

DEPARTMENT OF ZOOLOGY**Course Code:**
31CT31**Programme:****M.SC****CIA: II Test****Date:** 03.11.2020**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**

- A pedigree chart shows: (CO5)
 - The genotypic ratios of the offspring.
 - The types of gametes produced by the parents.
 - The pattern of inheritance of a specific gene.
 - Which genes is co -dominant.
- Employment of hereditary principles in the improvement of human race is (CO5)
 - euthenics
 - Eugenics
 - Euphenics
 - ethnology.
- Oncogenes do not encode for (CO5)
 - Trans-membrane protein receptors
 - Growth factors
 - DNA-dependent RNA polymerase
 - Cytoplasmic G-proteins and protein kinases
- The haploids are able to express both dominant and recessive characters due to (CO2)
 - Many alleles for each gene
 - The presence two alleles for each gene
 - Only one allele for each gene in an individual
 - only one allele in a gene
- Genetic transfer from one bacterium to another mediated by virus is called (CO2)
 - Recombination
 - Conjugation
 - Transformation
 - Transduction

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

- Comment on DNA photolyases. (CO4)
- Define oncogenes. (CO4)
- Give a short note on Eugenics and Euthenics. (CO5)
- Write a short note on congenital malformation. (CO5)
- Define transformation. (CO2)
- What are Hfr strains? (CO2)
- What is insertional inactivation? (CO2)

SECTION – C SHORT ANSWER**Answer any Three Questions****3X5=15 Marks**

- Explain the mechanisms of breakage and reunion DNA molecules. (CO4)
- Describe the various methods of Genetic Counseling. (CO5)
- Give an account of Pedigree Analysis and its significance in family studies. (CO5)
- Write a short note on haploidy in honeybee. (CO2)
- Enumerate the properties of a typical plasmid. (CO2)

SECTION - D LONG ANSWER**Answer any Two Questions:****2x10=20 Marks**

- Write an essay on Human Genome Project and its applications (CO5)
- Explain the Hfr gene transfer during conjugation in bacteria. (CO2)
- Discuss various methods adopted in gene transfer. (CO2)



Course Code: 31CT32	Programme:	M.SC	CIA: II Test
Date: 04.11.2020	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

- The light of fire fly is equivalent to (CO2)
a) 0.01 candle b) 0.02 candle c) 0.03 candle d) 0.04 candle
- The light producing marine species are found in (CO2)
a) Abyssal region b) Littoral region c) Plankton region d) All
- The sound intensity is expressed as (CO2)
a) Decibels b) cps c) Candela d) Mols
- Which one of the following flows through spinal canal? (CO4)
a) Plasma b) Serum c) Cerebrospinal fluid d) Hilus
- The functional unit of contractile system in a striated muscle is (CO4)
a) Myofibril b) Cross bridges c) Z band d) Sarcomere

SECTION – B Very short answer

Answer any Five Questions:

5X2=10 Marks

- What is chemiluminescence? (CO2)
- Define: High voltage slow waves. (CO2)
- What do you mean by paradoxical sleep? (CO2)
- What is respiration? (CO4)
- Mention the significance of counter current mechanism. (CO4)
- Define: Peripheral nervous system. (CO4)
- What is nerve impulse? (CO4)

SECTION – C Short answer

Answer any Three Questions

3X5=15 Marks


- Explain the general structure of nerve cell. (CO2)
- Discuss the visual cycle of rhodopsin. (CO2)
- What is receptor? Briefly describe the physiology of phonoreceptor. (CO2)
- Explain the mechanism of muscle contraction. (CO4)
- Write a short note on physiology of behaviour. (CO4)

SECTION - D Long Answer

Answer any Two Questions:

2x10 = 20 marks

- Through a labelled diagram, explain the structure of human eye. (CO2)
- What is heat therapy? Mention its uses. (CO2)
- Write an essay on pulmonary ventilation. (CO4)

	Course Code: 31CT33	Programme:	M.SC.	CIA: II Test
	Date: 05.11.2020	Course:	ZOOLOGY	Semester: II
	Time: 2Hrs	Year:	II	Maximum: 50 Marks
	Course Title:	PRINCIPLES OF BIOTECHNOLOGY		

