SET A

M.Sc. ZOOLOGY
SECOND SEMESTER
EVOLUTIONARY BIOLOGY
MSZ-205

[USE OMR FOR OBJECTIVE PART]

Duration: 1:30 hrs. **Full Marks: 35**

Objective

Time: 15 mins. **Marks: 10**

Choose the correct answer from the following: *1×10=10*

1. Which term describes the evolution of life from non-living matter?
   a. Biogeny b. Chemogeny
   c. Abiogenesis d. Special creation

2. The drawback of Darwinism was that it couldn't explain
   a. Variations b. Large rate of production
   c. Struggle for existence d. Reproductive fitness

3. In Lamarck's view, the key of organic evolution is that each progeny
   a. shows struggle for existence b. characters acquired by parental generation are inherited
   c. is similar to its parents d. phylogeny is repeated in its ontogeny

4. What is the role of genes in heritable variation?
   a. They influence how individuals develop b. They provide the blueprint for life
   c. They determine environmental changes d. They provide the energy for growth

5. The type of selection which acts against both extreme phenotypes and favours intermediate phenotype.
   a. Directional selection b. Disruptive selection
   c. Natural selection d. Stabilizing selection

6. $(p+q)2 = P2 + 2pq + q2 = 1$ represents an equation used in:
   a. Population genetics b. Mendelian genetics
   c. Biometrics d. Molecular genetics

7. Formation of new species due to geographical isolation is called
   a. Sympatric speciation b. Allopatric speciation
   c. Parapatric speciation d. Adaptive radiation

8. Match the scientists listed under column 'A' with ideas listed column 'B'.

Column A	Column B
i. Darwin	M. Neutral theory of molecular evolution
ii. Oparin	N. Use and disuse of organs
iii. Lamarck	O. Abiogenesis
iv. Kimura	P. Evolution by natural selection

a. i-M; ii-P; iii-N; iv-O
b. i-P; ii-M; iii-N; iv-O
c. i-N; ii-P; iii-O; iv-M
d. i-p; ii-O; iii-N; iv-M

9. The most accepted line of descent in human evolution is:

a. *Australopithecus →Ramapithecus →Homo sapiens →homo habilis*
b. *Homo erectus →Homo habilis →Homo sapiens*
c. *Ramapithecus →Homo habilis →Homo erectus →Homo sapiens*
d. *Australopithecus →Ramapithecus →Homo erectus → Homo habilis →Homo sapiens*

10. Individuals of two species preferably breed during different seasons. This type of isolation is called

a. Habitat isolation
b. Temporal isolation
c. Gametic isolation
d. Mechanical isolation

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Descriptive

Time : 1 hr. 15 mins. Marks: 25

[Answer question no.1 & any two (2) from the rest]

1. Write a note on Darwinism. 5

2. What is isolating mechanisms? Explain its different types. 10

3. Explain the different factors affecting Hardy-Weinberg Equilibrium 10

4. What are heritable variations? Explain the mechanism of Bottleneck Effect. 4+6=10

5. Write the factors for which Differentiate between Old World Monkey & New World Monkey. 10

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