

FOR THE CANDIDATES ADMITTED  
DURING THE ACADEMIC YEAR 2020 ONLY)

20UZY612

REG.NO

NGM COLLEGE (AUTONOMOUS) POLLACHI  
END-OF-SEMESTER EXAMINATIONS: MAY-2023

B. Sc.-ZOOLOGY  
VI SEMESTER

MAXIMUM MARKS: 70  
TIME: 3 HOURS

PART III  
ECOLOGY AND EVOLUTION

SECTION – A (10 X1 = 10 MARKS)  
ANSWER THE FOLLOWING QUESTIONS  
MULTIPLE CHOICE QUESTIONS (K1)

1. The quantity of the abiotic components present in the ecosystem is known as \_\_\_\_\_  
(a) Standing stage (b) Reserve nutrient  
(c) Standing crop (d) None of these
2. In Commensalism, the type of interaction is categorized by the effect  
(a) 0, 0 (b) +, 0 (c) +, + (d) +, -
3. The theory of biogenesis was proposed by \_\_\_\_\_  
(a) Father Saurez (b) Henry Charlton Bastian  
(c) Louis Pasteur (d) Van Helmont
4. Which is not a vestigial organ in man?  
(a) Muscles of external ear (b) Nictitating membrane  
(c) Vermiform appendix in man (d) Molar teeth
5. Theory of natural selection is based on the \_\_\_\_\_  
(a) Use and disuse  
(b) Inheritance of acquired characters  
(c) Struggle of existence and survival of the fittest  
(d) Mutations.

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Name the types of soil erosion?
7. What is the rate of natality?
8. Write a short note on geological time scale.
9. Give one example of an organism that acts as a connecting link between reptiles and aves.
10. State theory of Lamarckism.

**SECTION – B****(5 X 4 = 20 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)**

11. a) Describe any four properties of water.  
(OR)  
b) Explain thermal stratification.
12. a) With a neat sketch, give a brief account nitrogen cycle.  
(OR)  
b) Write a note on mutualism.
13. a) What are the stages in chemical evolution.  
(OR)  
b) Illustrate of Urey and Miller experiment with a diagram.
14. a) With suitable example, explain a Homologous structure.  
(OR)  
b) Write about paleontological evidences of evolution with an example.
15. a) Interpret the role of overproduction in evolution.  
(OR)  
b) Elaborate the major principles of Lamarckism.

**SECTION – C****(4 X 10 = 40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS.****(16TH QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Q.NO: 17 TO 21 )****(K4) OR (K5)**

16. Demonstrate the process of biochemical origin of life.
17. Describe the biological effects of light on plants and animals.
18. Outline the physiological changes that occur during the space travel in detail.
19. How the dating of fossils is done? Mention a note on significance of fossil study.
20. State recapitulation theory.
21. Give an account on evolution of man and substantiate it with an example.

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