

BSc Med. Zoology Department Program Outcomes

PO 1: Disciplinary Knowledge :

- > To develop a conventional disciplinary knowledge and its application to society.
- > To develop strong theoretical and practical understand and apply this to their higher studies and research programmes.

PO 2: Critical thinking and problem solving :

- > To exhibit the skill of critical thinking and use higher order cognitive skills to approach problems situated in their surrounding environment, society and other animal world.
- > Propose appropriate solution and help in ~~this~~ <sup>its</sup> implementation

PO 3: Research related skills :

- > Students will be able to develop the skills of practical work, lab instruments handling and working, critical thinking of practical work and able to apply this knowledge in their own research.

PO 4: Environment and Sustainability :

- > Students will have an understanding of our nature, environment and interaction of living and non-living beings. So this knowledge will be helpful in maintenance of environment.

## Program specific outcomes (PSOs)

- > Interaction with environment and another animals by study of their behaviour.
- > Systematic understanding of all animal kingdom from lower protozoans to Highest Mammals.
- > Understanding of Animals anatomy, morphology and Physiology.
- > Laboratory skills, practical knowledge, knowledge of Microscopes and all other instruments used in Zoology lab.
- > Understanding of Animal behaviour, their disorders and methods to cure them.
- > Understanding of Environment's Requirement and its maintenance.
- > Lab knowledge to be helpful in their Research.
- > Evolutionary knowledge of animals.
- > Ecology knowledge and methods to conserve our nature, wildlife, plant life etc.

## Course outcomes (COs)

### Semester - I

Paper I - Life and diversity from protozoa to Helminthes

Paper II - cell biology

1. Knowledge of small organisms and their interaction with Humans.
2. Importance of animals to environment and Human.
3. They will have knowledge of cell at microscopic level and able to apply this on research.
4. They will have knowledge of disease like Cancer, and ability to fight with diseases so they can easily handle their life problems.
5. Practical knowledge of microscopes, staining and small animals.

### Semester - II

Paper - I Life and diversity from Annelida to Hemichordata

Paper - II Genetics

1. Students will have knowledge of zoology and cells at gene level.
2. They will have knowledge of small animals and their interaction with environment.
3. Students will have knowledge of chromosomes, DNA, Gene, cells at microscopic level and able to implement their knowledge of in their higher studies and research work.
4. Students will have knowledge of all practical works helpful in higher research.



### Semester - III

Paper - I : Life and diversity of chordates - I -

Paper - II : Mammalian physiology - I

1. Students will have knowledge of all chordates animals, their behaviour, their diversity, their systemic study and their interaction with environment.
2. Students will have knowledge of Human physiology as digestive system, nutrition, biochemistry of our body.
3. Knowledge of biochemicals, their formation and regulation in our body.
4. Knowledge of Biodiversity among animals.
5. Practical knowledge of physiology experiments, animals morphology which is helpful in Research work.

### Semester - IV

Paper - I Life and diversity of chordates - II

Paper - II Mammalian physiology - II

1. Knowledge of chordates, their systemic study, behaviour, life cycle and interaction with humans.
2. Knowledge of Respiration, circulation, excretion, Reproduction in Humans.
3. Knowledge of Hormones, and their regulation in human body, which is helpful in research work.
4. Practical knowledge of higher chordates, physiology experiments, helpful in higher studies and Research.

## Semester - V

Paper - I Aquaculture

Paper - II Ecology and evolution

1. Knowledge of fish, fisheries and their capture and culture, which is very helpful in earning of life.
2. Provides a better understanding of aquatic animals and their environment.
3. Knowledge of our ecosystem, and its interaction with living being, helpful in maintenance of mother nature.
4. Knowledge of existence of human on earth and its evolution to a modern man so they can implement this knowledge in formation of a better society.

## Semester - VI

Paper - I Insect Pest Management

Paper - II Development Biology

1. Students will have knowledge of Pest and their management so that this knowledge can be implemented in daily life in protection of our crops.
2. Knowledge of development biology, how a single cell can develop in a complete organism.
3. Knowledge of dev. bio will be helpful in their higher studies and Research work.
4. Practical knowledge of instruments, slides of developing embryo will be helpful in their own research.

Programme Outcomes

PO1. Knowledge and Understanding of:-

- 1) The range of plant diversity in terms of structure, function and environmental relationships.
- 2) The evaluation of plant diversity.
- 3) Plant flora and its classification.
- 4) The role of plants in functioning of global ecosystem.
- 5) A selection of more specialized, optional topics.

