

DEPARTMENT OF ZOOLOGY



<b>Course Code:</b> 09CT11	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
<b>Date:</b> 03.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: I</b>
<b>Time:</b> 2Hrs	<b>Year:</b>	<b>I</b>	<b>Maximum: 50 Marks</b>
<b>Course Title:</b>	<b>INVERTEBRATES I</b>		

ANSWER ALL QUESTIONS

SECTION – A

10X1=10 Marks

**Multiple choice questions:**

- Which of the following diseases is caused by a nematode?  
a. Filariasis                      b. Amoebiasis                      c. Leprosy                      d. Poliomyelitis                      CO5
- Sexual dimorphism is found in  
a. *Hydra*                      b. Earthworm                      c. *Ascaris*                      d. *Fasciola*                      CO5
- What is a roundworm's body type?  
a. Pseudocoelom                      b. Coelom                      c. Cuticle                      d. Acoelomates                      CO5
- Rhabditiformis a \_\_\_\_\_  
a. Larva of *Ascaris*                      b. Planarian                      c. Mysis                      d. All the above                      CO5
- Elephantiasis caused by  
a. *Wucheria bancrofti*                      b. *Ascaris lumbricoides*                      c. *Enterobius vermicularis*                      d. *Fasciola hepatica*                      CO5
- Who is the primary host of malarial parasite?  
a. Anopheles                      b. Man                      c. *Ascaris*                      d. Rat                      CO1
- Which of the following synthetic drug is cure malaria?  
a. Quinine                      b. Daraprim                      c. Chloroquine                      d. All of these                      CO1
- Canal system is characteristic of  
a. Sponges                      b. Coelenterates                      c. Both a and b                      d. None of these                      CO2
- Endoskeleton of sponge is -----  
a. Spicules                      b. Conidoblast                      c. Cillia                      d. Trichocyst                      CO2
- Gemmules are helpful in  
a. Digestion                      b. Sexual reproduction                      c. Secretion of Spicules                      d. Survival in drought                      CO2

ANSWER ANY FIVE QUESTIONS

SECTION – B

5X2=10 Marks

**Very short answer:**

- What is gastrea?                      CO5
- Comment on Muller's larva.                      CO5
- Define: Pseudocoelom                      CO5
- Define: Digenetic host                      CO1
- List out the symptoms of Malaria?                      CO1
- What are functions of Choanocytes?                      CO2
- Comment on Gemmules.                      CO2

ANSWER ANY THREE QUESTIONS

SECTION – C

3X6=18 Marks

**Short answer:**

- Describe the morphological structure of round worm.                      CO5
- Narrate the disease and control of filarial worm.                      CO5
- Explain the parasitic adaptations of helminthes.                      CO5
- Write an account on the structure of a sponge.                      CO2
- Give a short note on the reproduction in sponges.                      CO2

ANSWER ANY ONE QUESTIONS

SECTION – D

1x12=12 Marks

**Long Answer:**

- Give a detailed account on life cycle of *Ascaris* with neat diagrams.                      CO5
- Write a detailed account on the lifecycle of plasmodium and its transmission and control measures. CO1

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<b>Course Code:</b> 09CT12	<b>Programme:</b> B.SC	<b>CIA:</b> II Test
<b>Date:</b> 06.11.2020	<b>Course:</b> ZOOLOGY	<b>Semester:</b> I
<b>Time:</b> 2Hrs	<b>Year:</b> I	<b>Maximum:</b> 50 Marks
<b>Course Title:</b>	<b>INVERTEBRATES II</b>	

