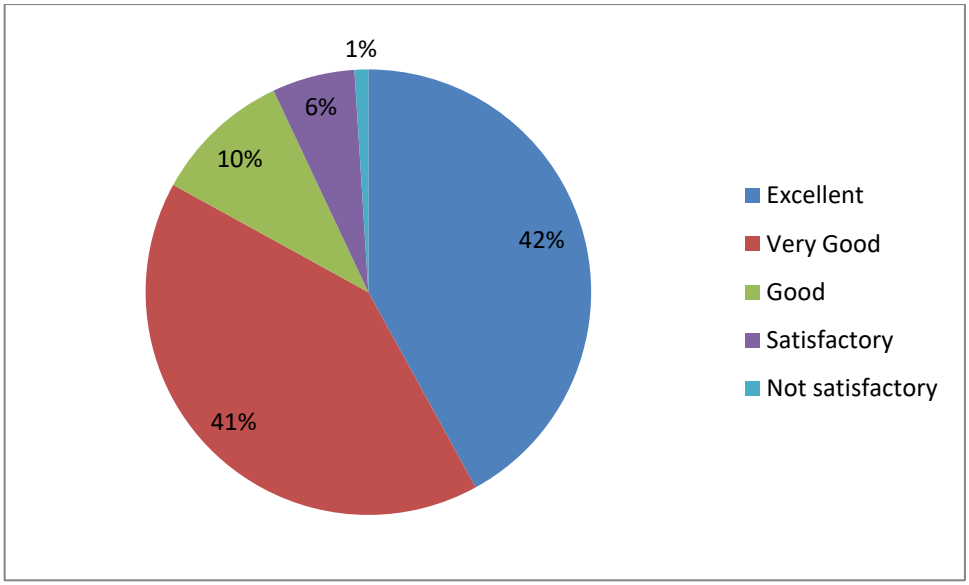
Response:



Q17. Rating overall quality of learning experience in this college

- Excellent
- Very Good
- Good
- Satisfactory
- Not satisfactory

Response:


1%
6%
10%
42%
41%
Excellent
Very Good
Good
Satisfactory
Not satisfactory

Report on Attainment of Learning Outcomes

2014-15

The institution believes that simply preparing, and communicating the learning outcomes (Programme Outcomes and Course Outcomes) is not satisfactory unless there is a good and structured mechanism for evaluating their attainment as it provides a benchmark to measure as to what extent the institution has succeeded in accomplishing its goals in consonance with its vision and mission. The IQAC has developed an effective and proper mechanism for the attainment of learning outcomes duly approved by the Governing Body. The attainment of learning outcomes is a significant aspect to enhance quality and mend the system to fulfil the need for common good of students, institution and society. Consequently, in 2014-15, the attainment of learning outcomes was given due importance by the college. In order to understand the level of attainment of learning outcomes for various courses, a questionnaire comprising 18 multiple choice questions was devised and uploaded on the institutional website. The details of this survey are as follow:

Survey/Feedback Type : Online
Website address : vbmv.org
Direct Link URL: https://vbmv.org/sss-attainment.php
Total number of questions attempted: 18
Total number of students in final year examination: 804
Number students participated: 778

The following are the observations on attainment of learning outcomes:

1. The students expressed their satisfaction about the display and communication of learning outcome for the courses.
2. The students revealed that they acquired expected competencies after completion of the program.
3. The students agreed that the college provided ample opportunities to learn all the skills that they expected.
4. The students revealed their satisfaction for adequate number of equipments and facilities as well as knowledge of teachers.
5. The students suggested to improve parking in the college.

Action taken:

1. Parking lots were extended for the vehicles of the students.
2. New roads were constructed on the campus
3. New building for PG courses was constructed on the campus

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance Cell
Vidya Bharati Mahavidyalaya
Camp, Amravati-444 602 (M.S.)

Vidya Bharati Mahavidyalaya College Amravati

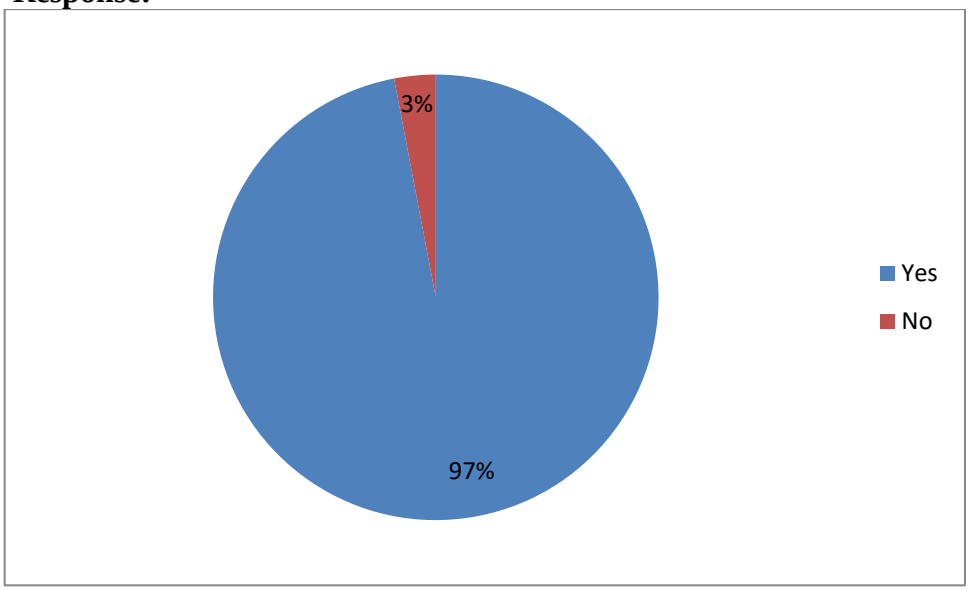
PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI.

Response to questionnaire to assess attainment of PO, PSO and CO: 2014-15

Q1. Is the information available through website and information brochure about the program?

- Yes
- No

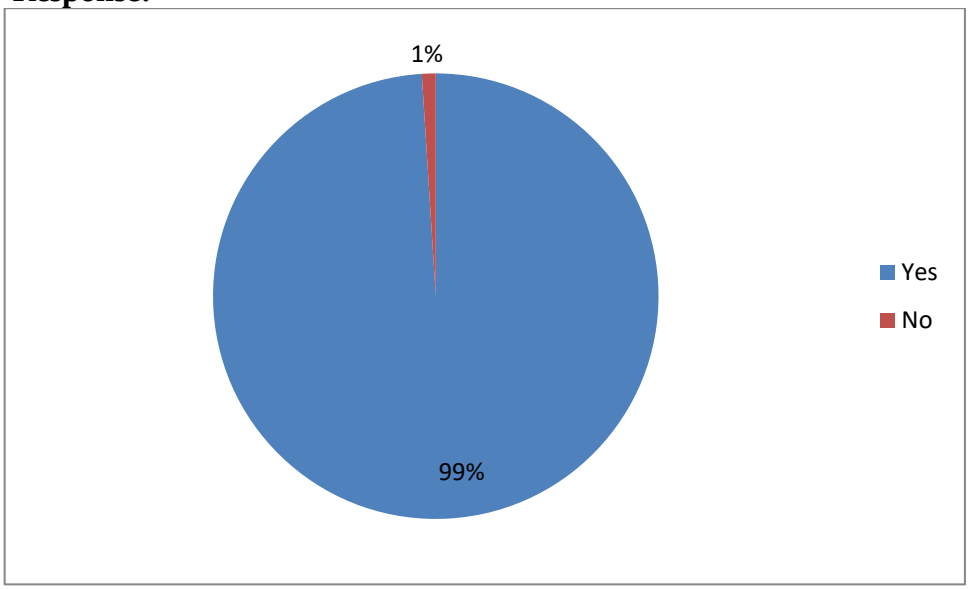
Response:



Q2. Are the learning outcomes (Programme Outcomes and Course Outcomes) displayed on college website?

