

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09CT11	Programme: B.Sc.,	CIA: I Test
Date: 23.07.2019	Major: ZOOLOGY	Semester: I
Time: 2Hrs	Year: I	Maximum: 50 Marks
Course Title: INVERTEBRATE-I		

ANSWER ALL QUESTIONS

SECTION – A

10X1=10 Marks

Multiple choice questions:

- Paramecium belongs into in the class of-----CO1
 a. Ciliata b. Cestoda c. Euceldata d. Trematoda
- Mode of nutrition in Paramecium is -----CO1
 a. Trizoic b. Metazoic c. Holozoic d. None of these
- Asexual reproduction of Paramecium is known as -----CO1
 a. Conjugation b. Autogamy c. Cytogamy d. Binary fission
- Malaria is caused byCO1
 a. Trypanosome b. Entamoeba c. Plasmodium d. Poliomyelitis
- Which of the following synthetic drug is cure malaria?CO1
 a. Quinine b. Daraprim c. Chloroquine d. All of these
- Rabditis are present in the cells of epidermis inCO4
 a. Turbellaria b. Trematoda c. Cestoda d. All of these
- Miracidium is a larval stage in the development ofCO4
 a. *Taeniasolium* b. *Fasciola hepatica* c. *Ascaris lumbricoides* d. *Echinococcusgranulosus*
- The primary host of liver fluke isCO4
 a. Pig b. Man c. Snail d. Sheep
- Fasciola hepatica* is an endoparasite that lives in theCO4
 a. Blood of sheep b. Spleen of sheep c. Liver of sheep d. Intestine of sheep
- Flame cells are the excretory organs of animals belonging the phylumCO4
 a. Protozoa b. Porifera c. Coelenterate d. Platyhelminthes

ANSWER ANY FIVE QUESTIONS

SECTION – B

5X2=10 Marks

Very short answer:

- Comment on Trichocyst. CO1
- Mention the functions of contractile vacuole in Paramecium. CO1
- What you meant by binary fission. CO1
- Write any four symptoms of malaria. CO1
- Comment on Hermaphrodite. CO4
- What is Mehli'sglands. CO4
- What is acoelomate. CO4

ANSWER ANY THREE QUESTIONS **SECTION – C**

3X6=18 Marks

Short answer:

- With a neat sketch discuss the structure of Paramecium. CO1
- Write an account on locomotion of Paramecium. CO1
- Give a brief note on life cycle of Plasmodium. CO1
- With a neat diagram explain the excretory system of *Fasciola hepatica*. CO4
- Write the general features of Miracidium larva. CO4

ANSWER ANY ONE QUESTIONS

SECTION – D

1x12=12 Marks

Long Answer:

- Write an essay on the reproduction of Paramecium. CO1
- Discuss the general characters of phylum platyhelminthesand Class Turbellaria. CO4

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT12	Programme: B.Sc.,	CIA: I Test
Date: 26.07.2019	Major: ZOOLOGY	Semester: I
Time: 2Hrs	Year: I	Maximum: 50 Marks
Course Title:	INVERTEBRATE-II	

SECTION – A Multiple choice questions

Answer All Questions:

10X1=10 Marks

- The body of annelida is divided into a number of segments called
a) Setae b) Appendage c) Annuli d) Metameres (CO1)
- Annelids are ____
a) Bilateral symmetry b) Asymmetry c) Radial symmetry d) none of these (CO1)
- Longitudinal and circular muscles are found in the body wall of
a) Sponges b) Cnidarians c) Annelids d) None of these (CO1)
- Trochophore larva is found in
a) Cnidarians b) Cockroach c) Annelids d) Sponges (CO1)
- Which class of annelids having bundles of setae?
a) Oligochaeta b) Polychaeta c) Hirudinea d) Echiuroidea (CO1)
- Scorpion belongs to the phylum____
a) Arthropoda b) annelida c) Nematoda d) Mollusca (CO3)
- Insect which yield useful products are called ____
a) Beneficial insects b) Harmful insects c) Productive insects d) Parasitic insects (CO3)
- The phenomenon of the existence of several morphological forms in a species is called____
a) Caste system b) Polymorphism c) Co-operation d) Warming (CO3)
- The worker cells of honey bees are _____ in shape.
a) Triangular b) Square c) Hexagonal d) Round (CO3)
- The nest of termite is called____
a) Houses b) Hive c) Formicaries d) Termitarium (CO3)