**SECTION – A Multiple choice questions**

**Answer All Questions:**

**10X1=10 Marks**

- How many pairs of appendages found in prawn? (CO2)  
a) 18                                      b) 19                                      c) 20                                      d) 21
- The last segment of prawn has a conical projection called (CO2)  
a) telson                                      b) prostomium                                      c) persitomium                                      d) pygidium
- Which of the following is living fossil belongs to the phylum Arthropoda? (CO2)  
a) Peripatus                                      b) Housefly                                      c) Limulus                                      d) Prawn
- Ink glands are present in the class (CO4)  
a) Cephalopoda                                      b) Gastropoda                                      c) Scaphopoda                                      d) Pelecypoda
- Hectocotylized arm is found in the class (CO4)  
a) Cephalopoda                                      b) Gastropoda                                      c) Scaphopoda                                      d) Pelecypoda
- Which of the animal found the torsion movement, during larval development? (CO4)  
a) Cephalopoda                                      b) Gastropoda                                      c) Scaphopoda                                      d) Pelecypoda
- Animals with radial symmetry in adults and bilateral symmetry in larvae are (CO4)  
a) Coelenterates                                      b) polychaetes                                      c) echinodermates                                      d) hemichordates
- What is common between earthworm, leech and centipede? (CO4)  
a) They have ventral nerve cord                                      b) They have malphigian tubules  
c) They have no legs                                      d) They are hermaphrodite
- Animals with radial symmetry in adults and bilateral symmetry in larvae are (CO4)  
a) Coelenterates                                      b) polychaetes                                      c) echinodermates                                      d) hemichordates
- Which of these groups has no parasitic forms: (CO4)  
a) Echinodermata                                      b) Nematoda                                      c) Protozoa                                      d) Arthropoda

**SECTION – B Very short answer**

**Answer any Five Questions:**

**5X2=10 Marks**

- List out the larval forms of crustacean. (CO2)
- Define direct and indirect development. (CO2)
- What is carapace? (CO2)
- Give a short note on Mxillae. (CO4)
- Comment on Labium. (CO4)
- Define Radula. (CO4)
- What is pulmonary chamber? (CO4)

**SECTION – C Short answer**

**Answer any Three Questions**

**3X6=18 Marks**

- List out the general characters of Phylum Arthropoda. (CO2)
- Comment on the affinities of Peripatus. (CO2)
- Critically comment on torsion in gastropods. (CO4)
- Write a note about the mouth parts of Millipede. (CO4)
- Describe in brief the morphological features of Centipede with neat diagram. (CO4)

**SECTION – D Long Answer**

**Answer any One Question:**

**1x12=12 Marks**

- Give a detailed account on appendages of Prawn. (CO2)
- Write an essay on the general characteristics of Mollusca. (CO4)





<b>Course Code:</b> 09CT31	<b>Programme:</b>	<b>B.SC.</b>	<b>CIA: II Test</b>
<b>Date:</b> 03.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: III</b>
<b>Time:</b> 2Hrs	<b>Year:</b>	<b>II</b>	<b>Maximum: 50 Marks</b>
<b>Course Title:</b>	<b>CELL BIOLOGY</b>		

**SECTION – A Multiple choice questions**

**Answer All Questions:**

**10X1=10 Marks**

- 1. Chromosome were first observed by** (CO4)
  - a) Hofmeister
  - b) G.B. Amici
  - c) H. von Mohl
  - d) A. Donne
- 2. Polytene chromosomes are found in ----- of insects.** (CO4)
  - a) Gut
  - b) Salivary glands
  - c) Trachea
  - d) All the above
- 3. Which is the largest organelle of the cell?** (CO4)
  - a) Mitochondrion
  - b) Lysosome
  - c) Golgi complex
  - d) Nucleus
- 4. Spreading of tumour cells to other parts of body by blood stream establishing new colony is called** (CO4)
  - a) Metastasis
  - b) Leukemia
  - c) Sarcoma
  - d) Lipoma
- 5. S Phase is characterized by** (CO4)
  - a) Active synthesis of DNA
  - b) RNA synthesis
  - c) Active synthesis of proteins
  - d) Formation of organelles
- 6. Endocytosis means** (CO2)
  - a) Phagocytosis
  - b) Pinocytosis
  - c) Both a and b
  - d) cell vomiting
- 7. Fluid mosaic model of plasma membrane was proposed by** (CO2)
  - a) Malpighi
  - b) Danielli and Davson
  - c) Robertson
  - d) Singer and Nicolson
- 8. The cisternae of Golgi bud off small vesicles called as** (CO2)
  - a) Primary lysosomes
  - b) Secondary lysosomes
  - c) Phagosomes
  - d) Pinosomes
- 9. The lysosomes release enzymes outside of the cell is called** (CO2)
  - a) Exocytosis
  - b) Endocytosis
  - c) Autolysis
  - d) Autophagy
- 10. A rough endoplasmic reticulum possesses a number of structures embedded on it are** (CO2)
  - a) Microbodies
  - b) Proplastids
  - c) Lysosomes
  - d) Ribosome

