

DEPARTMENT OF ZOOLOGY



Course Code: 31CT31	Programme:	M.SC	CIA: I Test
Date: 28.09.2020	Course:	ZOOLOGY	Semester: III
Time: 2Hrs	Year:	II	Maximum: 50 Marks
Course Title:	GENETICS		

SECTION – A MULTIPLE CHOICE QUESTIONS

Answer All Questions: (5X1=5 Marks)

- Which of the following is the name of the human genetic disorder resulting from defects in nucleotide excision repair? (CO4)
 - Hereditary nonpolyposis colorectal cancer (HNPCC)
 - Xeroderma pigmentosum (XP) c) Lynch syndrome
 - Diabetes
- Addition or deletion of a nucleotide base pair involves (CO4)
 - point mutation
 - silent mutation
 - nonsense mutation
 - frame shift mutation
- A spontaneous mutation usually originates as an error in (CO4)
 - DNA replication
 - DNA transcription
 - translation
 - reverse transcription
- Viruses are _____ (CO3)
 - obligate parasites
 - free living
 - both free living and parasitic
 - none of these
- Integration of viral DNA into host DNA to become (CO3)
 - Viral genome
 - Prophage
 - Virion
 - Prion

SECTION – B VERY SHORT ANSWER

Answer any Five Questions: (5X2=10 Marks)

- What is deamination in DNA? (CO4)
- Define tautomerism. (CO4)
- Comment on sickle cell disease. (CO4)
- Write a short note on Suppressor mutation. (CO4)
- Interpret the term transformation. (CO3)
- Discriminate transduction from transfection. (CO3)
- Characterize the transposons. (CO3)

SECTION – C SHORT ANSWER

Answer any Three Questions (3X5=15 Marks)

- Describe briefly the mechanism of DNA methylation. (CO4)
- Discuss in brief the mechanism of frame shift mutation in DNA (CO4)
- Write a note on photoreactivation DNA repair. (CO4)
- Narrate the genetic organization of the phage Φ X174 with a labelled sketch. (CO3)
- Highlight the genetic structure of bacteriophage – λ with labelled sketch. (CO3)

SECTION - D LONG ANSWER

Answer any Two Questions: (2x10=20 Marks)

- Write an essay on the molecular mechanism of excision and mismatch repair in DNA (CO4)
- Give an account on transposable elements. Add their significance. (CO3)
- Discuss the sequential gene regulation in the lytic and lysogenic cycles of phages. (CO3)

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Course Code: 31CT32	Programme:	M.SC	CIA: I Test
Date: 29.09.2020	Course:	ZOOLOGY	Semester: III
Time: 2Hrs	Year:	II	Maximum: 50 Marks
Course Title:	Physiology		

SECTION – A Multiple choice questions

Answer All Questions:

5X1=5 Marks

- Air enters tracheal system through the (CO1)
 - Spiracles
 - Glottis
 - Nostrils
 - Buccal cavity
- The Leydig cell is the major source of (CO1)
 - Androgens
 - LH
 - FSH
 - LTH
- The estrogens are (CO1)
 - C-18 steroids
 - C-20 steroids
 - C-25 steroids
 - C-30 steroids
- Which type of blood vessels carries blood away from the heart? (CO5)
 - Veins
 - Arteries
 - Capillaries
 - All
- The life span of RBC is (CO5)
 - 100 days
 - 110 days
 - 120 days
 - 150 days

SECTION – B Very short answer

Answer any Five Questions:

5X2=10 Marks

- Define EEG. (CO2)
- What is buoyancy? (CO1)
- Define osmoregulation. (CO1)
- What is metabolism? (CO1)
- Distinguish between open and closed circulatory system. (CO5)
- Give a note on types of heart. (CO5)
- Define thrombocytes. Give its functions. (CO5)

SECTION – C Short answer

Answer any Three Questions

3X6=18 Marks

- Explain the mechanism of transport of gases. (CO1)
- Discuss the role of respiratory pigments. (CO1)
- “Oxygen as a limiting factor” - Discuss. (CO1)
- Give an account on systole and Diastole. (CO5)
- Describe blood pressures and its measurement. (CO5)


SECTION - D Long Answer

Answer any Two Questions:

2x10 = 20 marks

- Describe the effects of hydrostatic pressure. (CO1)
- Write a detailed account on endocrine regulation of reproduction. (CO1)
- Write an essay on composition of blood. (CO5)

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	Course Code: 31CT33	Programme:	M.SC.	CIA: I Test
	Date: 30.09.2020	Course:	ZOOLOGY	Semester: III
	Time: 2Hrs	Year:	II	Maximum: 50 Marks
	Course Title:	PRINCIPLES OF BIOTECHNOLOGY		