PO.2 Intellectual skills - able to:-

- 1) Think logically and organize tasks into a structured form.
- 2) Assimilate knowledge and ideas based on wide reading and through the internet.
- 3) Understand the evolving state of knowledge in a rapidly developing field.

P.O.3: Practical Skills:-

Students learn to carry out practical work, in the field and in the laboratory, with minimal risk.

- 1) Interpreting plant morphology and anatomy.
- 2) Vegetation analysis.
- 3) Plant identification.
- 4) Plant pathology to be added for sharing the field and lab data obtained.
- 5) A range of phytochemical analyses of plant materials in context of plant physiology and biochemistry.



## 1. Transferable Skills:—

- 1.) Use of IT (word-processing, use of internet, statistical packages and databases).
- 2.) Communication of scientific ideas in writing and orally.
- 3.) Ability to work as part of a team.
- 4.) Ability to use library resources.
- 5.) Time management.
- 6.) Career planning.

## PO5. Scientific Knowledge:—

Apply the knowledge of basic sciences, life sciences and fundamental process of plants to study and analyze any plant form.

## PO6. Problem Analysis:—

Identify the taxonomic position of plants, formulate the research literature, and analyze non reported plants with sustained conclusions using first principles and method of nomenclature and classification in botany.

## PO7. Conduct investigations of complex problems:—

Use research-based knowledge and research methods ~~to~~ including design of experiments, analysis and interpretation of data, and development of the information to provide valid conclusions.

### PO3. Modern tool Usage:-

Create, select, and apply appropriate techniques, resources, and modern instruments for Biochemical estimation, Molecular biology, Biotechnology, PTC. experiments, cellular and physiological activities of plants with an understanding of the application and limitation.

### PO9. The Botany and Society:-

Apply reasoning informed by the contextual knowledge to assess plant diversity, its importance for society, health, safety, legal and environmental issues and the consequent responsibilities and norms of the biodiversity conservation.

### PO10. Environment and sustainability:-

Understand the impact of the plant diversity in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

### PO11. Ethics:-

Apply ethical principles and commit to environmental ethics and responsibilities and norms of biodiversity conservation.

### PO12. Life-long learning:-

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in broadest context of technological change



## Specific Outcome of B.Sc Botany: —

- SO1. Critically evaluation of ideas and arguments by collection relevant information about the plants, so as to recognise the position of plant in the broad classification and phylogenetic level.
- SO2. Identify problems and independently propose solutions using creative approaches, acquired through interdisciplinary experiences, and a depth and breadth of knowledge/expertise in the field of plant in taxonomy.
- SO3. Accurately interpretation of collected information and use taxonomical information to evaluate and formulate a position of plant in taxonomy.
- SO4. Students will be able to apply the scientific method to questions in botany by formulating testable hypothesis, Collecting data that address these hypotheses, and analyze those data to assess the degree to which their scientific work supports their hypothesis.
- SO5. Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.
- SO6. Students will be able to present scientific hypotheses and data both orally and in writing in the formats that are used by practising scientists.

# COURSE OUTCOME

B.Sc Part-I, Semester-I

Paper I :- Diversity of Microbes

on completion of course, student will be able to:-

1. Understand the behaviour of Bacteria & virus
2. Understand the diversity among Algae, Fungi
3. Know the systematic, morphology and structure of algae & understand the life cycle pattern.
4. Understand the useful and harmful activities of Algae.
5. Know the economic importance of algae and  
• Fungi
6. Understand the life cycle pattern of algae
7. Understand the Biodiversity of fungi
8. Understand the morphological diversity of Bryophytes.

## Paper - II :- Cell Biology

After completion of course, students will be able to:-

- 1) Understand the cell's basic structure with its function.
- 2) Understand about cell organelles.
- 3) Understand about Cell cycle and cell division.
- 4) Understand different types of chromosomal aberrations.

## Semester II :-

### Paper-I : Diversity of Archegoniates :-

After completion of course, students will be able to:-

- 1) Understand the morphological diversity of Bryophytes
- 2) Understand the morphological diversity of Pteridophytes.
- 3) Understand the economic importance of bryophytes and pteridophytes.

### Paper - II : - Genetics :-

After completion of course, students will be able to:-

- 1) Understand the morphological characters of DNA, as genetic material.
- 2) Understand the Genetic inheritance, pattern.
- 3) Understand the Genetic variations present in living organisms.
- 4) Understand the modern concept of gene, RNA, Ribosomes, and Central dogma of molecular biology.