SECTION – B Very short answer

Answer any Five Questions:

5X2=10 Marks

- What is metamerism? (CO1)
- What is hermaphrodite? (CO1)
- What is heteronereis? (CO1)
- Comment on feeding and digestion in Nereis. (CO1)
- Define chitin. (CO3)
- Write a short note on prosoma. (CO3)
- What are living fossils? (CO3)

SECTION – C Short answer

Answer any Three Questions

3X6=18 Marks

- Enumerate the morphological features of Nereis. (CO1)
- Describe the structure and functions of Parapodium. (CO1)
- Describe the structure of trochophore larva with neat sketch. (CO1)
- Enumerate the morphological features of scorpion. (CO3)
- Discuss briefly the economic importance of insects. (CO3)

SECTION – D Long Answer

Answer any One Question:

1x12=12 Marks

- List out the general characteristics of Phylum Annelida. (CO1)
- Write an essay on social life of insects. (CO3)

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT31	Programme: B.Sc.,	CIA: I Test
Date: 23.07.2019	Major: ZOOLOGY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	CELL BIOLOGY	

SECTION – A**Answer All Questions:****10X1=10 Marks**

- Sedimentation unit of ribosome is
a) Micron b) Millimicron c) Angstrom d) Svedberg (CO3)
- The oxidation of pyruvic acid into CO₂ and water is called
a) Krebs cycle b) Urea cycle c) Ammonia cycle d) Oxygen cycle (CO3)
- Which cell organelle is called power houses of cell?
a) Endoplasmic reticulum b) Mitochondria c) Golgi bodies d) Lysosomes (CO3)
- Ribosomes were first discovered by
a) Benda b) Swanson c) Altmann d) Palade (CO3)
- Ribosome is composed of
a) A single unit b) Two subunits c) Four subunits d) Five subunits (CO3)
- Cellular components take up stains according to their
a) Mol.weight of their constituent biomolecules b) Size c) Optical property d) Chemical composition (CO1)
- The intensity of staining is determined by
a) Alkalinity of the medium b) Acidity of the medium c) Constituent chemicals of cellular components d) All the above (CO1)
- In centrifugation, rpm refers to
a) Randomly processed material b) Rotation per minute c) Revolution per minute d) Really processed molecules (CO1)
- The difference between TEM and SEM is in
a) Electron source b) Electromagnetic coils c) The way of image formation by electron beam d) Electron aperture (CO1)
- The minimum resolving power of human eye is
a) 0.5 mm b) 0.25 mm c) 0.1mm d) 0.3mm (CO1)

SECTION – B Very short answer**Answer any Five Questions:****5X2=10 Marks**

- What is mDNA? (CO3)
- Define Polyribosomes. (CO3)
- Differentiate the 70S & 80S ribosomes. (CO3)
- Define Cell. (CO1)
- What is resolving power? (CO1)
- Interpret the term fixation. (CO1)
- Mention the purpose of staining. (CO1)

SECTION – C Short answer**Answer any Three Questions****3X6=18 Marks**

- Explain the oxidative phosphorylation. (CO3)
- Write the chemical composition of ribosomes. (CO3)
- Write a note on cell theory. (CO1)
- Differentiate SEM & TEM. (CO1)
- Give an account on principle, components, and working mechanism of compound microscope with a labeled sketch. (CO1)

SECTION – D Long Answer**Answer any One Question:****1x12=12 Marks**

- Narrate the steps involving in the preparation of permanent slides. (CO1)
- Explain the steps involved in Kreb's Cycle. (CO3)