SECTION – A MULTIPLE CHOICE QUESTIONS

Answer All Questions:

5X1=5 Marks

- The type of plasmid mediate their own transfer between bacteria through conjugation specified by “tra” gene and “mob” region is ---CO3
 - Relaxed plasmid
 - stringent plasmid
 - Conjugative plasmid
 - Non-Conjugative plasmid
- The vector that can exist in both Prokaryotic and Eukaryotic is ---CO3
 - Shuttle vector
 - Phagemid
 - Bacteriophage
 - Yeast created monochromosomes
- DNA solution injected directly into the cell using micromanipulator is ---CO5
 - macroinjection
 - micromanipulator mediated DNA delivering
 - microfection
 - microinjection
- The method widely used for transforming *In vitro* animal cell culture that used as lipid vesicle is ---CO5
 - lipofection
 - lipotransformation
 - Liposome mediated transformation
 - lipid mediated DNA transfer
- The chemical used to construct cDNA library are ---CO5
 - Oligo – dt
 - alkaline sucrose
 - d-NTP precursors
 - all the above

SECTION – B VERY SHORT ANSWER

Answer any Five Questions:

5X2=10 Marks

- Mention the types of DNA ligase ---CO2
- Write short notes on Vir gene ---CO2
- Why phage λ is considered on cloning vector ---CO3
- What are the types of cloning vectors? ---CO3
- What is patent? ---CO1
- Comment on Microinjection. ---CO4
- Mention any significance of gene libraries. ---CO4

SECTION – C SHORT ANSWER

Answer any Three Questions

3X5=15 Marks

- Explain the process of DNA ligation mechanism. ---CO2
- Discuss the types of phage vector and their applications. ---CO3
- Enumerate the characters and types of insertion. ---CO3
- Write an account on the current scenario of Indian Biotechnology. ---CO1
- Describe briefly on the method of DNA hybridization and colony hybridization -CO5

SECTION - D LONG ANSWER

Answer any Two Questions:

2x10=20 Marks

- Give a detailed account on plasmid vector characters, their types and applications. -CO3
- Give a detailed account on the gene cloning strategies. ---CO5
- Write an essay on methods of gene transfer and their significance ---CO5

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DEPARTMENT OF ZOOLOGY



Course Code: 31NE31	Programme:	M.SC	CIA: II Test
Date: 06.11.2020	Course:	ZOOLOGY	Semester: III
Time: 2Hrs	Year:	II	Maximum: 50 Marks
Course Title:	ECONOMIC ZOOLOGY		

SECTION – A Multiple choice questions

Answer All Questions:

5X1=5 Marks

1. Study of mulberry is called CO3
a) Sericulture b) Morigulture c) Apiculture d) Aquaculture
2. Which one of the following is/are used as rearing appliance in sericulture? CO3
a) rearing strand b) rearing trays c) feather d) all
3. Who is the father of Apiculture? CO2
a. Lanstroth b. Quinby c. Johann Dzierzon d. Miller
4. Honey bees are included in the phylum CO2
a. Mollusca b. Annelida c. Echinodermata d. Arthropoda
5. *Apis mellifera* is commonly known as CO2
a. Indian bee b. European bee c. Little bee d. Rock bee

SECTION – B Very Short Answer

Answer any FIVE Questions:

5X2=10 Marks

6. Define silk reeling CO3
7. Write scope of sericulture CO3
8. What is sericulture? CO3
9. Define the term apiary CO2
10. Mention the functions of worker bee CO2
11. Comment on wax moth CO2
12. Write the functions of the drone bee CO2

SECTION – C Short Answer

Answer any THREE Questions:

3X5=15 Marks

13. Describe the types of silkworm CO3
14. Discuss the life cycle of *Bombyx mori* with suitable diagrams CO3
15. Describe the scope of bee keeping CO2
16. Analyse the uses of bee venom CO2
17. Explain the structure of Newton's bee hive and comment on its advantages CO2

SECTION – C Long Answer

Answer any TWO Questions:

2X10=20 Marks

18. Describe the methods of propagation in mulberry CO3
19. Discuss the nutritive and medicinal value of honey CO2
20. What are exotic milch breeds? Explain the characteristics of Jersey and Holstein Friesian breeds CO5