### Semester - III :-

#### Paper I : Biology and Diversity of Seed plants - I

On completion of course, students are able to :-

- 1) Understand the General Characters, Origin and Evolution of Gymnosperms.
- 2) Understand the Geological Time Scale.
- 3) Evolution of Seed habit.
- 4) Understand the system of classification of gymnosperms.
- 5) Understand the morphology of Angiosperms.

#### Paper - II : Plant Anatomy.

On Completion of course, students are able to :-

- 1) Understand the anatomy of Tissue-mesodermic and permanent (simple, complex and secretory).
- 2) Understand the anatomy of monocot root and dicot root.
- 3) Understand the stomatal apparatus and their morphological types.

### Semester - IV :-

#### Paper - I :- Biology and Diversity of Seed plants - II

On Completion of course, students are able ~~are~~ to :-

- 1) Understand the taxonomy and systematics, in relation to <sup>chemo</sup>taxonomy.
- 2) Salient features of systems of classification of angiosperms.
- 3) Understand the diversity of flowering plants.
- 4) Diagnostic features and economic importance of different plant families. 12

## -II :- Plant Embryology :-

Completion of the course, the students are able to:

- 1) Understand the flowers - as a modified shoot.
- 2) Understand the pollen germination.
- 3) Understand the different processes related to plant embryology.
- 4) Understand the embryogenesis in Dicot and monocot.
- 5) Understand the types of pollination by different types and agencies.

## Semester - IV :-

### Paper - I : Plant Physiology.

On Completion of the course, the students are able to

- 1) Understand the plant-water relations.
- 2) Understand the different pattern of pathways.
- 3) Understand the detailed process of photosynthesis.
- 4) Understand the different plant hormones and their functions.
- 5) Understand the concept of phytochromes, their role and mechanism of action.
- 6) Understand the growth and development in plants.

## -II: Ecology:-

Completion of course, students are able to:-

- 1) Understand the Concept of Ecology.
- 2) Understand the adaptation of plants to water stress and salinity.
- 3) Understand the Greenhouse effect and greenhouse gases, impacts of global warming.
- 4) Understand the Biogeochemical Cycles.
- 5) Know the scope and importance of Ecology.

## Semester-VI :-

### Paper-I:-Biochemistry and Plant Biotechnology.

On Completion of course, the students are able to:-

- 1) Understand Plant biochemistry.
- 2) Understand the concept of plant tissue culture.
- 3) Understand the concept of plant biotechnology.
- 4) Understand the Lipid metabolism process.
- 5) Understand the nitrogen metabolism, occurring in plants.

### Paper-II :- Economic Botany.

Completion of course, the students are able to:-

- 1) Understand the role of plants in human welfare.
- 2) Gain knowledge ~~of~~ about various plants of economic use.
- 3) Know importance of plants and plants products.
- 4) Understand the chemical contents of plant products.
- 5) Know about the utility of plant resources.



## Department Of Chemistry B.Sc (PMC)

### Vision

To promote and support a comprehensive, innovative and dynamic learning experience to develop computational skills, critical thinking and problem solving ability to create a diverse global student population in pure science.

### MISSION

- \* To create ideas that deepens and nourishes the understanding of Science and to develop innovative and insightful researchers.
- \* To provide and formulate strategies for solving problems.
- \* To ensure that the students will obtain abilities to critically assess numerical and graphical information.
- \* To ensure that the student learner will be able to contribute to today's society.

### Program outcomes (POs)

After completion of the Bsc programme, graduating students will be →

#### Chemistry Learning outcomes

- PO1 Understand the principles of various fields of chemistry (organic, inorganic, physical, analytical and biochemistry)
- PO2 Develop as independent thinkers who are responsible for their own learning.
- PO3 Develop transferrable quantitative skills.

- 4 Be able to work with others demonstrating leadership and collective collaborative skills.
- PO 5 Demonstrate a comprehensive understanding of the theory and practice of modern instrumentation and apply to appropriate chemical problems.
- PO 6 Recognize potential laboratory safety concerns and address them using appropriate techniques.
- PO 7 Produce scientific reports formatted for peer-reviewed publication, using the primary literature.
- PO 8 Present the results, conclusions and relevance of scientific experiments to a specific audience.