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT32	Programme: B.Sc.,	CIA: I Test
Date: 26.07.2019	Major: ZOOLOGY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	GENETICS	

SECTION – A

- Multiple choice questions Answer All Questions: 10X1=10 Marks**
- Genetics is a branch of biology, which deals with (CO1)
 - Laws of heredity and variations
 - Process of cell division at gametogenesis
 - Formation of new species through natural selection
 - None of these
 - Who claimed to observe a mini form of man inside the sperm? (CO1)
 - Hertsoeker
 - Bateson
 - Weismann
 - Pythagorus
 - The phenotypic ratio of monohybrid cross is (CO1)
 - 3:1
 - 1:2:1
 - 1:1
 - 9:3:3:1
 - Mendel's experimental material was (CO1)
 - Pisum sativum*
 - Lathyrus odoratus*
 - Oryza sativa*
 - Mirabilis jalappa*
 - The test cross ratio is (CO1)
 - 3:1
 - 1:2:1
 - 1:1
 - 9:3:3:1
 - Which of the following type of sex determination occurs in man? (CO4)
 - XX – XO
 - XY – XO
 - XX – XY
 - XXX - XY
 - Haemophilia is more common in males because of (CO4)
 - Recessive character carried by Y-chromosome
 - Dominant character carried by Y-chromosome
 - Dominant trait carried by X-chromosome
 - Recessive trait carried by X-chromosome.
 - Which one of the following is hereditary disease? (CO4)
 - Typhoid
 - Cholera
 - Colour blindness
 - Malaria
 - The Y linked genes are called (CO4)
 - Chromosomes
 - Sex linkage
 - HH gene
 - Holandric gene
 - Haemophilia is a (CO4)
 - blood disease
 - Cancer disease
 - Lungs disease
 - Heart disease

SECTION – B Very short answer

- Answer any Five Questions: 5X2=10 Marks**
- Comment on mendelisms (CO1)
 - What are alleles? (CO1)
 - Define backcross (CO1)
 - What are supplementary genes? (CO1)
 - Differentiate autosome and allosome (CO4)
 - Define Gyanandromorphs (CO4)
 - Comment on Barr body (CO4)

SECTION – C Short answer

- Answer any Three Questions 3X6=18 Marks**
- Discuss the reasons for Mendel's success (CO1)
 - Analyse the biochemical basis of Epitasis (CO1)
 - Explain the following (i) Penetrance (ii) Expressivity (CO4)
 - Give an account on colour blindness (CO4)
 - Explain in short about bleeder's disease (CO4)

SECTION – D Long Answer

- Answer any One Question: 1x12=12 Marks**
- Write an essay on Mendel's law with illustrations (CO1)
 - Discuss in detail about chromosomal theory of sex determination in animals (CO4)

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09SB31	Programme: B.Sc.,	CIA: I Test
Date: 20.07.2019	Major: ZOOLOGY	Semester: III
Time: 2Hrs	Year: II	Maximum: 25 Marks
Course Title:	PUBLIC HEALTH AND HYGIENE	

ANSWER ALL QUESTIONS**SECTION – A****5X1=5 Marks****Multiple choice questions:**

1. Deficiency of vitamin K is (CO1)
a. Nerve disorder b. Diarrhea c. Delays clotting of blood d. Beri-beri
2. Severe deficiency of thiamine causes (CO1)
a. Beri-beri b. Oedema c. Cardiac failure d. Diarrhea
3. Where is the headquarters of WHO located? (CO1)
a. Geneva b. USA c. India d. Russia
4. The pure calcium deficiency is (CO1)
a. Osteoporosis b. Molasses c. Diabetic d. Fever
5. Which is the important role in the calcification of bones? (CO1)
a. Magnesium b. Iron c. Zinc d. Phosphorus and calcium

ANSWER ANY TWO QUESTIONS**SECTION – B****2X2=4 Marks****Very short answer:**

6. Write the functions of Vitamin- A. (CO1)
7. What is Rickets? (CO1)
8. Define Balanced diet. (CO1)
9. What is Scurvy? (CO1)

