

AMEER TUITION CENTRE**KAYALPATTANAM – 628 204.****MODEL – II & PREPARATORY PUBLIC EXAMINATION
PART – III – BIOLOGY****Time Allowed : 3.00 Hours****Maximum Marks : 70**

Instructions : (1) check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
(2) Use Black or Blue ink to write and pencil to draw diagrams.

Note : Candidate should answer **PART – I (Bio - Botany)** and **PART – II (BIO - Zoology)** in separate answer – books.

**PART – I BIO – BOTANY
(Marks : 35)****SECTION – A**

- Note :**
1. Answer all the question **8 x 1 = 8**
 2. Choose the most appropriate answer from the given **four** alternative and write the option code and the corresponding answers.
1. A Plant called X possesses small flower with reduced perianth and versatile anther. The probable agent for pollination would be

a) water	b) air	c) butterflies	d) beetles
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 2. Select the period for Mendel's hybridization experiments

a) 1856 - 1863	b) 1850 - 1870	c) 1857 - 1869	d) 1870 - 1877
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 3. Restriction enzymes are
 - a. Not always required in genetic engineering
 - b. Essential tools in genetic engineering
 - c. Nucleases that cleave DNA at specific sites
 - d. both b and c
 4. Arrange the correct sequence of ecological hierarchy starting from lower to higher level.
 - a) Individual organism → Population Landscape → Ecosystem
 - b) Landscape → Ecosystem → Biome → Biosphere
 - c) community → Ecosystem → Landscape → Biome
 - d) Population → organism → Biome → Landscape
 5. Ecosystem consists of

a) decomposers	b) producers	c) consumers	d) all of the above
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 6. Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer?

a) Ammonia	b) Methane	c) Nitrous oxide	d) Ozone
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7. Importing better varieties and plants from outside and acclimatising them to local environment is called
 a) cloning b) heterosis c) selection d) introduction
8. *Tectona grandis* is coming under family
 a) Lamiaceae b) Fabaceae c) Dipterocarpaceae e) Ebenaceae

SECTION – B

Answer **any four** from the following questions :

4 x 2 = 8

9. What are clones?
10. Name the chemicals used in gene transfer.
11. What is haplodiploidy?
12. Give four examples of plants cultivated in commercial agroforestry.
13. Differentiate primary introduction from secondary introduction.
14. Write the cosmetic uses of *Aloe*.

SECTION – C

Answer **any three** of the following questions. **Question No.19** is Compulsory. **3 x 3 = 9**

15. List out the functions of tapetum.
16. Write the advantages and disadvantages of Bt cotton.
17. What is co evolution?
18. What do you mean Embryoids? Write its application.
19. Discuss which wood is better for making furniture.

SECTION – D

Answer **all** the question :

2 x 5 = 10

20. (a) Bring out the inheritance of chloroplast gene with an example.
 OR
 (b) Mention the application of Biotechnology.
21. (a) Enumerate the anatomical adaptations of xerophytes.
 OR
 (b) Write the economic importance of rice.

PART – II Bio – Zoology**(Marks : 35)****SECTION – A**

Note : 1. Answer all the question **8 x 1 = 8**
2. Choose the most appropriate answer from the given **four** alternative and write the option code and the corresponding answers.

1. which type of parthenogenesis are only males produced?
 - a) Arrhenotoky
 - b) Thelytoky
 - c) Amphitoky
 - d) Both a and b
2. Colostrum is rich in
 - a. Ig E
 - b. Ig A
 - c. Ig D
 - d. Ig M
3. Which of the following is correct regarding HIV, hepatitis B, gonorrhoea and trichomoniasis?
 - (a) Gonorrhoea is a STD whereas others are not.
 - (b) Trichomoniasis is a viral disease whereas others are bacterial.
 - (c) HIV is a pathogen whereas others are diseases.
 - (d) Hepatitis B is eradicated completely whereas others are not.
4. A mRNA molecule is produced by
 - a) Replication
 - b) Transcription
 - c) Duplication
 - d) Translation
5. The age of fossils can be determined by
 - a) electron microscope
 - b) weighing the fossils
 - c) carbon dating
 - d) analysis of bones
6. Choose the correctly match pair.
 - a) Amphetamines - Stimulant
 - b) LSD - Narcotic
 - c) Heroin - Psychotropic
 - d) Benzodiazepine - Pain killer
7. The purpose of biological treatment of waste water is to _____
 - a) Reduce BOD
 - b) Increase BOD
 - c) Reduce sedimentation
 - d) Increase sedimentation
8. In the E-waste generated by the Mobile Phones, which among the following metal is most abundant?
 - a) Copper
 - b) Silver
 - c) Palladium
 - d) Gold

SECTION – B

Answer **any four** from the following questions :

4 x 2 = 8

9. Why is the offspring formed by asexual reproduction referred as a clone?
10. Give reasons: Genetic code is 'universal'.
11. Differentiate between divergent evolution and convergent evolution with one example.
12. Differentiate Natality and Mortality.
13. List the advantages of biogas plants in rural areas.
14. Discuss the role of an individual to reduce environmental pollution.

SECTION – C

Answer **any three** of the following questions. **Question No.19** is Compulsory. **3 x 3 = 9**

15. What is inhibin? State its functions.
16. Mention the symptoms of Down's syndrome.
17. Differentiate between Tundra and Taiga Biomes.
18. What is Red data book? Mention its purposes.
19. Draw a labeled sketch of a Structure of HIV

SECTION – D

Answer **all** the question :

2 x 5 = 10

20. (a) Give a schematic representation of spermatogenesis and oogenesis in humans.
OR
(b) HGP is the windows for treatment of various genetic disorders. Justify the statement.
21. (a) What is vaccine? What are its types?
OR
(b) Write a note on i) Protected areas, ii) Wild Life Sanctuaries.

Wish by,

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