### Course outcomes (COs) for chemistry →

- This course gives the student idea about the nature and purity of crystal.
- This course is very important for the students. This course gives student idea about the way a reaction proceeds and kinetic in details, specially for inorganic reaction.
- This course gives student idea about carbohydrates, starch etc. are different class of macromolecules consisting of preliminary units like glucose, mannose etc. Their structure are also a matter of constant study due to their uniqueness. They are available in different foods like potato and recently they are being used in medical science also.

cyclic reactions are used in a vast way in Nature and also by organic chemist. This course gives the student theoretical basis of the kinds of reaction and also helps them to find a way to carry out these types of reaction.

- To determine the structure is very important for organic chemt. Various spectroscopies method are available like NMR, IR, UV absorption spectroscopies are few of them. The student are given in a way very preliminary ideas of this course.
- Electrochemistry discussed electrical properties of ionic solutions. Different applications are there of this course.

### Course outcomes

#### 1st semester →

- To educate students on topics: Periodic classifications of elements and chemical bonding.
- To educate students on basic organic chemistry of saturated and unsaturated hydrocarbons along with introduction to different types of reactions.
- To impart knowledge on states of matter - solid, liquid and gaseous states
- To expose students on radical analysis in inorganic mixture. Determination of surface tension and viscosity of liquids.

#### 2nd semester →

- To make students aware about 's', 'p' and zero group elements and their related chemistry.



- o educate students on Alcohols, Ethers, Aldehyde and ketones along with introduction of Aromatic compounds.
- To educate students on the Topics: Chemical Kinetics, Photochemistry and Macromolecules.
- To provide laboratory experience to the students by performing Volumetric Analysis for determination of equivalent weight of Acids and experiment based on organic compounds synthesis and their purification methods

#### 3rd semester →

- To impart understanding of co-ordination compounds and properties of d and f block elements.
- To educate students on chemistry of carboxylic acid, Nitro compounds and carbohydrates.
- To impart Basic understanding on Thermodynamics and Electrochemistry
- To provide laboratory experience on selected experiments related to topics taught in theory.
- To provide opportunity and experience of presenting seminar and pre-allotted topics related to theory.

#### 4th semester →

- To educate students on topic: adsorption, Surface Chemistry and Quantum Chemistry.
- To educate students on topics: Atomic Nucleus, Nuclear Reaction, Radio Activity, Aqueous Aqueous and Non-Aqueous Chemistry.
- To provide students knowledge of stereo-chemistry, chromatography and Hetero-cyclic compounds.
- To provide opportunity and experience of presenting seminar on allotted topics related to theory.

#### 5th semester →

- To offer an advanced course on Organometallic Compounds and Field theories of Co-ordination and theory of transition metals.
- To impart advanced knowledge on organic reaction, Mechanism and Stereo-Chemistry.
- To impart knowledge on Thermodynamics, Statistical Mechanics and Electro-Chemistry.
- To impart understanding on basis of Biology for students of Mathematics stream.
- To impart understanding on basis of Mathematics for students of Biology stream.
- To provide laboratory experience to the students by performing experiments based on topics taught in theory.

#### 6th semester →

- To educate on Advance topics of Biomolecules and their synthesis.
- To impart understanding on Advanced topics of Quantum Chemistry, Group Theory and Reaction Dynamics.
- To impart knowledge on Basic Technique on Statistics and Computer Application.
- To provide laboratory experience to the students by performing experiments based on topics taught in theory.

\* Electrochemistry discussed electrical properties of ionic solutions. Different applications are there of this course.

\* This course gives the student idea about the nature and purify the crystal.

### Specific Outcomes

- Clear understanding of the fundamental concept in Organic, Inorganic, physical and Analytical chemistry.
- Ability to perform scientific experiments skillfully by application of procedural knowledge.
- Capacity of working in research labs and related fields.
- Idea about research in chemistry and knowledge of the significance of the scientific concepts learnt which find application in industry, medicine and modern research.



Programme outcomes (POs)

After Completion of B.Sc Programme, Graduating students will be:-

- 1) Able to develop a Conceptual understanding of physics principles.
- 2) Able to transfer and apply the acquired concepts and principles in higher studies in all branch of physics.
- 3) Able to understand the practical knowledge of physics and apply this knowledge in their own research.
- 4) To ensure knowledge and ability to use various problem Solving Strategies.
- 5) Able to understand the impact of the Scientific Sol<sup>n</sup> in social and environmental contents and demonstrate the knowledge of and need for sustainable development

## Physics Department

### Programme Specific Outcomes:-

After completion of B.Sc Programme, Graduating students will be

- 1) able to understand the concepts and significance of the various physical phenomena.
- 2) able to understand the basic concepts of methodology of science and the fundamentals of Physics.
- 3) Able to understand the theoretical basis of Quantum Mechanics, relativistic physics, nuclear physics, optics, Spectroscopy, Solid State Physics, Astrophysics, Statistical physics.
- 4) Able to understand and apply the concept of electronics in the designing of different analog and digital circuits.
- 5) Able to apply the theories learnt and skills acquired to solve real time problems.

