

Warning:- Please, do not write anything on this question paper except your Roll No.

1222 (Inter Part – II)

(Session 2018-20 to 2020-22)

Roll No-----

Biology (Objective)

Paper (II)

Sig. of Student -----

Time Allowed:- 20 minutes

PAPER CODE 4465

Maximum Marks:- 17

Note:- You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Write **PAPER CODE**, which is printed on this question paper, on the both sides of the Answer Sheet and fill bubbles accordingly, otherwise the student will be responsible for the situation. Use of Ink Remover or white correcting fluid is not allowed.

Q.1

1. Aquatic environment can be classified as
(A) Fresh water (B) Marine water (C) Terrestrial (D) Both A and B
2. Tundra Ecosystem have
(A) Caribou (B) Arctic foxes (C) Both A and B (D) Bison herds
3. There is no structural and functional relationships between nutritive and excretory system in
(A) planarian (B) Earthworm (C) Cockroach (D) All A,B and C
4. The inactive and Non-Conducting Wood is called
(A) Sapwood (B) Heartwood (C) Both A and B (D) None of these
5. The muscles which work against each other by contraction are
(A) Agonistic muscles (B) Antiparalel muscle (C) Antagonistic (D) Both A and C
6. The Unicellular organisms respond to changes in
(A) Temperature (B) Light intensity (C) Various chemicals (D) All A,B and C
7. Decrease in _____ level onset the birth
(A) Estrogen level (B) Progesterone level (C) ACTH (D) Oxytocin
8. Negative Physiological changes in our body is called
(A) Gerontology (B) Aging (C) Regeneration (D) Abnormal Development
9. In _____ the individuals are borne with small skull.
(A) Microcephaly (B) Megacephaly (C) Scratia (D) Tetanus
10. The synthesis of all the biomolecules of an organism is catalysed by
(A) Hormones (B) Enzymes (C) DNA (D) RNA
11. The partition of the centriole takes place during interphase but present in the same
(A) Centomere (B) Centrum (C) Centrosome (D) Cytosome
12. Chromosomal Condensation reaches to its maximum during _____ phase.
(A) Zygotene (B) Pachytene (C) Diplotene (D) Diakinesis
13. A rare X-linked recessive trait is
(A) Down's Syndrome (B) Testicular Feminization Syndrome (C) Turner's Syndrome (D) All A,B and C
14. PCR Amplification and analysis can be used to diagnose
(A) Viral infections (B) Genetic Disorders (C) Cancer (D) All A,B and C
15. In Plant cells, there is full genetic potential of the organism, hence called
(A) Totipotent (B) Impotent (C) Meristems (D) Both A and C
16. Galapagos islands were inhabited by _____ of Finches
(A) 12 types (B) 13 types (C) 30 types (D) 40 types
17. A niche is defined as the role of a species that plays in a community including
(A) Behaviour (B) Influence (C) Both A , B (D) None of these

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1222(Enter Part-II)

(Session 2018-20 to 2020-22)

Biology (Subjective)

Paper (II)

Time Allowed: 2.40 hours

Maximum Marks: 68

Section ----- I

2. Answer briefly any Eight parts from the followings:- *SCD-22* $8 \times 2 = 16$
- | | |
|--|---|
| (i) What different adaptations have been made by xerophytes to limit water loss? | (ii) Enlist any four nitrogenous wastes produced as a result of purine and pyrimidine metabolism. |
| (iii) Differentiate between ammonotelic and uricotelic animals. Give examples. | (iv) Define Collenchyma cells. |
| (v) Differentiate between sapwood and heartwood. | (vi) Write down any four functions of skeletal system. |
| (vii) Interpret the effect of photoperiodism as studied by Garner and Allard. | (viii) What is diploid parthenogenesis? |
| (ix) Write a note on productivity of aquatic ecosystem | (x) Outline animal life of temperate deciduous forests |
| (xi) Write a note on water as a renewable resource. | (xii) How wild life plays an important role in food chain. |
3. Answer briefly any Eight parts from the followings:- $8 \times 2 = 16$
- | | |
|---|---|
| (i) Justify that sympathetic system is associated with fight or flight. | (ii) Write functions of Gastrin. From Where it is secreted? |
| (iii) Interpret habituation with the help of an example | (iv) Why blood pressure is a multifactorial trait? |
| (v) What are pseudoautosomal genes? Give an example | (vi) What is Gene linkage and Linkage group? |
| (vii) Who and when developed the PCR? Why it is named so? | (viii) How foreign genes can be introduced into plant embryos or protoplasts? |
| (ix) Write about vortex mixing method to insert genes into the eggs of animals. | (x) Differentiate between Secondary and Tertiary Consumers. |
| (xi) Differentiate between Hydrosere and Xerosere. | (xii) Elaborate symbiosis with an example. |
4. Answer briefly any Six parts from the followings:- $6 \times 2 = 12$
- | | |
|---|--|
| (i) How neural plate is formed during chick development. | (ii) Differentiate between growth and development. |
| (iii) Compare Heterochromatin with Euchromatin. | (iv) Which codons are called stop codons and why? |
| (v) How many binding sites are found in promotor of prokaryotes and Eukaryotes. | (vi) What are the functions of Mitotic apparatus. |
| (vii) How can you identify the cancer cells? | (viii) Define Neo-Darwinism. |
| (ix) How artificial Selection is different from Natural selection. | |

Section ----- II

Note: Attempt any three questions.

$(8 \times 3 = 24)$

5. (a) Discuss the osmoregulatory strategies in the animals of terrestrial environment.
(b) Write a note on food chain and food web.
6. (a) Explain in detail the significance of Hydrostatic skeleton in animals having no hard parts such as bones.
(b) Write a note on Transcription along with a neat diagram.
7. (a) How does diffused type of nervous system differ from central nervous system. List the differences by taking example of one animal with diffused nervous system and other with central nervous system.
(b) Explain the population explosion, its control, consequences and causes.
8. (a) What are sexually transmitted Diseases? Explain.
(b) Discuss pattern of Sex-determination in Animals?
9. (a) Explain role of nucleus in development by giving example of Acetabularia.
(b) Describe the details of engulfment of Aerobic bacteria and cyanobacteria by a prokaryotic cell to develop a Eukaryotic cell?