- Yes
- No

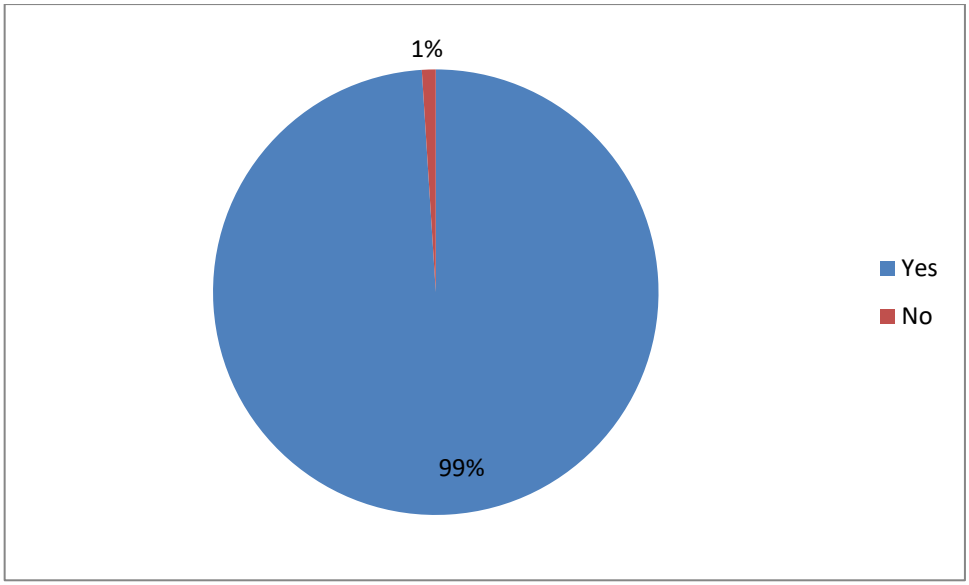
Response:



Q3. Did you read the outcomes of the programme before taking admission?

- Yes
- No

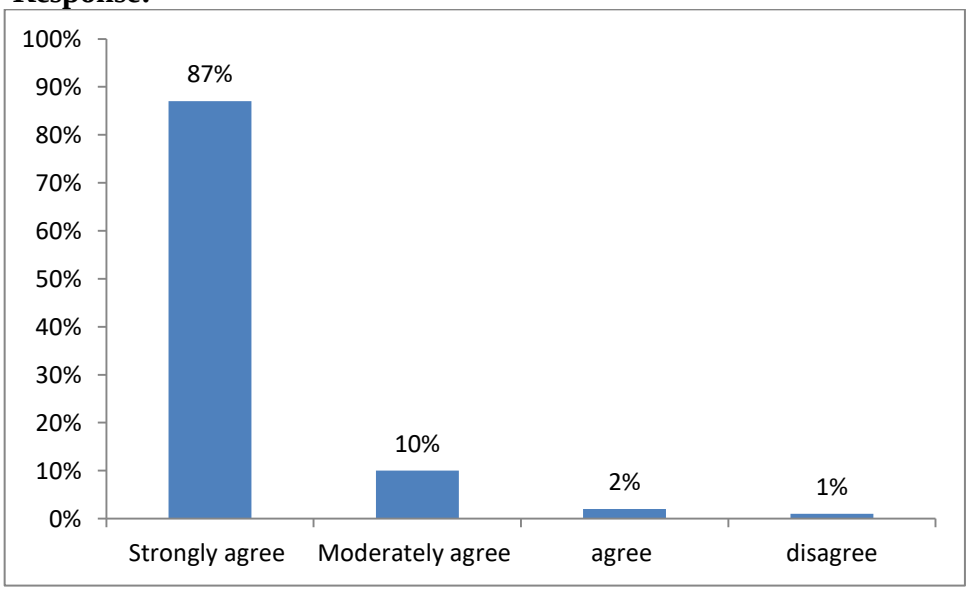
Response:



Q4. I have learned what I expected from the program

- Strongly agree
- Moderately agree
- agree
- disagree

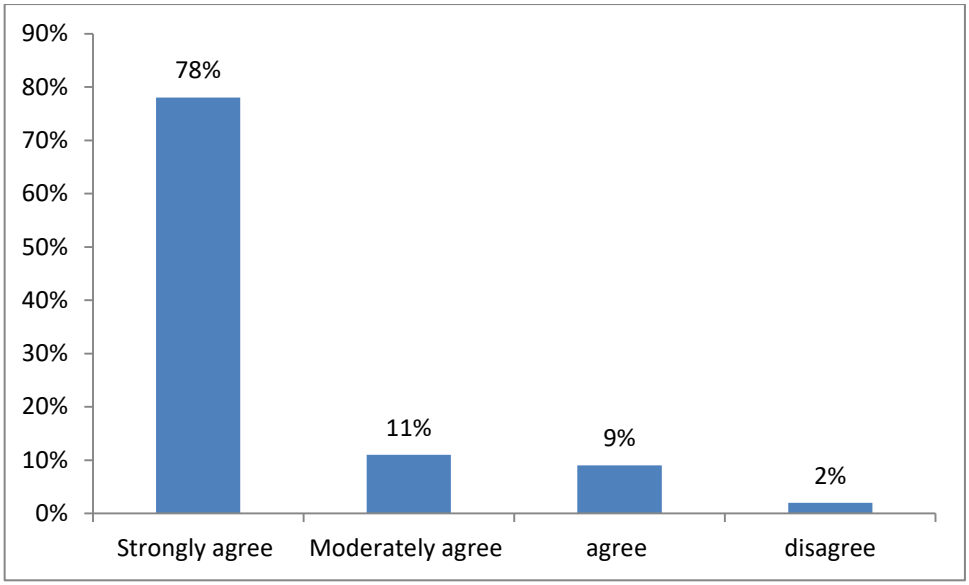
Response:



Q5. The college provided ample opportunities to learn all the skills that you expected

- Strongly agree
- Moderately agree
- agree
- disagree

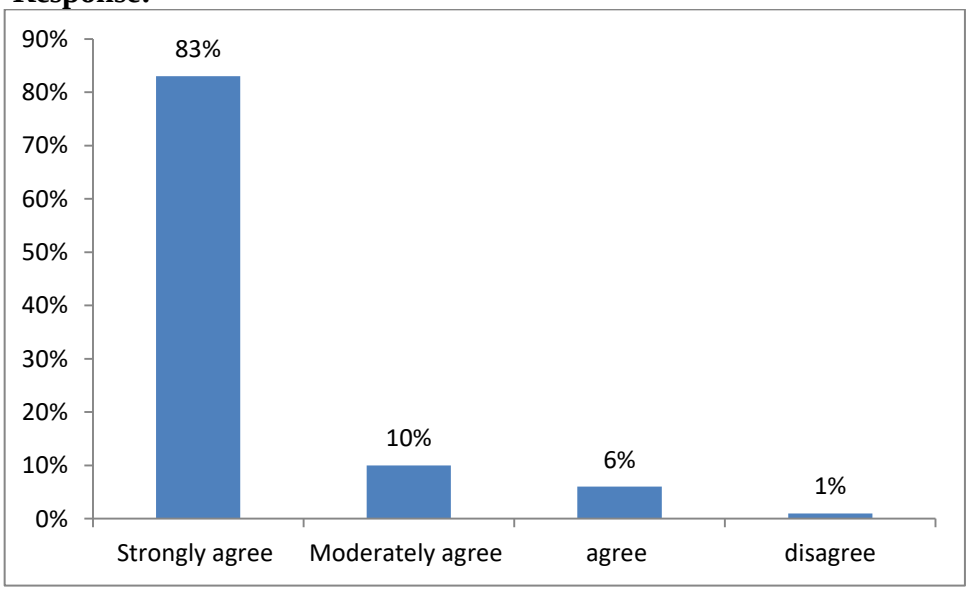
Response:



Q6. The college has adequate number of equipments and facilities and are well maintained

- Strongly agree
- Moderately agree
- agree
- disagree

Response:



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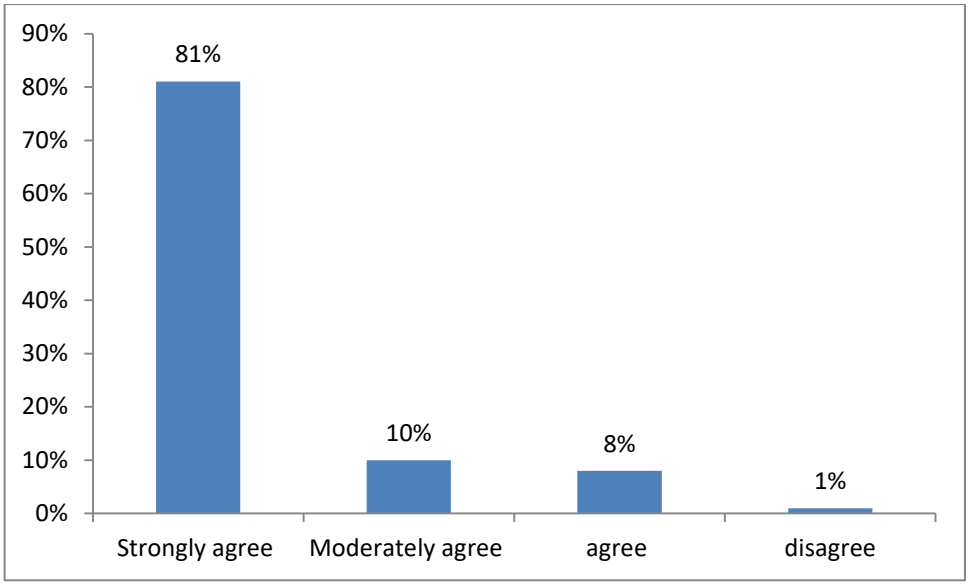
- Strongly agree
- Moderately agree
- agree
- disagree

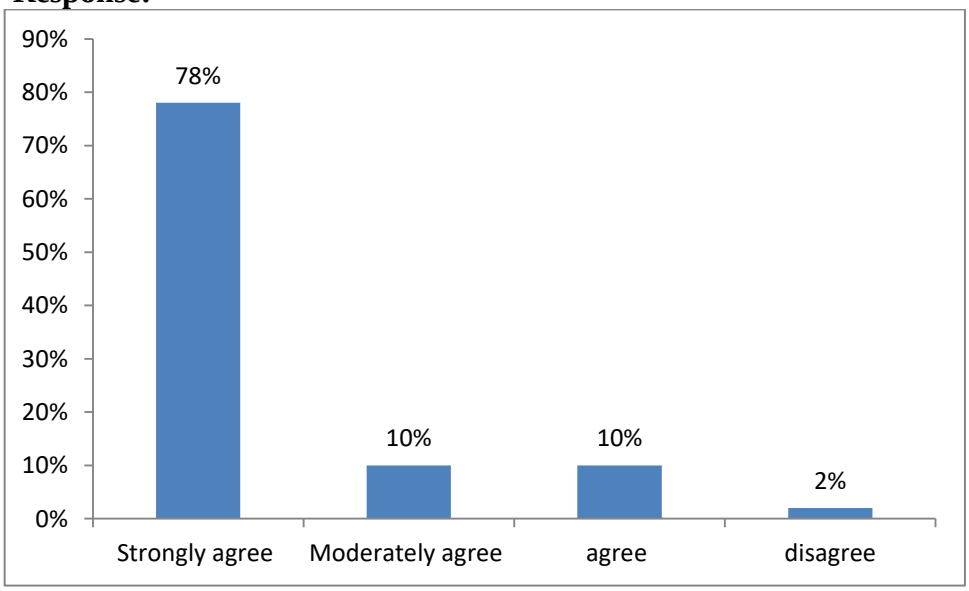
Response:



Q8. Do you have idea of what jobs you might be able to get after completing the program

- Strongly agree
- Moderately agree
- agree
- disagree

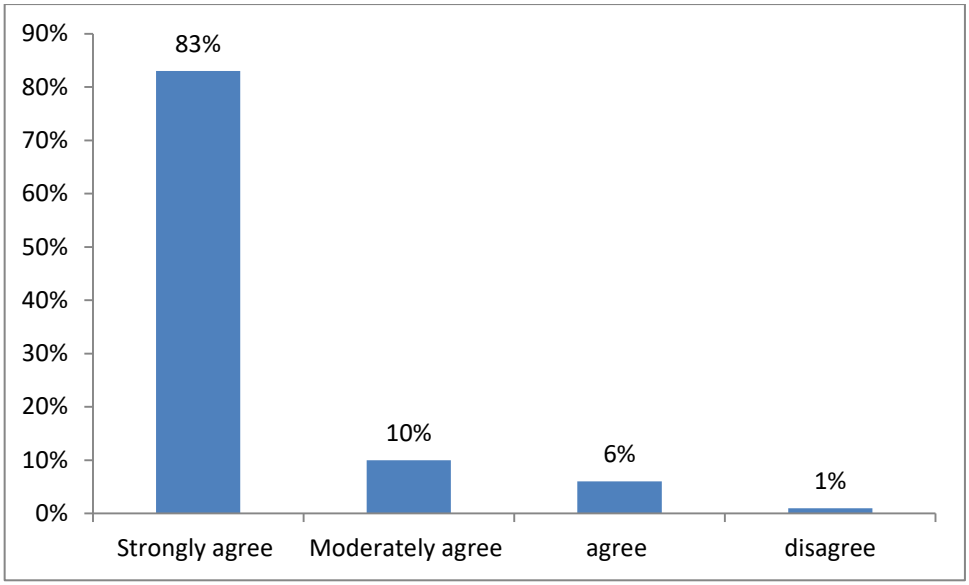
Response:



Q9. Support services such as tutoring and counselling were adequate and helped me succeed in the program

- Strongly agree
- Moderately agree
- agree
- disagree

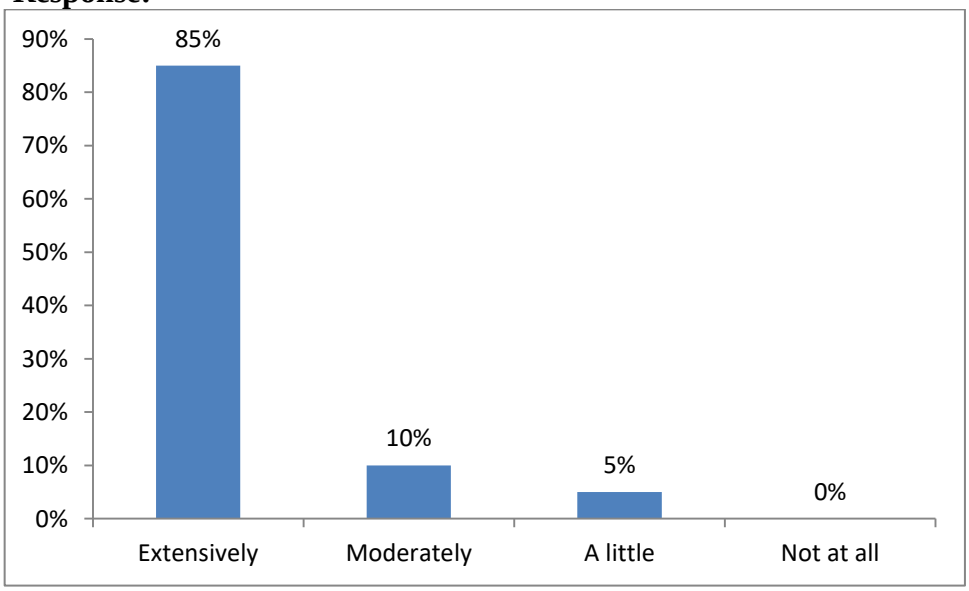
Response:



Q10. How much did you write (assignments, tutorials, activities) in your program?