ANSWER ANY ONE QUESTIONS**SECTION – C****1X6=6 Marks****Short answer:**

10. Explain the scope of public health and hygiene. (CO1)
11. Write the deficiency symptoms of Vitamin-K & E. (CO1)

ANSWER ANY ONE QUESTIONS**SECTION – D****1X10 Marks****Long Answer:**

12. Briefly explain the physiological role of food. (CO1)
13. Explain the nutrition requirements of different age groups. (CO1)

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09AT01	Programme: B.Sc.,	CIA: I Test
Date: 27.07.2019	Major: CHEMISTRY / BOTANY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	ANIMAL ORGANIZATION	

SECTION – A Multiple choice questions**Answer All Questions:****10X1=10 Marks**

- The binomial nomenclature was proposed by (CO1)
 - Hildebrand
 - Linnaeus
 - Hyman
 - Young
- The cavity located between the body wall and the alimentary canal is called (CO1)
 - Symmetry
 - Coelom
 - Tissue
 - Organ
- The animal possessing a true coelom is called (CO1)
 - Co-coelomic epithelium
 - Coelomata
 - Body wall
 - Pseudocoelomocytes
- The science of classification of species is called (CO1)
 - Toxonomy
 - Animal kingdom
 - Sub-kingdom
 - Evolution
- The assembling of animals into groups based on their similarity is known as (CO1)
 - Anatomy
 - Morphology
 - Classification
 - Palaeontology
- The mode of respiration in pigeon is _____ (CO2)
 - Aquatic
 - Pulmonary
 - Anaerobic
 - none
- What type of respiration occurs in fishes? (CO2)
 - Aquatic
 - Pulmonary
 - Anaerobic
 - none
- The anterior end of the trachea is entered into a chamber is called (CO2)
 - Pharynx
 - Larynx
 - Tracheole
 - Buccal cavity
- The air capillaries remain in close contact with _____ (CO2)
 - Blood capillaries
 - Trachea
 - Larynx
 - Tracheole
- The gases exchange takes place in birds are (CO2)
 - Air capillary
 - ventobronchi
 - dorsobronchi
 - parabronchi

SECTION – B Very short answer**Answer any Five Questions:****5X2=10 Marks**

- What is coelom? (CO1)
- What do you mean by symmetry? (CO1)
- Write a short note on locomotion in protozoa. (CO1)
- Mention the function of contractile vacuole. (CO2)
- Give the list of air sacs present in birds. (CO2)
- What is double respiration? (CO2)
- Define saprophytic nutrition with example. (CO2)

SECTION – C Short answer**Answer any Three Questions****3X6=18 Marks**

- Write a note on binomial nomenclature. (CO1)
- Enumerate the general characters of phylum protozoa. (CO1)
- Give an account on the respiratory system of fishes. (CO2)
- Describe the types of mode of nutrition in protozoa with suitable example. (CO2)
- Comment on respiratory system of cockroach with a neat sketch. (CO2)

SECTION – D Long Answer**Answer any One Question:****1x12=12 Marks**

- Explain in detail the principles taxonomy with an example. (CO1)
- Draw the structure of frog digestive system and comment on it. (CO2)

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT51	Programme: B.Sc.,	CIA: I Test
Date: 24.07.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIOCHEMISTRY AND BIOPHYSICS	

