

Biology (Objective Type)

RWP-21

Time: 20 Minutes

Marks: 17

NOTE: Write answers to the questions on the objective answer sheet provided. Four possible answers A,B,C and D to each question are given. Which answer you consider correct, fill the corresponding circle A,B,C or D given in front of each question with Marker or pen ink on the answer sheet provided.

- 1.1. Fruit development without fertilization is called:
 - (A) Vernalization
 - (B) Parthenogenesis
 - (C) Parthenocarpy
 - (D) Dormancy
2. Which colour cytoplasm of an ascidian fertilized egg gives rise gut____:
 - (A) Clear cytoplasm
 - (B) Yellow cytoplasm
 - (C) Grey equatorial cytoplasm
 - (D) Grey vegetal cytoplasm
3. The ability to regain the lost or injured part of the body is called:
 - (A) Aging
 - (B) Regeneration
 - (C) Generation
 - (D) Degeneration
4. Which of the following is initiation codon?
 - (A) AUG
 - (B) UAA
 - (C) UGG
 - (D) UGA
5. The division of nucleus during cell division is called:
 - (A) cytokinesis
 - (B) Karyokinesis
 - (C) Parthenogenesis
 - (D) Karyotype
6. The crossing over occur in_____stage:
 - (A) Leptotene
 - (B) Zygotene
 - (C) Pachytene
 - (D) Diplotene
7. A gamete without any sex chromosome is:
 - (A) Heterogamete
 - (B) Homogamete
 - (C) Nullogamete
 - (D) Isogamete
8. The plasmid psc₁₀₁ has antibiotic resistance gene for:
 - (A) Tetracycline
 - (B) Ampicillin
 - (C) Penicillin
 - (D) Terramycin
9. Archaeobacteria can tolerate temperature upto:
 - (A) 118°C
 - (B) 119°C
 - (C) 120°C
 - (D) 121°C
10. The organism,which inhibit the root nodules of legume plants are:
 - (A) Fungi
 - (B) Algae
 - (C) Bacteria
 - (D) Cynobacteria
11. The grass land in tropical climate having woody trees are called:
 - (A) Prairies
 - (B) Savanna
 - (C) Tundra
 - (D) Alpine
12. Establishment of new forests where no forest existed is known as:
 - (A) Afforestation
 - (B) Reforestation
 - (C) Forestation
 - (D) Deforestation
13. The active up take of sodium in ascending limb of loop of Henle is promoted by_____hormone:
 - (A) Aldosterone
 - (B) ADH
 - (C) Testosterone
 - (D) Progesterone
14. Which one of the following is an ectotherm:
 - (A) Bird
 - (B) Huming bird
 - (C) Amphibian
 - (D) Bat
15. The active conducting portion of wood in older trees is:
 - (A) Sap wood
 - (B) Heart wood
 - (C) Bark
 - (D) Callus
16. Arthritis is an inflammatory or degenerative disease that damage:
 - (A) Muscles
 - (B) Brain
 - (C) Joints
 - (D) Kidney
17. The part of brain,which play role in the formation of long term memory is:
 - (A) Thalamus
 - (B) Hippocampus
 - (C) Amygdala
 - (D) Pons

Roll No. _____ To be filled in by the candidate

(For all sessions)

Biology (Essay Type)**RWP-21**

Time: 2:40 Hours

Section-I

Marks: 68

2x8=16

2. Write short answers of any eight parts from the following.

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|---|------------------------------------|
| i. What is peritoneal dialysis? | ii. What is panting? |
| iii. Differentiate between Poikilotherms and Homeotherms. | iv. What is Ecdysis? |
| v. Differentiate between Hyaline cartilage and Elastic cartilage. | vi. What is Sciatica? |
| vii. What is diploid parthenogenesis? | viii. What are fraternal twins? |
| ix. Write the plants in temperate deciduous Forests. | x. Write a note on profundal zone. |
| xi. Write a note on Tidal power. | xii. What is reforestation? |

2x8=16

3. Write short answers of any eight parts from the following.

- | | |
|---|---|
| i. Define gene linkage. How does gene linkage affect variations among offsprings? | |
| ii. How are transgenic bacteria used to improve plant health? Give two examples. | |
| iii. What are different types of hormones on the basis of chemical nature? | |
| iv. Define food web. How do pathways of food web help to maintain stability of ecosystem? | |
| v. Enlist antibodies found in A, AB, B and O blood groups. | vi. How plant growth is affected by ethene? |
| vii. Differentiate between Phenotype and genotype with examples. | viii. Write the structural components of limbic system. |
| ix. Define DNA finger printing. Write its significance. | x. Define habitat and niche. |
| xi. What is the significance of Transgenic Corn and Soybean? | xii. Define mutualism. Give two examples. |

2x6=12

4. Write short answers of any six parts from the following.

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| i. What are Okazaki fragments? Give their lengths. | |
| ii. What is primitive streak? How is it formed? | iii. Define Transcription and Anticodon. |
| iv. What is meant by Nucleosome and gene? | v. State Regeneration and dedifferentiation. |
| vi. Define Interphase. Name its subphases. | viii. Characterize pachytene in Meiosis I. |
| vii. What are vestigial organs? Give examples as well. | ix. Define genetic drift and hydrothermal vents. |

Section - II

8x3=24

NOTE: Answer any three questions from the following.

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|---|---|
| 5. (a) How does osmoregulation take place in terrestrial animals? | 4 |
| (b) What are different components of ecosystem? | 4 |
| 6. (a) Discuss sliding filament model of Muscle contraction. | 4 |
| (b) Describe the process of transcription. | 4 |
| 7. (a) Explain Feedback mechanism. | 4 |
| (b) Write a note on importance of forests. | 4 |
| 8. (a) Describe the types of parthenogenesis in animals. | 4 |
| (b) What is dominance? Explain complete and incomplete dominance with examples. | 4 |
| 9. (a) Describe in your own words the Growth Correlations in plants. | 4 |
| (b) Describe evidence of evolution from the Comparative Anatomy of animals. | 4 |

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