**SECTION – B Very Short Answer**

**Answer any FIVE Questions:**

**5X2=10 Marks**

11. Write the significance of mitosis. (CO4)
12. Define cell aging. (CO4)
13. Comment on lamb brush chromosomes. (CO4)
14. Discriminate pinocytosis and phagocytosis. (CO2)
15. What are residual bodies? (CO2)
16. Point out the functions of SER and RER. (CO2)
17. How are the lipid bilayers are held together in biological membranes? (CO2)

**SECTION – C Short Answer**

**Answer any THREE Questions:**

**3X6=18 Marks**

18. Polytene chromosomes are giant chromosomes-discuss. (CO4)
19. Explain the structure and functions of nucleolus (CO4)
20. Narrate the properties of cancer cells. (CO4)
21. Describe the fluid – mosaic model of cell membrane with a labelled sketch. (CO2)
22. Enumerate the functions of Golgi complex. (CO2)

**SECTION – D      Long Answer**

**Answer any ONE Question:**

**1X12=12 Marks**

23. Elaborate the functions of plasma membrane.


**(CO2)**

24. Write an essay on heterotypic division of Meiosis and their significance.

**(CO4)**

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	<b>Course Code:</b> 09CT32	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
	<b>Date:</b> 06.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: III</b>
	<b>Time:</b> 2Hrs	<b>Year:</b>	<b>II</b>	<b>Maximum: 50 Marks</b>
	<b>Course Title:</b>	<b>GENETICS</b>		

SECTION – A Multiple Choice Questions

Answer All Questions:

10X1=10 Marks

- The universal blood donors for the ABO system are type: CO2  
a. AB                      b. A                      c. B                      d. O
- Who proposed three genes are involved in the production of Rh antigen? CO2  
a. Wiener                      b. Fisher                      c. Mendel                      d. None
- The symptoms of erythroblastosis foetalis is CO2  
a. jaundice                      b. anaemia                      c. both a and b                      d. none
- Crossing over is more frequent in CO3  
a) males                      b) females                      c) both                      d) None of these
- The science of improvement of existing human race is called CO5  
a. Euthenics                      b. Eugenics                      c. Negative eugenics                      d. Polygenesis
- Who coined the term linkage? CO3  
a) Correns                      b) Mendel                      c) Morgan                      d) De Vries
- The accumulation of phenylalanine in the blood is called CO5  
a. Hyperaemia                      b. Phenylketonuria                      c. Polyuria                      d. Polydipsia
- Down's syndrome is a CO5  
a. 22-trisomy                      b. 25-trisomy                      c. 32-trisomy                      d. 21-trisomy
- Albinism is recessive gene represented by CO5  
a. AA                      b. a                      c. aa                      d. bb
- Fraternal twins is also called CO5  
a. Twins                      b. Siamese twins                      c. Dizygotic twins                      d. Identical twins

SECTION – B Very Short Answer

Answer any FIVE Questions:

5X2=10 Marks

- Comment on acromelanism CO2
- What is genetic counseling? CO5
- Compare the positive and negative eugenics CO5
- What is coupling? CO3
- Define the extra chromosomal inheritance CO5
- Comment on albinism CO5
- Comment on Pedigree analysis CO5

SECTION – C Short Answer

Answer any THREE Questions:

3X6=18 Marks

- Analyse the genetic basis of Rh blood group CO2
- With reference to polygenic inheritance, discuss the inheritance of skin colour in man CO2
- Describe the aim and purpose of genetic counseling CO5
- Discuss klinefelter's syndrome (22AA+XXY) and Turner's syndrome (22AA<sub>X</sub>) CO5
- Analyse the term twins and its types. CO5

SECTION – C Long Answer

Answer any ONE Question:

1X12=12 Marks

- Describe the genetics of ABO blood group CO2
- Write an essay on extra chromosomal inheritance of shell coiling in *Limnaea* CO5

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<b>Course Code:</b> 09SB31	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
<b>Date:</b> 02.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: III</b>
<b>Time:</b> 1 Hrs	<b>Year:</b>	<b>II</b>	<b>Maximum: 25 Marks</b>
<b>Course Title:</b>	<b>Public Health and Hygiene</b>		

ANSWER ALL QUESTIONS

SECTION – A

5X1=5 Marks

**Multiple choice questions:**

- The one of the processes are used to remove contaminants. (CO2)  
a. Physical                      b. Chemical                      c. Biological                      d. All the above
- Salmonella typhi* is the major cause of (CO3)  
a. Typhoid fever                      b. Yellow fever                      c. Cold                      d. Black fever
- Amoebiasis is caused by (CO3)  
a. *E.coli*                      b. *E. histolytica*                      c. *S. typhi*                      d. *V. cholera*
- Expand the WQS (CO2)  
a. Water Quality standards                      b. Water Quantity standards  
c. Waste water Quality standards                      d. Waste water Quantity standards
- Which one is a Zoonotic Disease? (CO3)  
a. Tetanus                      b. AIDS                      c. *Japanese encephalitis*                      d. Dengue

ANSWER ANY TWO QUESTIONS

SECTION – B

2X2=4 Marks

**Very short answer:**

- Write the significance of water. (CO2)
- Comment on Filariasis (CO3)
- Define Zoonosis. (CO3)
- What is holard? (CO2)

ANSWER ANY ONE QUESTIONS

SECTION – C

1X6=6 Marks

**Short answer:**

- Explain the Polio virus. (CO3)
- Narrate the sewage water treatment (CO2)

ANSWER ANY ONE QUESTIONS


SECTION – C

1X10=10 Marks

**Long Answer:**

- Describe the structure, infection, Transmission, Control and Treatment of AIDS. (CO3)
- Briefly explain the various methods of solid waste and excreta disposal. (CO2)

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	<b>Course Code:</b> 09AT01	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
	<b>Date:</b> 07.11.2020	<b>Course:</b>	<b>BOT/CHEM</b>	<b>Semester: III</b>
	<b>Time:</b> 2Hrs	<b>Year:</b>	<b>II</b>	<b>Maximum: 50 Marks</b>
	<b>Course Title:</b>	<b>Animal Organization</b>		

**SECTION – A Multiple choice questions**

Answer All Questions:

**10X1=10 Marks**

- Which of the following is hearing organ of human ear? (CO4)  
a) Corti                      b) Mallieus                      c) Incus                      d) Stapes
- The rod cells of retina contain (CO4)  
a) Rhodopsin                      b) Iodopsin                      c) melanin                      d) chromatophores
- In rabbits fertilization takes place within (CO5)  
a) Vagina                      b) Placenta                      c) Fallopian tube                      d) Ovary
- The Acidity of sperms is neutralized by (CO5)  
a) Testis                      b) Epididymis                      c) Vas deferens                      d) Prostate gland
- What is the odour character of urine? (CO5)  
a) Aromatic                      b) Fruity                      c) Sweety                      d) Woody
- The mode of nutrition in amoeba is (CO3)  
a) Holophytic                      b) Holozoic                      c) Parasitic                      d) Saprozoic
- Which of the following is an example for the mixotrophic nutrition? (CO3)  
a) Euglena                      b) Amoeba                      c) Volvox                      d) Endamoeba
- The capture and passage of food into the cytoplasm is called (CO3)  
a) Ingestion                      b) Digestion                      c) Absorption                      d) Egestion
- The functional role of contractile vacuoles in paramoecium are (CO3)  
a) Thermoregulation                      b) food storage                      c) Osmoregulation                      d) digestion
- The swimming movement of Paramoecium is by the beating of \_\_\_\_ (CO3)  
a) Flagella                      b) cilia                      c) Pseudopodi                      d) None of these

**SECTION – B Very short answer**

Answer any Five Questions:

**5X2=10 Marks**

- What is double respiration? (CO4)
- List out the glands of male reproductive system of Rabbit and its functions. (CO5)
- What is nephron? (CO5)
- Comment on ciliary movement? (CO3)
- What do you meant by spiral path of paramecium? (CO3)
- Give a short note on holophytic nutrition in amoeba. (CO3)
- Mention any two functions of contractile vacuoles. (CO3)

**SECTION – C Short answer**

Answer any Three Questions

**3X6=18 Marks**

- Draw the structure of human ear and comment on it. (CO4)
- Comment on compound eye of insect with neat sketch. (CO4)
- Write an account on urine formation in kidney. (CO5)
- Give a short account on Ingestion in Paramecium. (CO3)
- Write a short note about the flight muscles in birds. (CO3)

**SECTION – D Long Answer**

Answer any One Question:

**1x12=12 Marks**

- Write an essay on structure of male and female reproductive system of Rabbit. (CO5)
- Explain in detail the circulatory system of Earthworm. (CO3)



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<b>Course Code:</b> 09CT51	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
<b>Date:</b> 04.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: V</b>
<b>Time:</b> 2Hrs	<b>Year:</b>	<b>III</b>	<b>Maximum: 50 Marks</b>
<b>Course Title:</b>	<b>BIOCHEMISTRY AND BIOPHYSICS</b>		

SECTION – A Multiple choice questions

Answer All Questions:

10X1=10 Marks

- All the enzymes required for beta oxidation occurred in the (CO3)  
a. Cytoplasm      b. Nucleus      c. Ribosome      d. Mitochondria
- The molecules formed from complete oxidation of fructose 1, 6-diphosphate is (CO3)  
a. ATP      b. NADP      c. CO<sub>2</sub> and H<sub>2</sub>O      d. NADH
- Conversion of 2-phosphoglyceric acid into 2-phosphoenol acid requires (CO3)  
a. Na<sup>+</sup>      b. K<sup>+</sup>      c. Ca<sup>++</sup>      d. Mg<sup>++</sup>
- Organelles which are regarded as “Power houses” of the cell and in which the oxidative reactions of the respiratory process take place are (CO3)  
a. Mitochondria      b. Endoplasmic reticulum      c. Ribosome      d. Chloroplasts
- Life without air is (CO3)  
a. Anaerobic      b. Impossible      c. Reduction      d. Free from oxidative damage
- Brownian movement was first observed by (CO5)  
a. Tyndall      b. Robert Brown      c. De Robertis      d. Schwann
- In the final stage of respiration the oxidative phosphorylation occurs in----- (CO5)  
a. Mitochondria      b. Vacuoles      c. Cell membrane      d. Chromosomes
- Under that conditions existing in biological systems at constant temperature and pressure changes in free energy, enthalpy and entropy related to each other quantitatively by the equation (CO5)  
a.  $\Delta G = \Delta H + T \Delta S$       b.  $\Delta G = \Delta H + T \Delta S - T$       c.  $\Delta G = \Delta H - T \Delta S$       d.  $\Delta G = \Delta H + 1/2 T \Delta S$
- In colloidal system, the size of the particles ranges from ----- in diameter. (CO5)  
a. 1 $\mu$  to 0.1  $\mu$       b. 1.5  $\mu$  to 0.5  $\mu$       c. 2  $\mu$  to 1  $\mu$       d. 2  $\mu$  to 1.5  $\mu$
- High energy phosphate bond in ATP is called (CO5)  
a. Hydrogen bond      b. Covalent Bond      c. Ionic bond      d. Pyrophosphate bond

SECTION – B Very Short Answer

Answer any FIVE Questions:

5X2=10 Marks

- What is glycogenesis? (CO3)
- Comment on gluconeogenesis (CO3)
- What is deamination? (CO3)
- What is glycolysis? (CO3)
- What is energy? Mention its types. (CO5)
- Define: First law of thermodynamics (CO5)
- What is Gibbs free energy? (CO5)

SECTION – C Short Answer

Answer any THREE Questions:

3X6=18 Marks

- Describe the reactions of urea cycle. (CO3)
- Briefly explain the biosynthesis of cholesterol. (CO3)
- Distinguish between exergonic and endergonic reactions. (CO5)
- Define and explain redox potential. (CO5)
- Describe the biological importance of hydrotrophy. (CO5)