- Extensively
- Moderately
- A little
- Not at all

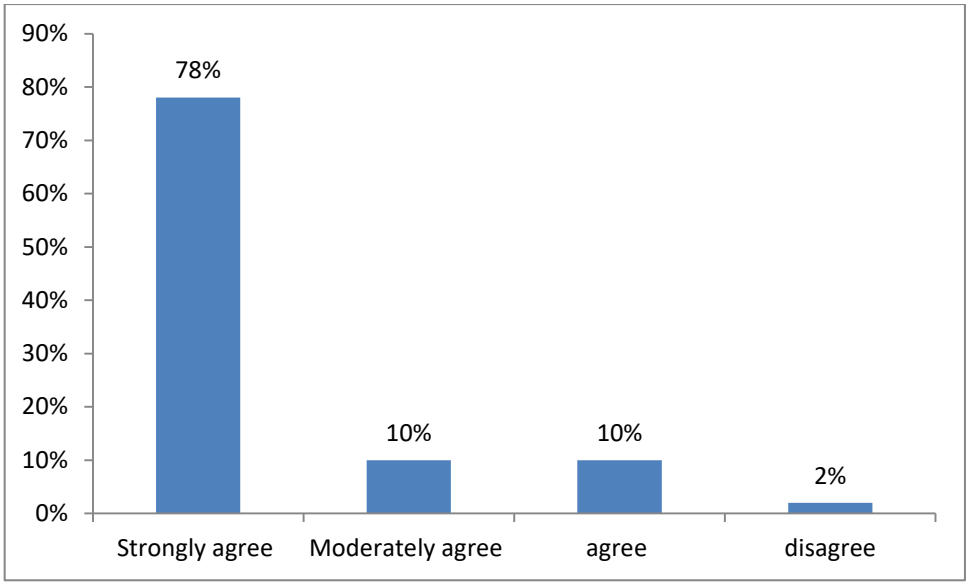
Response:



Q11. Did your program contain activities to increase information technology literacy?

- Extensively
- Moderately
- A little
- Not at all

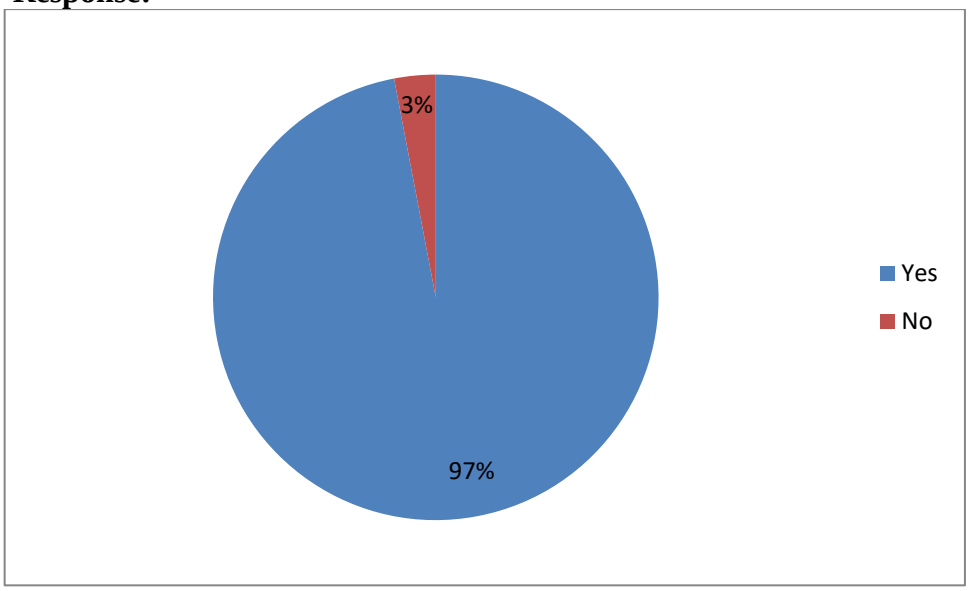
Response:



Q12. Did your program include modes of critical thinking?

- Yes
- No

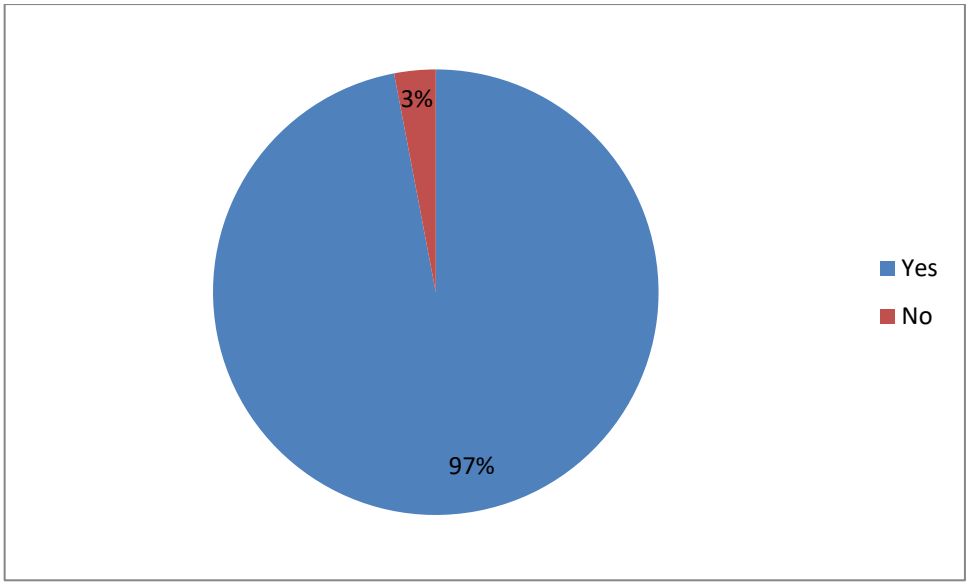
Response:



Q13. Did your program include project work?