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## Physics Department Course Outcomes

### Semester-1

#### Paper-1 : Classical Mechanics

After completion of this course students will be able to :

- understand the Newton's law and its applications
- apply the Lagrangian and Hamiltonian Dynamics to study motion of particles.
- understand the use of Canonical Transformations and Poisson Brackets.
- understand the Central forces and Non-inertial frames of Reference to study motion of different objects.
- understand the rigid Body Dynamics and Small Oscillations.

#### Paper-2 : Electricity and Magnetism

- understand the concept of the electric force, electric field and electric potential for stationary charges.
- Calculate electric potential and electric field by using Gauss's law.
- concept of magnetic field, magnetic field for steady currents using Biot-Savart's law and Ampere's law.
- study the magnetic materials and its properties.

### Semester-2

#### Paper-1 : Properties of Matter and Special Theory of Relativity

- After completion of the course students are able to :
  - understand the surface tension applications in daily life.
  - understand the basic concepts of mechanics, fluid dynamics and various types of forces.

#### Paper-2 : Classical Electrodynamics

- Understand the importance of Electrostatics
- Understand the importance of Magnetostatics.
- Understand the Maxwell's equation (Differential and Integral form) and their physical significance.
- Understand the Faraday's law of induction, Lenz's law, generalization of Ampere's law.



### Semester-3

#### Paper-1 : Computer Programming and Thermodynamics

After completion of this course students will be able to:

- Properties of algorithms, a few kinematic equations, free fall, equation of state, factorial of a number.
- understand the various thermodynamics process like isothermal, isobaric, isochoric processes and laws of thermodynamics.
- understand Carnot's Cycle, Heat engines and Refrigerator.

#### Paper-2 : Optics - I

- understand the geometrical optics.
- understand the lens aberrations.
- use optical Instruments such as simple microscope, compound microscope, etc.

### Semester-4

#### Paper-1 : Statistical Physics

After completion of this course students will be able to:

- understand the Probability theory, Statistical Description of thermodynamic system.
- understand the classical statistical mechanics.
- understand the applications of statistical mechanics and quantum distribution functions.
- understand the Boltzmann limit of boson and fermion gases.
- understand the applications of Bose - Einstein statistics and fermi - Dirac statistics.

#### Paper-II : Optics - II

- understand Newton's rings, Michelson's interferometer and its applications.
- understand Fresnel's Diffraction and Fraunhofer diffraction.
- understand the polarisation of light.

## Semester-5, Paper-I

### Solid State Physics

→ After completion of this course students will be able to

- Understand lattice, Basis, Translational vectors, Primitive unit cell, Symmetry operations, Different types of lattices and crystal structures.
- Understand X ray Diffraction and other characterization and other characterization Techniques.
- Understand Free Electron and importance of Band Theory of Metals.
- Understand the magnetic properties of materials.

### Paper-II, Quantum Mechanics

- Understand the concept of wave packet, phase velocity, group velocity.
- Understand the Heisenberg's uncertainty principle with thought experiment.
- Understand the physical interpretation of wave function
- Schrodinger time dependent and independent equations.
- Apply the Schrodinger Steady state equation to study the motion of particles.
- Understand the importance of Operators in Quantum Mechanics.

## Semester - 6<sup>th</sup> Paper - I

### Atomic and Molecular Physics and Laser

- After completion of this course students will be able to:
- Understand the Rutherford atomic model and vector atom model.
  - Understand the Pauli exclusion principle and electron configuration.
  - Understand the L.S. and J-J coupling schemes.
  - Understand the normal and anomalous Zeeman effect and Stark effect.
  - Understand the application of X-ray spectroscopy.
  - Understand the molecular spectroscopy and Raman spectroscopy.
  - Understand the interaction of radiation with matter.
  - Understand the spontaneous and stimulated emission.
  - Understand the importance of population inversion in laser.