SECTION – A

MULTIPLE CHOICE QUESTIONS

Answer All Questions:

5X1=5 Marks

- The method of separation of DNA on the basis of its size to transfer the DNA in a filter membrane for probe hybridization is ---CO4
a) Southern blotting b) Northern blotting c) Western blotting d) Eastern blotting
- The first phases of PCR technique is ---CO4
a) De-naturation b) annealing c) de-annealing d) Synthesis
- Which of the following is a chemical nucleotide sequencing method? ---CO4
a) Sanger b) Maxim–Gilbert c) Edmans d) Automated sequencing
- The enzymes that cleave nucleotide at a time from an end of a polynucleotide chain are ---CO2
a. Endo nucleases b. Restriction enzymes c. Exo nucleases d. Restriction endo nucleases
- The purpose of restriction modification methylation is mainly to facilitate ---CO2
a. entry of plasmid b. Restrict entry of plasmid c. the attachment of plasmid d. To kill the plasmid

SECTION – B

VERY SHORT ANSWER

Answer any Five Questions:

5X2=10 Marks

- Mention the functions of Ribonuclease D (Rnase D) ---CO2
- Comment on the source and digestive properties of SI Nuclease ---CO2
- What are the importance of BAL 31 Exonuclease? ---CO2
- List any two properties of Ribonuclease H (RNase H) ---CO2
- Comment on DNA chip. ---CO4
- What is *Taq* polymerase? ---CO4
- What are the advantages of using proteins and nucleic acid in determining phylogenies? ---CO4

SECTION – C

SHORT ANSWER

Answer any Three Questions

3X5=15 Marks

- Enumerate the characters of Type I restriction Enzymes ---CO2
- Compare the source and activities of Mungbean Nuclease and DNase1 ---CO2
- How DNA types are analyzed using microarray. ---CO4
- Differentiate Sanger method and Maxim-Gilbert methods of DNA sequencing. ---CO4
- Write a detailed account on various blotting techniques and their Biological importance. ---CO4

SECTION - D

LONG ANSWER

Answer any Two Questions:

2x10=20 Marks

- Describe the process of restriction modification system ---CO2
- Give a detailed account on RFLP and its significance. ---CO4
- Write an essay on the polymerases chain reaction and its principles & applications ---CO4

DEPARTMENT OF ZOOLOGY



Course Code: 31NE31	Programme:	M.Sc., / M.COM	CIA: I Test
Date: 01.10.2020	Course:	CHEM. / M.COM	Semester: III
Time: 2Hrs	Year:	II	Maximum: 50 Marks
Course Title:	ECONOMIC ZOOLOGY		

SECTION – A Multiple choice questions

Answer All Questions: 5X1=5 Marks

- Earthworm belongs to the class (CO1)
 - archioloigochaeta
 - neoligochaeta
 - acanthobdellida
 - rhynchobdellida
- The preferred species for composting of urban waste is (CO1)
 - Pheretima elongata*
 - Eudrillus rubellus*
 - Eisenia fetida*
 - Lumbricus rubellus*
- The temperature required for making good quality casting is (CO1)
 - 15-20°C
 - 25-30°C
 - 5-10°C
 - 0-5°C
- Pisciculture' is culture of (CO4)
 - earth worm
 - Prawns
 - Fishes
 - silkworm
- The important food fish is (CO4)
 - Rohu
 - Catla
 - Wallago
 - Clarius

SECTION – B Very short answer

Answer any Five Questions: 5X2=10 Marks

- Write the scope of vermitechnology (CO1)
- What is hermaphrodite? (CO1)
- Mention the characteristics of vermicasts (CO1)
- List out the scope of fish culture (CO4)
- What is monoculture? (CO4)
- Define Integrated fish farming (CO4)
- What is hypophysation? (CO4)

SECTION – C Short answer

Answer any Three Questions 3X5=15 Marks

- Explain the basic requirements of vermitechnology (CO1)
- Write the biology of *Eisenia fetida* (CO1)
- Describe the Windrow method of vermitechnology (CO1)
- Enumerate the characteristics of culturable species (CO4)
- Enlist the salient features of *Catla* (CO4)

SECTION - D Long Answer

Answer any Two Questions: 2x10 = 20 Marks

- Define Vermiwash. Discuss the method of preparation, composition and applications of vermiwash (CO1)
- Analyse the role of vermitechnology in organic farming (CO1)
- Describe induced spawning technique in Indian Major Carps. (CO4)