- Yes
- No

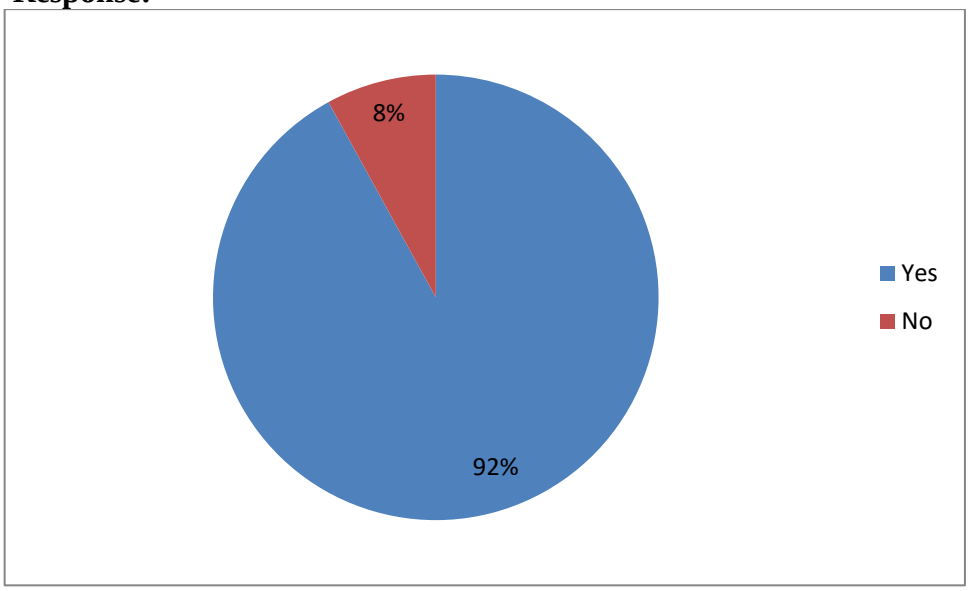
Response:



Q14. Did you participate in community based projects or service learning activities (NSS, NCC)?

- Yes
- No

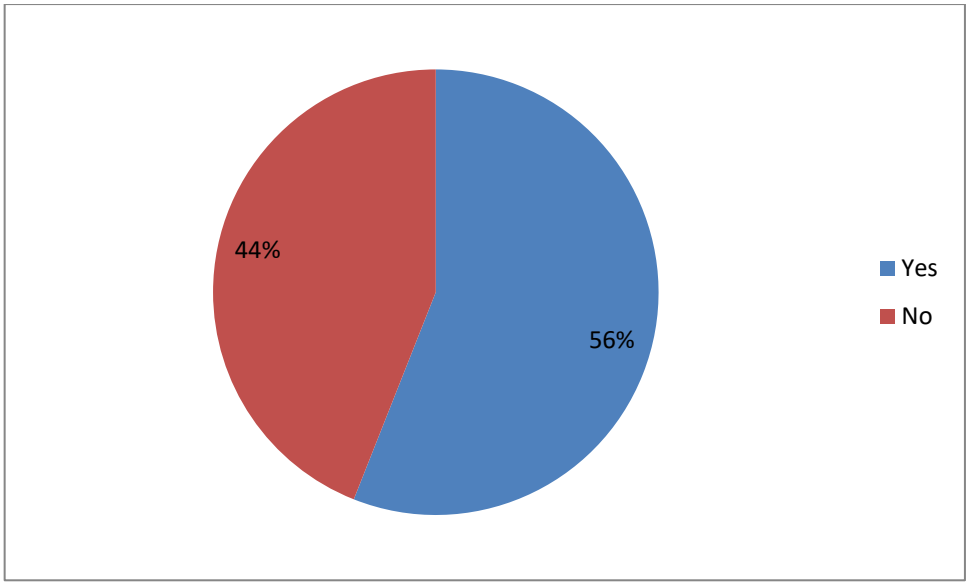
Response:



Q15. Did your program include internship programs and exposure to industry as a part of syllabus?

- Yes
- No

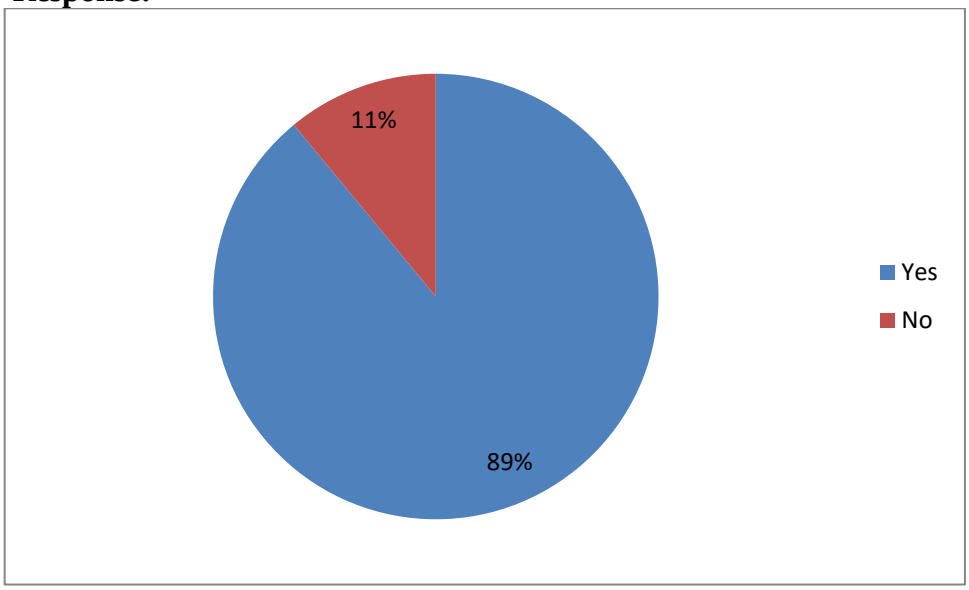
Response:



Q16. Will you recommend this programme to other students?

- Yes
- No

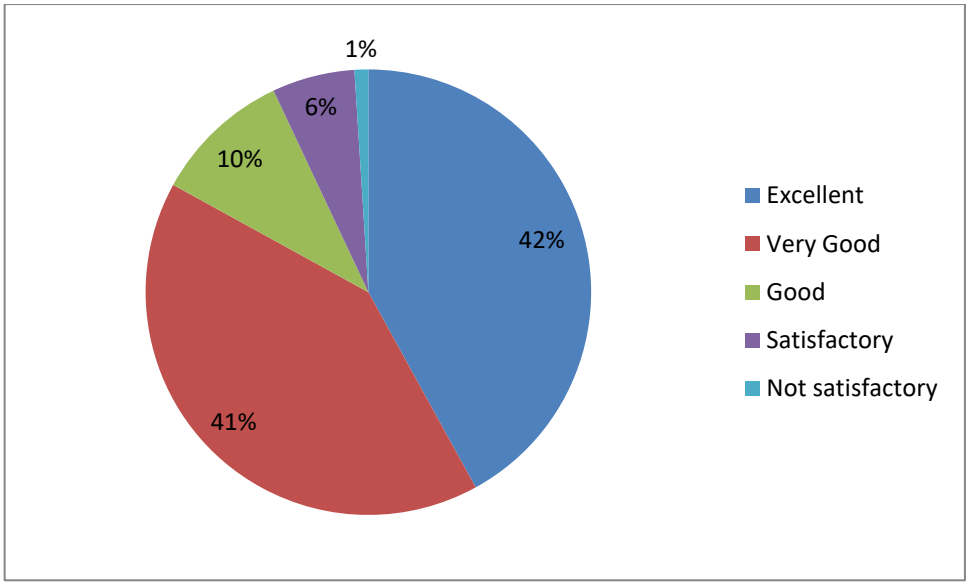
Response:



Q17. Rating overall quality of learning experience in this college

- Excellent
- Very Good
- Good
- Satisfactory
- Not satisfactory

Response:

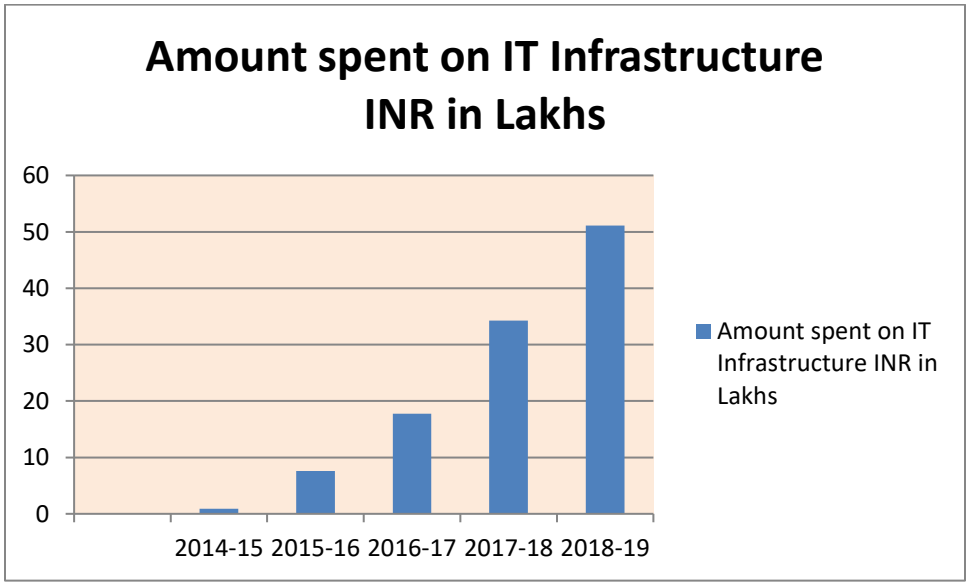

1%
6%
10%
42%
41%
Excellent
Very Good
Good
Satisfactory
Not satisfactory

4.3.1 Institution frequently updates its IT facilities including wi-fi

The Institution deploys adequate ICT facilities required for academic and administrative purposes. All IT facilities are frequently updated and congruently changed as per the need of time. After second cycle of NAAC, there is paradigm shift from black board to green board; green board to white board; from white board to LCD and from LCD to DLP and from DLP to smart boards. Now there are thirteen ICT class rooms, two ICT halls and two smart class rooms available with the Institution. The ICT halls are equipped with modern acoustics. Almost all laboratories are equipped with LCD projectors. Prior to second cycle, there was broadband facility with 20 MBPS; gradually it is updated upto 100 mbps. Now we have 50 MBPS lease line and moreover soon it will be updated upto 100 mbps. As far as computing facilities are concerned, all computers are with latest configurations and its connectivity has been shifted from LAN to cloud facility. Enlisted information given below depicts the frequency in updating IT facilities including wi-fi.

A) Amount spent on IT Infrastructure

Year	Amount spent on IT Infrastructure INR in Lakhs
2014-15	0.87067
2015-16	7.5728
2016-17	17.76146
2017-18	34.24488
2018-19	51.13589



B) **IT Upgradation (Computers, Printers, Projectors, Internet)**

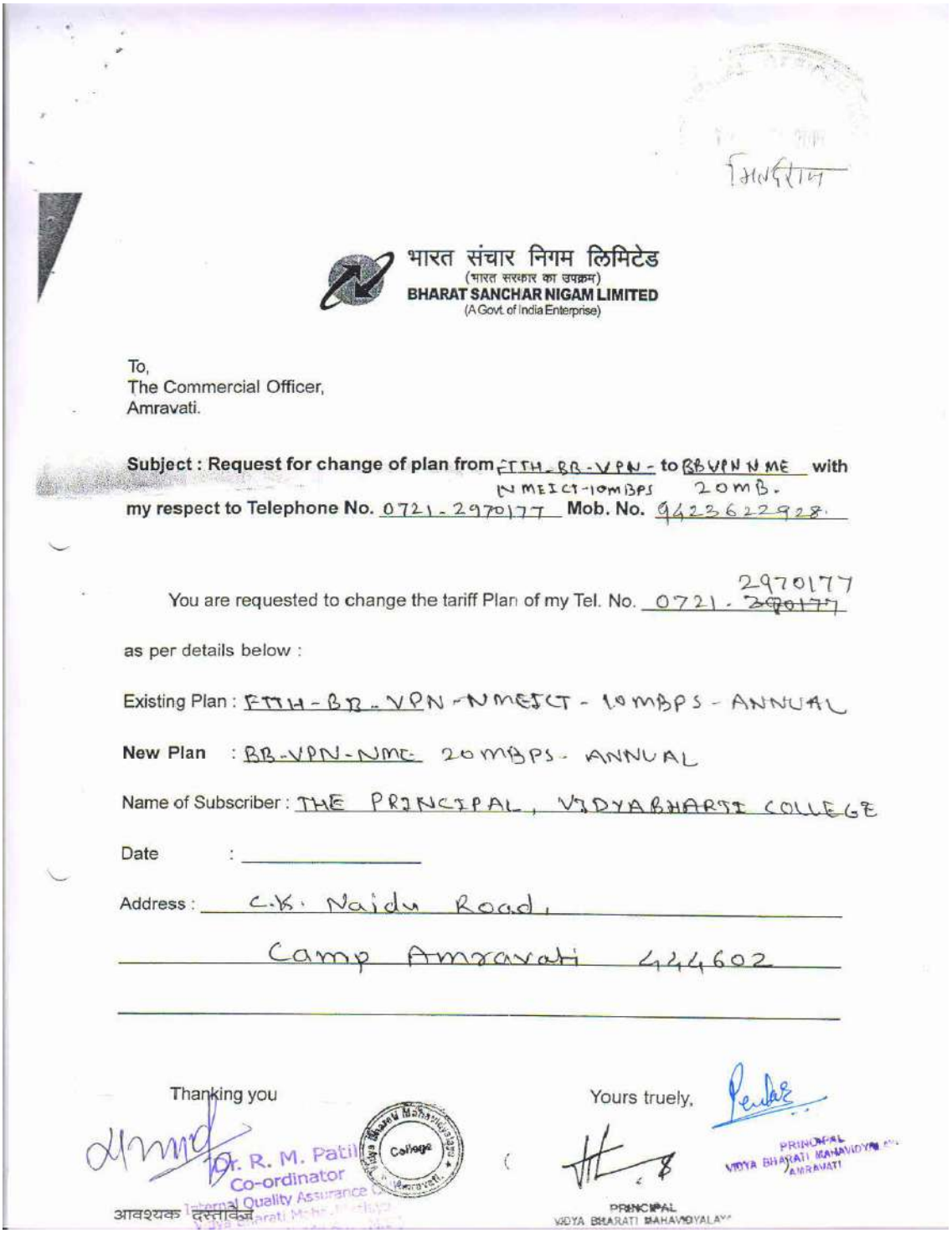
Sr. No	Configuration	Deployed to	Date of Updation/Purchase
1	Lenevo Tiny, M-72, Interl Pent Core, i3, 500 GB HDD, RAM 2 GB, DDR 3	MCA	03/01/2014
2	Lenevo Desktop Thinkcentre 72, RAM 2GB, HDD 500	Comp. Sci	26/11/2014
3	DMP, TVS MSP 250	MCA	2014-15
4	Lenevo Desktop i3, 4th generation, 1TB HDD, 1GB RAM	MBA	12/06/2014
5	Lenevo Desktop i3, 4th generation, 1TB HDD, 1GB RAM	MBA	18/3/2015
6	TVS MSP 250 Star DMP	Comp. Sci	15-16
7	TVS MSP 250 Star DMP	Comp. Sci	15-16
8	Lenevo Desktop H5050, RAM 2GB, HDD 500	Comp. Sci	12/12/2015
9	EPSON EB 525 W Short Throw	Comp. Sci	2016-17
10	EPSON EB 575 Ultra Short Throw	Comp. Sci	2016-17
11	Dotmatrix Star, TVS MSP-240	MBA	15/11/2016
13	EPSON, EBX-31	MBA	02/12/2017
14	Lenevo K 200	MBA	21/3/2017
15	Computer server Lenevo, TL 150Intel Xeon E-3 1225 V5, 3.3 GHz 8MB, 2133MHz 1x8GB, 1x1 TB Sata 7200 Serial PCKSBEN	MBA	13/6/2017
16	EPSON,Short Throw	MBA	15/11/2017
17	Canaon,LBP 2900B	MBA	18/7/2018
18	EPSON 675 Short Throw	MBA	10/02/2018
19	EPSON XGA EB X-31 XGA	Comp. Sci	2017-18
20	EPSON EB-525-W WXGA Short Throw	Comp. Sci	2017-18
21	Server Lenevo TS 150 (70UAAA00771H)	MBA	08/06/2018