### Paper - 2 Nuclear Physics

- Understand the basic properties of Nucleus.
- Understand the properties of  $\alpha$ ,  $\beta$ ,  $\gamma$  rays.
- Understand the properties of nuclear forces.
- Understand the use of gas filled Detectors and solidstate detectors.
- Understand the concept regarding nuclear fission, chain reaction and critical mass and nuclear reactor.



## Program Outcomes of B.Sc. Computer Science.

1. Apply fundamental principles and methods of computer science to a wide range of applications.
2. Design, correctly implement and document solution of significant computational problems.
3. Impart an understanding of the basic of our discipline.
4. Prepare for continued professional development.
5. Develop proficiency in the practice of computing.
6. Effective citizenship and ethics.
7. Social competence and communication skills.

## B.Sc. Computer Science Program Specific Outcomes (PSOs)

- (a) Ability to apply knowledge of computing, mathematics, and basic science that may be relevant and appropriate to its solution.
- (b) Ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.
- (c) Ability to design, implement and evaluate computer-based system, process, component, or program to meet desired needs.
- (d) An ability to function effectively on teams to accomplish a common goal.
- (e) Understanding of professional, ethical, legal, security, social issues and responsibilities.
- (f) Ability to analyze the local and global impact of computing on individuals, organizations and society
- (g) Recognition of the need for an ability to engage in continuing professional development.

Ability to use current techniques, skills, and tools necessary for computing practices.

(e) Ability to use and apply current technical concepts and practices in the core development of solutions in the form of information technology.

(f) Ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based system.

(g) Ability to incorporate effectively integrate IT-based solutions to applications.

(h) Understanding of best practices and standards to develop user interactive and abstract application.

(i) An ability to assist and manage the execution of an effective project plan.



1

## Course Outcomes

1. To impart the basic concepts of logics and designs and Theorem of Boolean algebra.
2. Understand the concepts of register multiplexes and demultiplexes circuits.
3. Understand the concept of computer number system, Input and Output devices.
4. Students will be able to gain practical experience in M.S. Word.
5. Students will be able to gain practical experience in M.S. Excel.
6. Students will be able to gain practical experience in M.S. powerpoint

(2)

## Course Outcomes

1. Understand the concepts of systems, types of systems, elements of system.
2. Understand the tools of structured analysis of DFD, Data Dictionary, Gantt chart, System Testing.
3. Students will acquire knowledge of C-language and learn to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems.
4. Demonstrate an understanding of computer programming language concepts. To be able to develop C programs.
5. Ability of design and develop Computer programs, analysis and interprets the concepts of pointers, declarations, initialization, operation on pointers & their usage.
6. Develop confidence and ability for life-long learning needed for Computer language.

③

## Course Outcomes

1. Students will acquire knowledge of C++ language.
2. Demonstrate and understanding of Computer Programming Language concept, to be able to develop C++ programs
3. Understand the concept of Network-ing & Communication Technologies.
4. Understand the concepts of OSI and TCP/IP Model.
5. Algorithm — Shortest path algorithms, Distance path Algorithm.
6. Ability to develop computer programs, analysis and interprets the concepts of pointer, New and delete, this operators.



(4)

## Course Outcomes

1. To understand concepts about searching and sorting techniques.
2. To impart the data structures and algorithms.
3. To understand basic concepts about stacks, queues and lists.
4. To solve complex applications using structured programming methods.
5. To develop skills to apply appropriate data structures in problem solving.
6. To understand concept about operating system, types of operating system, operating functions, feedback, paging and file management.
7. To understand the concepts of critical section.

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## Course Outcomes

1. To identify the basic concept of Database Management System, Component, Function, Merit and Demerits.
2. To acquire the knowledge of three level architectures.
3. Ability to understand Normalization — 1st normal form to BCNF.
4. To acquire the knowledge of Internet tools, searching and types of searching.
5. Students learn to write, test and debug webpages using HTML.
6. To acquire the knowledge of Internet and External Linking.
7. Students will be able to write Regular expression for pattern matching and apply them for various filters for a specific task.

⑥

## Course Outcomes

1. To impart the basic concepts of visual, Basic and Programming.
2. To understand basic concepts about DAO, ADO and simple activex control.
3. Students will be able to broaden knowledge of Software Product.
4. Students will be able to gain experience in various models:- Waterfall, Prototype, Spiral model.
5. They will be able to increase proficiency in software Project Management and gain practical experience in Requirements Engineering.
6. They will acquire the background of software Architecture and understand and be able to explain software Metrics and software Reliability.