

Roll No.

Total Printed Pags - 6

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M.Sc. (Third Semester)
EXAMINATION, Dec. - Jan., 2021-22
ZOOLOGY

Paper Fourth

(Population Genetics and Evolution)

Time : Three Hours]

[Maximum Marks:80

Note: Attempt all sections as directed.

Section - A

(Objective/multiple choice Questions)

(1 Mark each)

Note: Attempt all questions. This section contains objective /MCQ type questions.

Tick the corect answer

1. Development of tentacles in snail is the example of
 - (A) Meiotic drift
 - (B) Variation
 - (C) Use and disuse of organs
 - (D) All the above are correct
2. 'Ontogeny recapitulates phylogeny' who stated by
 - (A) Haeckel (1866)
 - (B) Lamarck (1786)
 - (C) Darwin (1859)
 - (D) None of the above

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3. Pangenesis theory was given by
 - (A) Devries
 - (B) Weisman
 - (C) Darwin
 - (D) Haeckel
4. Fossils found in rocks indicate the age of the rock is called as -
 - (A) Era
 - (B) Tracks
 - (C) Petrification
 - (D) Index fossil
5. The persistent accumulation of small changes within a lineage is -
 - (A) Mega evolution
 - (B) Evolution
 - (C) Variation
 - (D) Phylectic graduation
6. Struggle for existence cause variation -
 - (A) True
 - (B) False
7. Mechanism of evolution
 - (A) Mutation
 - (B) Variation
 - (C) Genetic drift
 - (D) All the above are correct

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8. According to Devries in his mutation theory -
(A) Mutants are distinct from their parents.
(B) Mutants disappear from gene pool
(C) It is always harmful
(D) None of the above
9. Pheno types are -
(A) Recombinants
(B) Morphological appearance
(C) Genetic structures
(D) None of the above
10. According to Hardy Weinberg law -
(A) Random mating occurs
(B) No migration occur
(C) No change in the DNA
(D) All the above are correct
11. Carbonaria is the example of -
(A) Resistance to pesticides
(B) Industrial melanism
(C) Antibiotic resistance
(D) All are correct
12. Who discovered sickel cell anaemia -
(A) J B S Haldane
(B) James B Harrick
(C) Bateson
(D) Hargovind Khwarana

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13. Territoriality fight is an example of -
(A) Sexual selection
(B) Disruptive selection
(C) Gene pool structure
(D) genetic equilibrium
14. Pan mixis is mating pattern -
(A) In laboratory
(B) Is baccross pattern
(C) Random affair
(D) All are correct
15. Founder principle was established by
(A) Haldane
(B) Bateson
(C) Ernst Myr
(D) James Hanick
16. Gradual genetic variation in any population is termed as
(A) Punctuated evolution
(B) Mutation.
(C) Micro evolution
(D) Genetic drift
17. Orohippus appeared in
(A) Pleistocene
(B) Eocene
(C) Recent time
(D) Meiocene
18. Rama pithecius lived
(A) 5 mya
(B) 7 mya
(C) 4 mya
(D) 8-14 mya

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19. Where does the camel originate from -
(A) South America
(B) Asia
(C) Europe
(D) North America
20. The genetic lineage of elephant splits from:
(A) Dianosaurs
(B) Primalis
(C) Archaeopteryx
(D) None of the above

Section - B

(Very Short Answer Type Question)

(2 Marks each)

Note : Please write only 2 - 3 lines.

1. Fossil
2. Variation
3. Point mutation
4. Epigametic selection
5. speciation
6. Genetic load
7. Taxa
8. Homoerectus

Section - C

(Short Answer Type Questions)

(3 Marks each)

Note: Word limit is 40 - 50 words approx

1. Struggle for existence
2. Phosphogens (What type of evolutionary evidence is this?)

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3. Heavy metal resistance in plants
4. Meiotic drive
5. Balance Hypothesis
6. Gene equilibrium
7. Genetion and evolution
8. Any example of micro evolution

Section - D

(Long Answer Type Questions)

(5 Marks each)

Note: Word limit is 250 words approx.

1. Write in short about a direct evidence of evolution: (first mention what is direct evidence then give detail)

OR

Discuss synthetic theory of evolution.

2. Write about chromosomal mutation.(Illustrations are appreciated whreever necessary).

OR

Discuss the phenotypic variations.

3. Describe the factors affecting reproductive isolations.

OR

How did Tuberculosis spread in human population during 18th & 19th century?

4. Describe evolution of herse with suitable illutrations.

OR

Write the major features of micro and mega evolution with suitable examples.

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