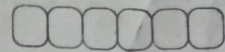


KK12Bio

Kanniyakumari District
Common Quarterly Examination - 2024

Standard 12
BIOLOGY

Time: 3.00 Hours

Marks: 70

Note: Answer Part I (Bio-Botany) and Part II (Bio-Zoology) in separate answer sheets.

PART - I (Bio-Botany)
SECTION - 1

Marks: 35

- i) Answer all the questions **8×1=8**
ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1) First cell of male gametophyte in angiosperm is
 - a) Microspore
 - b) megaspore
 - c) Nucleus
 - d) Primary Endosperm nucleus
- 2) Identify the incorrect pair
 - a) Sporopollenin - Exine of pollengrain
 - b) Tapetum - Nutritive tissue for developing microspores
 - c) Nucellus - Nutritive tissue for developing embryo
 - d) Obturator - Directs the pollen tube into micropyle
- 3) Which mendelian idea is depicted by a cross in which the F₁ generation resembles both the parents
 - a) Incomplete dominance
 - b) Law of dominance
 - c) Inheritance of one gene
 - d) Co-dominance
- 4) An ancestral trait reappears after have been lost through evolutionary changes in the previous generation is called
 - a) Atavism
 - b) mitochondrial Inheritance
 - c) Chloroplast Inheritance
 - d) Polygenic Inheritance
- 5) The term mutation was introduced by
 - a) Mullar
 - b) Huger de vries
 - c) M.S.Swaminathan
 - d) W.S.Sutter
- 6) Changing the codon AGC to AGA represents
 - a) Missense mutation
 - b) Non-sense mutation
 - c) Frameshift mutation
 - d) Deletion mutation
- 7) Choose the wrong statement about the application of plant tissue culture
 - a) Improve hybrid production
 - b) somatic embryoids can be encapsulated into synthetic seeds
 - c) Production of primary metabolites from cell culture utilized in pharmaceuticals cosmetics and food industry
 - d) Production of disease resistant plants
- 8) Virus free plants are developed from
 - a) Organ culture
 - b) Meristem culture
 - c) Protoplant culture
 - d) Cell suspension culture

SECTION - II

- II. Answer any 4 questions. Q.No. 14 is compulsory. **4×2=8**

- 9) Differentiate Grafting and layering
- 10) "Endothecium is associate with dehiscence of anther", Justify the statement
- 11) Name the seven contrasting traits of mendel
- 12) What are called syntenic genes?
- 13) What are the materials used to grow microorganisms like spirulina
- 14) How does redifferentiation differ from differentiation in the basic concept of tissue culture?

SECTION - III

- III. Answer any 3 questions. Q.No. 19 is compulsory. **3×3=9**

- 15) Write short notes on pollen kitt.
- 16) Differentiate incomplete dominance and co-dominance
- 17) Give any three importance of crossing over.
- 18) What do you know about the word pBR 322?
- 19) Give an account on cryopreservation.

KK12Bio

2

SECTION - IV**IV. Answer all the questions.****2×5=10**

- 20) What is endosperm? Explain the types
(OR)

Describe dominant epistasis with an example.

- 21) Write down the significance of ploidy
(OR)

Describe the steps involved in recombinant DNA technology.

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

Marks: 35

I. Answer all the questions**8×1=8**

- The matured sperms are stored in the
a) Epididymis
b) Seminiferous tubules
c) seminiferous vesicle
d) Vas deferens
- In which type of parthenogenesis are only females are produced
a) Arrhenotoky
b) Thelytoky
c) Amphitoky
d) Both a and b
- Mammalian egg is
a) Mesolecithal and non cleidoic
b) Microlecithal and non cleidoic
c) Alecithal and non cleidoic
d) Alecithal and cleidoic
- ZW ZZ system of sex determination occurs in
a) Fishes
b) Reptiles
c) Birds
d) All the above
- The Neanderthal man had the brain capacity of
a) 650-800 cc
b) 1200 cc
c) 900 cc
d) 1400 cc
- Which of the following disease spread through droplet nuclei?
a) Tularemia
b) Listeriosis
c) Chicken pox
d) Mumps
- 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
- 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**

- What is surrogasy
- Expand the following? GIFT and IVF
- Write the symptoms of filariasis?
- What is criss - cross inheritance?
- Differentiate template strand from coding strand?
- 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**

- What is conjugation? Give example
- Writes the importance of hormone inhibin?
- Writes notes on Amniocentesis?
- Explain vestigial organs with examples.
- 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.