SECTION – C Long Answer


Answer any ONE Question:

1X12=12 Marks

- Narrate the  $\beta$ -oxidation of fatty acids. (CO3)
- What is bioelectricity? Explain the spontaneous electrical activity of the brain and the factors that alter the EEG pattern. (CO5)



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	<b>Course Code:</b> 09CT52	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
	<b>Date:</b> 05.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: V</b>
	<b>Time:</b> 2Hrs	<b>Year:</b>	<b>III</b>	<b>Maximum: 50 Marks</b>
	<b>Course Title:</b>	<b>BIOTECHNOLOGY</b>		

**ANSWER ALL QUESTIONS**

**SECTION – A**

**10X1=10 Marks**

**Multiple choice questions**

- The plasmid containing foreign DNA fragment in to a bacterial cell is known as  
a. Transfection      b. Transformation      c. Transduction      d. Illumination      CO2
- A collection of clones containing all DNA segments of the genome of an organism is called  
a. Genomic DNA library      b. Gene band      c. Gene library      d. All of these      CO2
- Colony hybridization method was devised by  
a. Grunstein & Hogness      b. Black man      c. Watson      d. Davis and Raveer      CO2
- Which is a technique involving electric field-mediated membrane permeabilization?  
a. Transfection      b. Transformation      c. Electroporation      d. Conjugation      CO2
- Callus differentiates under the influence of the paired hormones  
a) Auxin and cytokinin      b) Auxin and abscisic acid      c) Auxin and ethylene      d) Cytokinin and gibberellins      CO3
- Technique of SCP is introduced by  
a) Gregor Mendel      b) Louis Pasteur      c) Scrimshaw      d) Ian Wilmot      CO4
- Substrate used by microorganisms to produce single-cell proteins includes  
a) Methane gas      b) Industrial wastes      c) Agricultural wastes      d) All of above      CO4
- What technique can be used to introduce genetic materials into plant cells?  
a) GFP      b) Gene gun      c) Fixation      d) Staining      CO4
- Mushroom is:  
a) Saprophytic fungus      b) Autotrophic Algae      c) Heterotrophic fungus      d) None of the above      CO4
- Process of replacing defective genes with effective genes is known as  
a) transgenic fusion      b) transgenic budding      c) transgenic injection      d) gene therapy      CO5

**ANSWER ANY FIVE QUESTIONS**

**SECTION – B**

**5X2=10 Marks**

**Very short answer:**

- Comment on cDNA.      CO2
- What is rDNA?      CO2
- What is organ culture?      CO3
- What are biofertilizers and biopesticides?      CO4
- Define the term Contraception.      CO5
- Give a brief not on Penicillin.      CO5
- Comment on DNA Probe.      CO5

**ANSWER ANY THREE QUESTIONS**

**SECTION – C**

**3X6=18 Marks**

**Short answer:**

- Write an account on gene cloning strategies.      CO2
- Give a detailed account on the basic aspects of *Invitro* cell culture and write its significance.      CO3
- Give a briefly account on single cell protein (SCP).      CO4
- What is the role of primary and secondary metabolites?      CO4
- Write a note on the following: (i) Biohydrogen (ii) Mushroom culture      CO4

**ANSWER ANY ONE QUESTIONS**

**SECTION – D**

**1x12=12 Marks**

**Long Answer:**

- Write an essay on Gene transfer methods and discuss its significance.      CO2
- Explain in detail the monoclonal antibody production and its applications.      CO5

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<b>Course Code:</b> 09CT53	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
<b>Date:</b> 07.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: V</b>
<b>Time:</b> 2Hrs	<b>Year:</b>	<b>III</b>	<b>Maximum: 50 Marks</b>
<b>Course Title:</b>	<b>Microbiology and Immunology</b>		