22	Lenevo Mdh V-520 core-13, 4GB RAM, 1TB HDD	MBA	23/8/2018
23	Lenevo Desktop V520, i3 7th generatioRAM 2GB, HDD 1TB	Comp. Sci	29/8/2018
24	EB 675 SR-X2A78700107	MBA	19/9/2018
25	Epson EB 675	MCA	25/10/2018
26	Lenevo 530, Core i3, 9th generation, 1TB HDD, RAM 4 GB	MCA	15/11/2019
27	TVS Singel function, MSP 250	MCA	15/11/2019
28	Epson EBS 41	MCA	15/11/2019
29	Internet Connectivity: Broadband	20 MBPS	15/03/2018
30	Lease line	50 MBPS	01/04/2018
31	Internet Connectivity: Broadband	40 MBPS	13/08/2018
33	Internet Connectivity: Broadband, Fibro combo ULD 3999	100 MBPS	20/02/2019
34	MIS- ERP CCMC	E-governance	14/05/2019
35	LIBSYS 1.0 version	Fully automated	2007 &2020
36	LIBMAN 10th version	Fully automated	
37	ILMS- e Edu hub	COA-LMS	09/10/2019
38	Words Worth	English Language Lab software	23/10/2018

C) A Journey of Black Board to Green Board; from Green Board to White Board; from white Board to Smart Board

D) Latest Upgradation of Computer Laboratories

E) Progression towards Internet Connectivity: From Basic broadband plan of 20 mbps to 100 mbps Lease Line and Cloud Based ERP Solution



भारत संचार निगम लिमिटेड
(भारत सरकार का उपक्रम)
BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

To,
The Commercial Officer,
Amravati.

Subject : Request for change of plan from FTTH-BB-VPN-NMEICT-10MBPS **to** BBVPN NME 20MB. **with my respect to Telephone No.** 0721-2970177 **Mob. No.** 9423622928.

You are requested to change the tariff Plan of my Tel. No. 0721-2970177

as per details below :

Existing Plan : FTTH-BB-VPN-NMEICT-10MBPS-ANNUAL

New Plan : BB-VPN-NME 20MBPS-ANNUAL

Name of Subscriber : THE PRINCIPAL, VIDYABHARTI COLLEGE

Date :

Address : C.K. Naidu Road,
Camp Amravati 444602

Thanking you

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance

आवश्यक दस्तावेज

Yours truely,

PRINCIPAL
VIDYA BHARATI MAHAVIDYALAY

PRINCIPAL
VIDYA BHARATI MAHAVIDYALAY
AMRAVATI

भारत संचार निगम लिमिटेड
(भारत सरकार का उपक्रम)
BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

To,
The Commercial Officer,
Amravati.

Subject : Request for change of plan from FTTH-BB-VPN-NMEICT-20MBPS **to** FTTH-BB-VPN-NMEICT-40MBPS **with my respect to Telephone No.** 0721-2970177 **Mob. No.** _____

You are requested to change the tariff Plan of my Tel. No. 0721-2970177 as per details below :

Existing Plan : FTTH-BB-VPN-NMEICT-20MBPS-ANNUAL

New Plan : FTTH-BB-VPN-NMEICT-40MBPS-ANNUAL

Name of Subscriber : The, Principal, Vidyabharti Mahavidyalaya

Date : 13/08/2018

Address : C.K. Naidu Road
Camp Amravati 444602

Thanking you

Yours truely,

Vidya Bharati Mahavidyalaya College Amravati

PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI.

आवश्यक दस्तावेज
१) टेलीफोन बिल (२) पॅन कार्ड / ड्रायव्हिंग लायसन्स (स्वयं सत्यापित) (Self Attested)

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance Cell
Vidya Bharati Mahavidyalaya
Camp, Amraveti-444 602 (M.S.)

13 AUG 2018

PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI

ALLTECH SYSTEM

Authorized Channel Partners of *TATA Teleservices (Maharashtra Limited)* Internet Services Provider

To,		Bill No.	AS/2018-19/21160
The Principal,		Date	01/04/2018
Vidhyabharti Mahavidhyalay		Your Ref.	VBMV/PO/2281
C.K. Naidu Road, Camp Amravati-444602		Date	15/03/2018

Service Details	:	
Active Port Service	:	TATA Teleservices (Maharashtra Limited)
Bandwidth	:	50 MBPS 1:1 Lease Line (OFC)
Annual Recurring	:	350000.00
Account No	:	605942664
Bill Period	:	Quarterly
Payment Mode	:	Quarterly Advanced
Billing Period	:	01/04/2018 To 30/06/2018
Due Date	:	05/04/2018
One time Charges	:	10000.00
Credit Limit	:	50000.00
GST No.	:	Nil

Bandwidth Advanced Charges (ARC)	:	87500.00
Central Goods & Service Tax @ 9.0%	:	7875.00
State Goods & Service Tax @ 9.0%	:	7875.00
Total Current Charges in Rupees	:	103250.00
In words	:	One Lakh Three Thousand Two Hundred & Fifty Rs. Only
Link Commissioning Date	:	31/03/2018
Circuit ID	:	CAMPVBMV
MUX Port	:	21-10/100/100-UTP

Declaration:
We declared that this invoice shows the actual price of the goods and services described and that all particulars are true and correct.

ALLTECH SYSTEMS AMRAVATI

GST No.: 27AQKPC2277Q1Z3

Authorized Signatory

Ground Floor, ... Building, Ambapeth Amravati-444601. Email. alltechamt@gmail.com. Contact No. 7218400000

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance
Vidya Bharati Mahavidyalaya
Camp, Amravati-444 602

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O/C

Vidya Bharati Shaikshanik Mandal, Amravati's

VIDYA BHARATI MAHAVIDYALAYA, AMRAVATI.

C.K. Naidu Road, Camp, Amravati - 444 602. (M.S.) India

Re-accredited "A" by NAAC (CGPA 3.26-II Cycle) - CPE status by UGC - Thrice,
'Lead College' by S.G.B. A University, Amravati, Mentor College Under Paramarsh Scheme of UGC

☎ 0721-2662740, Fax No. 0721-2552012 | Website : http://www.vbmv.org | Email : principal@vbmv.org, vm126@sgbau.ac.in

President	Founder President	Principal
Mr. R.D. Shekhawat	Dr. D.R. Shekhawat	Dr. Pradnya Yenkar
☎ : 2662866, 2662783 (R)	☎ : 2662866, 2662783 (R)	☎ : 2662740 (O), 2664013 (R)

Ref. No. Ref. No. VBM/SR/ 105 /2020

Date : 20 JUL 2020

To,
Vodafone Idea Limited
Pune, 411003
Maharashtra

Kind Attn: - Mr. Abhijit Dey

Subject:- P.O. for upgradation of 50 to 100 Mbps Link, Circuit ID: - ENT32PUNAMA065003

Dear Sir,

As per your offer and final negotiation, we are pleased to place the purchase order for upgradation of exiting ILL link up to 100 Mbps with following terms & conditions.

