(6 pages) **Reg. No. :** .....

Code No. : 6603 **Sub. Code : KZOM 23/ PZOM 23**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Second Semester

Zoology

EVOLUTION

(For those who joined in July 2016 and afterwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The halophiles can utilize the

   (a) Light energy

   (b) Solar energy

   (c) Thermal energy

   (d) All of them

2. The concept of homology was introduced by

(a) Lynn Margulis (b) Richard Owen

(c) Oparin (d) L.E. Orgel

3. ———————— was considered as a missing link between reptiles and birds.

(a) Archaeopteryx (b) Pteranodon

(c) Avimimus (d) Caudipteryx

4. Egg laying mammals occur only

(a) Africa (b) Afghanistan

(c) Argentina (d) Australia

5. Most fundamental idea in population genetics was offered by Englishman

(a) Sewall Wright (b) R.A. Fisher

(c) G.H. Hardy (d) Haldane

6. Founder-flush speciation theory proposed by

(a) Hampton Carson

(b) Mayr

(c) Joffrey Powell

(d) Michael white

7. The mean size of a *Homo habilis* brain is roughly

(a) 300 cc (b) 450 cc

(c) 500 cc (d) 650 cc

8. From which species does Lucy belong?

(a) *Homo habilis*

(b) *Australopithecus afarensis*

(c) *Homo sapiens*

(d) *Australopithecus robustus*

9. The last common ancestor of human is

(a) Pan troglodytes

(b) Homo neanderthalensis

(c) Lemuroidea

(d) Dromaeosaurus

10. To which primate are human most closely related?

(a) Chimpanzees

(b) Gorillas

(c) Orangutans

(d) Gibbons

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are coacervates? Discuss the importance in the origin of life.

Or

(b) Define abiogenesis.

12. (a) Write the discontinuous distribution of closely related animals.

Or

(b) Describe the Darwin's finches.

13. (a) Write the account on nature of variation.

Or

(b) Explain premating mechanism of geographic isolation.

14. (a) Discuss the following (i) Bradytelic evolution (ii) Tachytelic evolution.

Or

(b) Describe the mechanism of Macroevolution.

15. (a) Write the history of human evolution.

Or

(b) Write the following (i) Place of origin of man (ii) Time of origin of man.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe Stanley millers experiment and explain how does it prove the biochemical theory of origin of life.

Or

(b) Differentiate between coacervates and microspheres.

17. (a) What is organic evolution? Describe the evidences of organic evolution from comparative morphology and anatomy.

Or

(b) Discuss evidences from embryology in favour of organic evolution.

18. (a) State Hardy Weinberg's law of equilibrium. Discuss its salient features.

Or

(b) Discuss genetic basis of random genetic drift.

19. (a) Illustrate mechanism of Mega evolution and their special features.

Or

(b) Differentiate between micro and macro evolution.

20. (a) Write the morphological similarities and differences between man and apes.

Or

(b) Describe the *Australopithecus* and their characteristic features.

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