

Tsl12Blo

Tenkasi District  
Common Quarterly Examination - 2024



215-09-2024

Time Allowed: 3.00 Hours

**Standard 12**

**BIOLOGY**  
**BIO-BOTANY**  
**PART - A**

Maximum Marks: 70

Marks: 35

**I. Choose the best answer:****8×1=8**

- 1) Ruminant endosperm is found in  
a) Cocos                      b) Areca                      c) Vallisneria                      d) Arochis
- 2) Extra nuclear inheritance is a consequence of preservice of genes in  
a) Mitochondria and Chloroplasts  
b) Endoplasmic Reticulum and Mitochondria  
c) Ribosomes and Chloroplasts  
d) Lysosomes and Ribosomes
- 3) In pBR 322, pBR stands for  
a) Plasmid Bacterial Recombination                      b) Plasmid Bacterial Replication  
c) Plasmid Boliver and Rodrigues                      d) Plasmid Baltimore and Rodrigues
- 4) Virus free plants are developed from  
a) Meristem culture                      b) Cell suspension culture  
c) Protoplast culture                      d) Organ culture

**5) Match List I with List II:****List I****List II**

- |   |                     |
|---|---------------------|
| A) A pair of chromosomes extra with diploid     | i) Monosomy         |
| B) One chromosome extra to the diploid          | ii) Tetrasomy       |
| C) One chromosomes loses from diploid           | iii) Trisomy        |
| D) Two individual chromosomes lose from diploid | iv) Double monosomy |

- |    | <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> |    |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----|
| a) | i        | iii      | ii       | iv       | b)       | ii       | iii      | iv       | i  |
| c) | ii       | iii      | i        | iv       | d)       | iii      | ii       | i        | iv |

- 6) An analysis of chromosomal DNA using the Southern hybridisation technique does not use.  
a) Electrophoresis                      b) Blotting  
c) Autoradiography                      d) PCR
- 7) The arrangement of nuclei in a normal embryo sac in the dicot plant is  
a) 2+4+2                      b) 3+2+3                      c) 2+3+3                      d) 3+3+2
- 8) Poly Ethylene glycol method is used for  
a) biodiesel production                      b) seedless fruit production  
c) energy production from sewage                      d) gave transfer without a vector

**PART - B****II. Answer any 4 of the following questions:****4×2=8**

- 9) What is pollen kit?
- 10) Give the types of synapsis.
- 11) Define multiple alleles.
- 12) Name the chemicals used in gene transfer.
- 13) Define cybrid.
- 14) Draw and mark the parts of first cell of the male gametophyte.

**PART - C****III. Answer any 3 of the following questions.****3×3=9****[Q.No. 19 is compulsory]**

- 15) How are artificial seeds produced?
- 16) What is the difference between missense and nonsense mutation?

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- 17) List out the functions of tapetum.
- 18) What is Back cross and write their types?
- 19) Give the significance of ploidy.

**PART - D****IV. Answer all the questions:**

2×5=10

- 20) a) Explain the structure of dicot seed with suitable diagram. (OR)
- b) Explain the basic concepts involved in plant tissue culture.
- 21) a) Differentiate incomplete dominance and co-dominance. (OR)
- b) Mention the application of Biotechnology.

**PART - II (Bio-Zoology)**

Marks: 35

**SECTION - I****I. Answer all the questions**

8×1=8

- 1) The matured sperms are stored in the .....
  - a) Epididymis
  - b) Seminiferous tubules
  - c) seminiferous vesicle
  - d) Vas deferens
- 2) In which type of parthenogenesis are only females are produced
  - a) Arrhenotoky
  - b) Thelytoky
  - c) Amphitoky
  - d) Both a and b
- 3) Mammalian egg is .....
  - a) Mesolecithal and non cleidoic
  - b) Microlecithal and non cleidoic
  - c) Alecithal and non cleidoic
  - d) Alecithal and cleidoic
- 4) ZW ..... ZZ system of sex determination occurs in
  - a) Fishes
  - b) Reptiles
  - c) Birds
  - d) All the above
- 5) The Neanderthal man had the brain capacity of
  - a) 650-800 cc
  - b) 1200 cc
  - c) 900 cc
  - d) 1400 cc
- 6) Which of the following disease spread through droplet nuclei?
  - a) Tularemia
  - b) Listeriosis
  - c) Chicken pox
  - d) Mumps
- 7) The total number of nitrogenous bases in human genome is estimated to be
  - a) 3.5 million
  - b) 35000
  - c) 35 million
  - d) 3.1 million
- 8) Spread of cancerous cells to distance sites is termed as
  - a) Metastasis
  - b) Oncogenes
  - c) Proto-oncogenes
  - d) malignant neoplasam

**SECTION - II****II. Answer any four of the following questions**

4×2=8

- 9) What is surrogasy
- 10) Expand the following? GIFT and IVF
- 11) Write the symptoms of filariasis?
- 12) What is criss - cross inheritance?
- 13) Differentiate template strand from coding strand?
- 14) Write any two difference between active and passive immunity?

**SECTION - III****III. Answer any three of the following questions. Q.No. 19 is compulsory.**

3×3=9

- 15) What is conjugation? Give example
- 16) Writes the importance of hormone inhibin?
- 17) Writes notes on Amniocentesis?
- 18) Explain vestigial organs with examples.
- 19) What are the application of Karyotyping? any three

**SECTION - IV****IV. Answer any two of the following**

2×5=10

- 20) Describe the techniques used to detect fetal abnormalities during pregnancy (OR)  
State any five goals of Human Genome project
- 21) Explain the three major categories in which fission occur? (OR)  
Explain the structure of immunoglobulin with suitable diagram.

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