KHADERIA HIGHER SECONDARY SCHOOL, VANIYAMBADI.

MODEL COMMON QUARTERLY EXAM (2) – SEP 2024

CLASS: 12-B **BIOLOGY** **MAXIMUM MARKS: 70**

BIO BOTANY (35 Marks) **TIME: 3 HRS.**

I. CHOOSE THE CORRECT ANSWER. **8 X 1=8**

1. The extreme top of the pollen take appears hemispherical and transparent is called as
   a) Synergid b) obturator c) Cap block d) Microspore
2. Which of the following one is used as a Biosensor.
   a) Electrophorosys b) Biorectors c) Vectors d) Electrophoresis
3. Reported a lethal gene in snapdragon epore
   a) E Baur b) Gregore mendal c) W. Batson d) Nilsson - Ehle
4. The genes controlling the seven pea characters studied by mendel are known to be located on how many different Chromosomes?
   a) Seven b) Six c) Five d) Four
5. is Responsible for the production of Anthocanin Digments.
   a) Amiao acids b) Nucleic acid c) Proteins d) Fats
6. Cryo preservation means if it a process to preserve plant cell,
   a) at very low temperature by using ether b) at very high temperature of 121°C
   c) at very low temperature of of 196°C using liquid nitrogen d) encapsulation by using agar
7. In which techniques Ethidium Bromide is used?
   a) Southern Blotting techniques b) Western Blotting techniques
   c) Polymerase chain Reaction d) Agrore Gel Electroporosis
8. Somatic embryogensis is reported in which plant.
   a) Oryza Sativa b) Cathranthur roseul c) cinchona d) Digitalis purpurea

II. ANSWER ANY FOUR QUESTIONS. **4X2=8**

9. What is pollen kit?
10. Distinguish mound layering and air layering?
11. What are multiple alleles?
12. Differentiate Liakage and crossing over?
13. What is PCR?
14. Define Somoclonal variation?

III. ANSWER ANY THREE QUESTIONS. QUESTION NO.19 IS COMPULSORY. **3X3=9**

15. Why Mendel has chosen pisum.
16. List out the functions of tapetum?
17. Write any three significance of ploidy?
18. Write the Applications of somatic Embryogenesis?
19. What do you know about the word PBR 332?

IV. ANSWER ALL THE QUESTIONS: **2X5=10**

20. Discuss the steps involved in Microsporogenesis?

[Or]

Describes dominant Epistasis with an example?

21. Mention the Application of Biotechnology?

[Or]

Explain Basic concepts of Tissue culture?

BIO ZOOLOGY (35 Marks)

I. CHOOSE THE CORRECT ANSWER. **8 X 1=8**

1. Strobilation occurs in
a) Sponge b) Aurelia c) Noctiluca d) Amoeba
2. Which of the following is incorrect reganding zw - zz type of sex determination?
a) It occurs in birds and some reptiles. b) Females are homogometic and males are heterogametic
c) Males produce are type of gamete d) It occurs in gypsy moth
3. The total number of nitrogenous bases in human genome is estimated to be about
a) 3.5 million b) 35000 c) 35million d) 3.1 billion
4. AIDS virus has
a) single stranded RNA b) Double stranded RNA Single stranded DNA d) Double stranded DNA
5. One gene one enzyme hypotnesis was proposed by
a) Goeorge Beadle b) Edward Tatum c) saltum d) A and B
6. In Geological time scale in which period orign of algae is appeared
a) Devonian b) silurian c) ordorician d) cambrian
7. Among the following drugs which one is not a stimulants
a) Amphetamines b) cocaine c) opium d) nicotine.
8. Cyclosporin - A is an immumosuppressive drug produced from
a) Aspergillus nigher b) managcus purpureus c) Penicillium notatum d) Trichoderma polysporum

II. ANSWER ANY FOUR QUESTIONS. **4X2=8**

9. What is meant by apolysis?
10. What is colostrum? write its significance.
11. Write the symptoms of phenylketonuria?
12. Define Transcription.
13. What is mean by surrogacy.
14. How is milk converted into curd?

III. ANSWER ANY THREE QUESTIONS. QUESTION NO.19 IS COMPULSORY. **3X3=9**

15. Write three Application of karyotyping.
16. Write any three symptoms of Fungal sexually transmitted Infection *candidiasis.*
17. Differentiate - Template strand and coding strand.
18. Differentiate Innate immunity and Acquired Immunity.
19. What is meant by single cell protein?

IV. ANSWER ALL THE QUESTIONS: **2X5=10**

20. a) Explain the various phases of menstrual cycle.

(OR)

b) Explain any five techniques of Assisted Reproductive Technology (ART)

21. a) Explain the genetic basis of ABO blood grouping in man.

(OR)

b) Darwin's finches and Australian marsupials are suitable examples of adaptive radiation, Justify the statement.