SECTION – A Multiple choice questions**Answer All Questions:****10X1=10 Marks**

- The pH range is
 - 0 to 1
 - 0 to 5
 - 0 to 10
 - 0 to 14
- The pH of human blood is
 - 5.6
 - 6.6
 - 7.0
 - 7.4
- The size of the colloidal particle is
 - 1-3 nm
 - 5-7 nm
 - 8-9 nm
 - 10-100 nm
- The half life of Co^{60} is
 - 1.3 years
 - 2.3 years
 - 3.3 years
 - 5.3 years
- The enzyme formed of a protein part and a non-protein part is together called
 - Coenzyme
 - Endoenzyme
 - Exoenzyme
 - Holoenzyme
- A substance which accelerates a biochemical reaction but itself does not undergo any change is
 - Catalyst
 - Enzyme
 - Modulator
 - Activator
- Active site of an enzyme is formed of
 - Amino group of amino acids
 - Carboxyl groups of specific amino acids
 - HS bonds of amino acids
 - R-groups of selected amino acid
- The molecular formula for disaccharide is
 - $\text{C}_{10}\text{H}_{19}\text{O}_6$
 - $\text{C}_{12}\text{H}_{12}\text{O}_7$
 - $\text{C}_{11}\text{H}_{17}\text{O}_8$
 - $\text{C}_{12}\text{H}_{22}\text{O}_{11}$
- Pick out the sulphur containing amino acids
 - Cystine
 - Cysteine
 - Methionine
 - All
- Which of the following is a milk sugar?
 - Maltose
 - Lactose
 - Sucrose
 - Glucoheptulose

SECTION – B Very short answer**Answer any Five Questions:****5X2=10 Marks**

- Differentiate between acidity and alkalinity.
- Define electrolytes.
- What do you mean by “universal indicators”?
- Define buffers.
- Mention any two functions of cholesterol.
- Define Isoenzyme.
- Write a short note on monosaccharaides.

SECTION – C Short answer**Answer any Three Questions****3X6=18 Marks**

- How will you determine the size of the colloidal particles?
- Enumerate the characteristics of indicators.
- Explain the types of colloidal solution.
- List down the properties of enzymes.
- Enlist the functions of carbohydrates.

SECTION – D Long Answer**Answer any One Question:****1x12=12 Marks**

- Define isotopes. Explain its importance in the field of medical science.
- Discuss in detail the biosynthesis of cholesterol.

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT52	Programme: B.Sc.,	CIA: I Test
Date: 25.07.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIO TECHNOLOGY	

ANSWER ALL QUESTIONS**SECTION – A****10X1=10 Marks****Multiple choice questions:**

- In electrophoresis, rate of DNA migration is determined by
a) Molecular size of DNA b) Voltage applied c) Both a and b d) a alone
- What are molecular markers?
a) RFLP b) RAPD c) AFLP d) All the above
- Thermusaquaticus* is the source of
a) Vent polymerase b) Primary enzyme c) Taq polymerase d) Primase enzyme
- Microarray chips are made up of
a) Silicon b) Glass c) Gold d) Both a and b
- The restriction enzymes are called as
a. Molecular scissors b. Ligases c. Plasma gene d. All of these
- The first artificial cloning developed from
a. *Bacillus subtilis* b. *Staphylococcus aureus* c. *E. Coli* d. Plasmids
- The private proprietary information that benefits the owners is called
a. Trade secrets b. Trade Marks c. Patents d. Copy Right
- Which is the Science of applied biological process?
a. Biotechnology b. Embryology c. Mycology d. Invertebrates phycology
- Which of the following is not termed as hybridization?
a) DNA and cDNA b) DNA and mRNA c) DNA from different species
d) DNA from male and female of same species
- What is a probe?
a) Chemically synthesized DNA b) Purified DNA
c) Fragmented DNA duplex d) Either purified or synthesized single stranded DNA

ANSWER ANY FIVE QUESTIONS**SECTION – B****5X2=10 Marks****Very short answer:**

- Comment on *Taqpolymerase*.
- What is DNA probe?
- Comment on RFLP.
- What is reverse transcriptase?
- Differentiate the Linker and adopter.
- What is contraception?
- Comment on birth control pills.

ANSWER ANY THREE QUESTIONS**SECTION – C****3X6=18 Marks****Short answer:**

- Brief the working principle and applications of Agarose gel electrophoresis.
- With a diagram explain Southern blotting and give its importance.
- Write a note on microarray.
- Comment on IPR
- What is recombinant vaccine? Mention its significance.