Sr.No	Existing Plan & Charges	Upgradation of link	Recurring per year
01	50 Mbps 1:1 Rs 2,90,000/- per year	50 to 100Mbps 1:1 Rs. 1,85,000/- extra/year	Rs. 4,75,000/-

Terms & Conditions:

- The institute takes the billing responsibility for the same.
- Price is valid for a contract term of 1year.
- Recurring payment: Quarterly in Advance
- GST at 18 % Extra
- Delivery of upgraded link, Immediate with MUX

Thanks & Regards,

Authorized Signatory
Dr. Pradnya Yenkar
PRINCIPAL
VIDYA BHARATI MAHAVIDYALAYA
AMRAVATI

ersoft
Solutions Pvt. Ltd

Invoice

MASTERSOFT ERP SOLUTIONS PVT LTD, 1456- A NEW NANDANWAN OPP. PANDAV POLYTECHNIC NAGPUR GSTN - 27AAJCM7667D1Z4 CIN - U72900MH2015PTC264680 E-MAIL - accounts@iitms.co.in	Invoice No **DEC/007/2019-20**	Dated **02-Dec-2019**
	Delivery Note	Mode/Terms Of Payment
Our Bank Details as follows Company Name - **Mastersoft ERP Solutions Pvt. Ltd.** Bank Name - **State Bank of India** Branch Name - **Nandvan Nagpur** Account No - **34979484917** IFS Code - **SBIN0011144**	Supplier's Ref.	Other Reference(s)
	Buyer's Order No VBM/SR/141/2019	Dated 14-May-2019
Buyer To, THE PRINCIPAL, VIDYABHARTI MAHAVIDYALAYA, AMRAVATI.	Despatch Document No	Dated
	Terms of Delivery	

Sr. No	Description Of Goods	HSN/SAC	Quantity	Rate	Per	Amount
1	**CLOUD BASED ERP SOLUTION** *STUDENT BILLING FOR THE PERIOD 2019-20*	85238020	5131.00 NO	90.00	NO	4,61,790.00
	CGST@9%			9.00		41,561.10
	ROUNDED OFF					- 0.20
	SGST@9%			9.00		41,561.10
	Total					5,44,912.00

Amount Chargeabel (in words) E. & O.E

Rupees **Five Lakhs Forty-Four Thousand Nine Hundred Twelve Only**

	Taxable Value	Central Tax		State Tax	
		Rate	Amount	Rate	Amount
Total	4,61,790.00	9.00	41,561.10	9.00	41,561.10

Tax Amount (in words) Rupees Forty-One Thousand Five Hundred Sixty-One And Ten Paisa Only

Company's PAN : AAJCM7667D

Declaration
We Declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

NOTE:- Interest will be charged 1.5%, If payment not received within 35 days from the date of this Invoice

For MASTERSOFT ERP SOLUTIONS PVT LTD

Authorised Signatory

This is a System Generated Invoice. Hence, Signature is not required.

Dr. R. M. Patil
Co-ordinator
Internal Quality Assurance Cell
Vidya Bharati Mahavidyalaya
Camp, Amravati-444 602 (M.S.)

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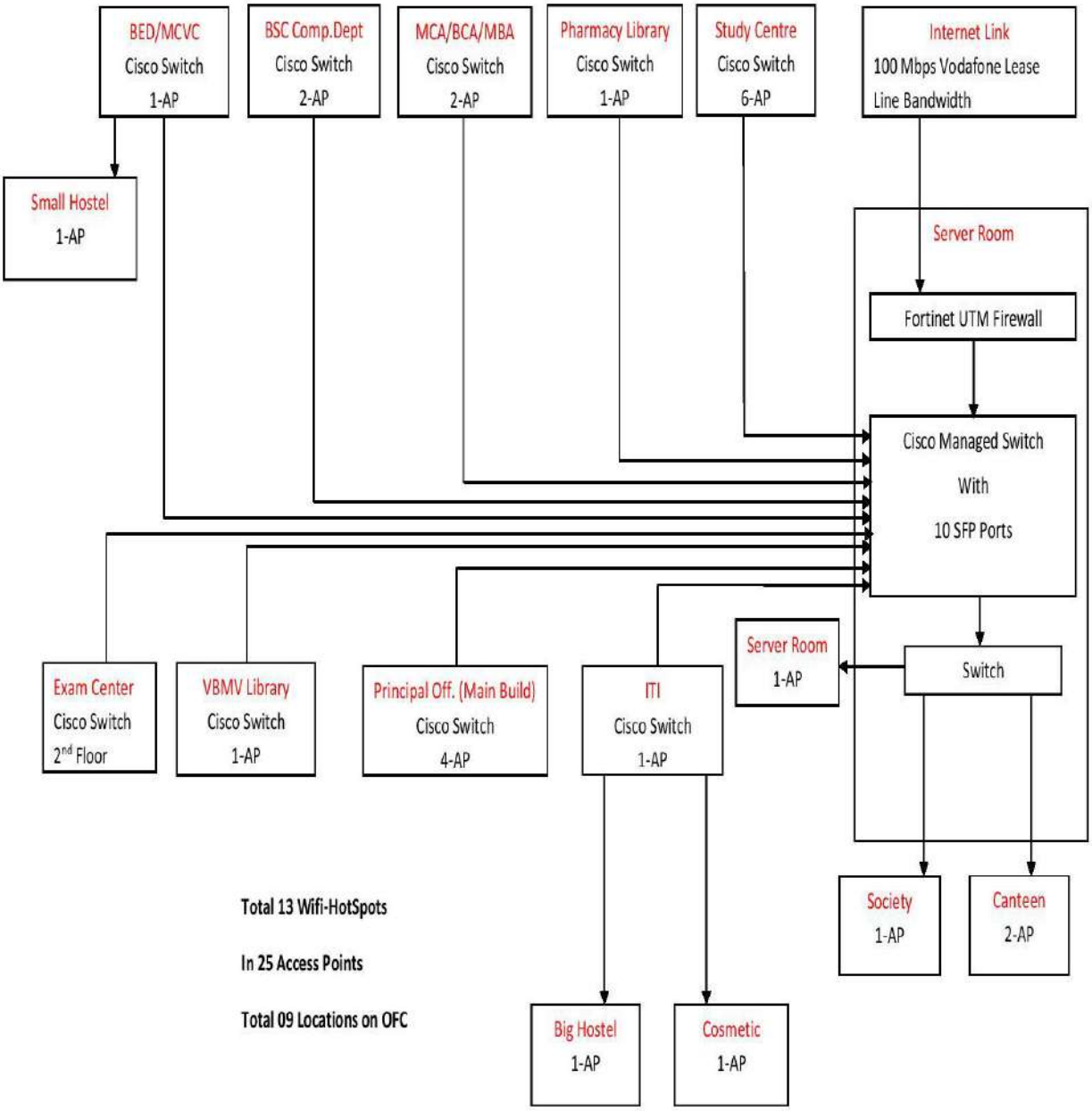
F) A Network of Lease Line-WiFi distribution



G) System Admin: Mr. Mahendrasingh Chauhan