**SECTION – A Multiple choice questions**

**Answer All Questions:**

**10X1=10 Marks**

- Humoral immunity is mediated by (CO5)  
a) B Cells                      b) Macrophages                      c) T cells                      d) All the above
- What is the role of complement system? (CO5)  
a) Cytolysis                      b) Opsonisation                      c) Anaphylotoxin                      d) all the above
- Auto immunity is caused by (CO5)  
a) Bacteria                      b) Virus                      c) T dependent antigens                      d) Self antigens
- The amount of antibody present in the serum is estimated by adopting\_\_\_\_\_ (CO5)  
a) Direct ELISA                      b) Indirect ELISA                      c) Both a and b                      d) Dot ELISA
- The amount of antigen present in the serum is estimated in (CO5)  
a) Direct ELISA                      b) Indirect ELISA                      c) Both a and b                      d) Dot ELISA
- Pick out the soil protozoans (CO2)  
a) Uroleptus                      b) Navicula                      c) Fragilaria                      d) Cyamella
- The bacterial contamination in water is caused by (CO2)  
a) Coliform groups                      b) faccal streptococci                      c) Miscellaneous organism                      d) all
- In a plate count method, the colonies are counted by a (CO2)  
a) Quebec colony counter                      b) nephelometer                      c) colorimeter                      d) spectrophotometer
- Which of the following causes the spoilage of fish? (CO2)  
a) Flavobacterium                      b) Torula                      c) Serratia                      d) Erwiniasp
- \_\_\_\_\_ was the father of canning (CO2)  
a) Aristotle                      b) Nicholas Appert                      c) Fleming                      d) Hansen

**SECTION – B Very short answer**

**Answer any Five Questions:**

**5X2=10 Marks**

- Define Immunoglobulin. (CO4)
- What are all the immune cells? (CO4)
- Expand and define ELISA. (CO5)
- What is immune response? (CO5)
- Comment on Yogurt. (CO2)
- What is botulism? (CO2)
- Write any four symbiotic nitrogen fixing bacteria. (CO2)

**SECTION – C Short answer**

**Answer any Three Questions**

**3X6=18 Marks**

- List out the types of Immunoglobulins and its functions. (CO4)
- Discuss briefly the double Immuno diffusion. (CO5)
- Narrate the bacterial reproduction. (CO2)
- Explain the MPN test. (CO2)
- What is food spoilage? Explain the biochemical changes of food spoilage. (CO2)

**SECTION – D Long Answer**

**Answer any One Question:**

**1x12=12 Marks**

- Give a detailed account on principle and applications of immuno electrophoresis. (CO5)
- Briefly discuss the physical and chemical methods of food preservation. (CO2)





<b>Course Code:</b> 09SB51	<b>Programme:</b>	<b>B.SC</b>	<b>CIA: II Test</b>
<b>Date:</b> 02.11.2020	<b>Course:</b>	<b>ZOOLOGY</b>	<b>Semester: V</b>
<b>Time:</b> 1Hrs	<b>Year:</b>	<b>III</b>	<b>Maximum: 25 Marks</b>
<b>Course Title:</b>	<b>SERICULTURE</b>		

**SECTION – A Multiple choice questions**

**Answer all questions**

1 x 5=5 marks

- Which is the common pest of silkworm?  
a) Uzi fly                      b) House fly                      c) Dragon fly                      d) tse-tse fly
- Which is the optimum temperature for rearing silkworm?  
a) 24°C                      b) 34°C                      c) 44°C                      d) 54°C
- Chandrika is a  
a) Mountage                      b) Ant well                      c) Basket                      d) Net
- The powdery mildew diseases caused by  
a) Bacteria                      b) Fungus                      c) Virus                      d) Nematodes
- Which of the following is used for bed cleaning?  
a) Mountage                      b) Ant well                      c) Basket                      d) Net

**SECTION – B Very Short Answer**

**Answer any two questions:**

2x2 = 4 marks

- List out the pests of mulberry.
- Enlist the different types of Mountages.
- What is silk reeling?
- Define stifling.

**SECTION – C Short Answer**

**Answer any one question:**

1x6 = 6 marks

- Discuss the different types of defective cocoons.
- Describe the structure of silk gland with neat diagram.

**SECTION – D Long Answer**

**Answer any one question:**

1x10 = 10 marks

- Write an essay on different types of rearing appliances used in sericulture.
- Give a detailed account on characteristics of cocoons.