ANSWER ANY ONE QUESTIONS**SECTION – D****1x12=12 Marks****Long Answer:**

- Write a detailed account on Polymerase Chain Reaction and its significance.
- Biotechnology as an interdisciplinary pursuit- Discuss.

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09EP51	Programme: B.Sc.,	CIA: I Test
Date: 26.07.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIostatistics, Computer Application and Bioinformatics	

SECTION – A**Multiple choice questions Answer All Questions: 10X1=10 Marks**

- Sample size depends on
 - type of problem investigated
 - resource available
 - required precision
 - all of them
- The techniques used to collect Primary data are
 - Census method
 - sampling method
 - Mailed questionnaire
 - Both census and sampling method
- Continuous variable are represented by
 - histogram
 - line diagram
 - bar diagram
 - pie chart
- Data obtained by the investigator is called
 - primary data
 - array data
 - chronological data
 - Secondary data
- stratified random sampling
 - samples are chosen at random
 - samples are chosen at random from different strata of a population
 - samples are drawn from selected clusters
 - samples are selected haphazardly according to administrative convenience
- Who is also known as Father of Computer?
 - Vint Cerf
 - Tim Berner Lee
 - Charles Babbage
 - Steve Jobs
- Central Processing Unit (CPU) consists of
 - control unit
 - arithmetic and logic unit
 - main store
 - all of above
- Which shortcut make selected text Italic?
 - Ctrl + I
 - Ctrl + A
 - Ctrl + S
 - Ctrl + V
- Which key can be used to view Slide show?
 - F5
 - F2
 - F7
 - F9
- RAM' stands for
 - Random Access Memory
 - Read Access Memory
 - Read Arithmetic Memory
 - Random Arithmetic Memory

SECTION – B**Answer any Five Questions: 5X2=10 Marks**

- Define four and cross method
- What is sampling?
- Write the formula of mid value .
- Convert 66982 into Binary
- Expand ENIAC and EDVAC
- Mention the keyboard syntax for BOLD, Paste, Cut and Centralized Phrase
- What are super computers?

SECTION – C**Answer any Three Questions 3X6=18 Marks**

- Describe classification of data with illustrations
- Prepare a frequency table for the following data which shows length of fishes (cm).
10,12,10,15,16,17,18,20,22,25,30,33,31,38,40,19,11,17,12,15,11,31,33,35,34,22,25,27,21,30
- Describe the home page of MS word
- Write notes on generations of computers
- What are the advantages of MS Excel in MS Office?

SECTION – D**Answer any One Question: 1x12=12 Marks**

- Give a detailed account on diagrammatic presentation of data with examples
- Write an essay on types of computers their advantages, disadvantages and limitations

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09SB51	Programme: B.Sc.,	CIA: I Test
Date: 20.07.2019	Major: ZOOLOGY	Semester: V
Time: 1Hr	Year: III	Maximum: 25 Marks
Course Title:	SERICULTURE	

SECTION – A Multiple choice questions

Answer all questions

1 x 5=5 marks

- The first authentic reference to silk is found in the chronicle of the chou king of
a) China b) India c) Japan d) Russia
- The rearing of silkworm is called
a) Sericulture b) Moriculture c) Vermiculture d) Aquaculture
- The development of roots from the stem while it is still attached to the mother plant.
a) Grafting b) Cutting c) Transplantation d) Layering
- The technique of joining of the parts of two plants is called
a) Grafting b) Cutting c) Transplantation d) Layering
- Name the method of removing of unwanted branches of the mulberry plants.
a) Mulching b) Pruning c) Manuring d) Training

SECTION – B Very Short Answer

Answer any two questions:

2x2 = 4 marks

- What is mulching?
- Mention the significance of pruning.
- Expand and list out the functions of CSR&TI.
- Give the importance of manuring.

SECTION – C Short Answer

Answer any one question:

1x6 = 6 marks

- What is irrigation? Give its types.
- Trace the history of sericulture.

SECTION – D Long Answer

Answer any one question:

1x10 = 10 marks

- Explain the different methods of vegetative propagation.
- Discuss elaborately the seedling propagation.
