

Total Pages—5

UG/II/ZOOL/H/III/17(Old)

2017

ZOOLOGY

[Honours]

PAPER –III

Full Marks : 90

Time : 4 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

[OLD SYLLABUS]

GROUP – A

Answer any two questions of the following : 15 × 2

- 1. (a) Discuss various modes of host defense mechanism exhibited during host-parasite interaction.**

(Turn Over)

- (b) Define Innate and acquired immunity.
- (c) State the role of macrophage in acquired immune system. 8 + 4 + 3
2. (a) What is conservation ? State the difference between in-situ and ex-situ conservation. Describe the present status of tiger conservation in India.
- (b) What are the criteria for declaring an eco-zone as to be a "Biodiversity Hot Spot" ? Name the hot spot in India. (2 + 4 + 4) + (3 + 2)
3. (a) Define symbiosis and commensalism.
- (b) Describe the mosquito cycle of the *Plasmodium* sp. with a neat labelled diagram.
- (c) Discuss the pathogenicity and control of filariasis. 4 + 3 + 4 + 4
4. Define ecological niche. Explain with a suitable experiment what would happen if two species occupy the same niche.

What are Ecological Equivalent and Ecotypes ? 2 + 5 + 4 + 4

5. (a) Explain fixed action pattern with sample.
(b) Discuss innate and learned behaviour with examples.
(c) Define hypervolume niche with diagram. 6 + 4 + 5

GROUP – B

Answer any five questions of the following : 8×5

6. Illustrate antigen-antibody interaction. 8
7. Describe the life cycle of echinococcus granulosus with neat diagram. 8
8. Explain circadian rhythm with example. 8
9. What is vassination ? Describe various types of vaccines. 2 + 6
10. Mention the significance of the study of bioecology of mosquitoes. 8

11. Name the causative organisms of cholera and shigellosis. State pathogenicity of amoebiasis. 2 + 6
12. Classify microbes based on DNA-DNA hybridization. 8
13. Define biodiversity. State the importance of biodiversity in human society. What is meant by megadiversity countries ? 2 + 4 + 2
14. Distinguish between ecosystem and ecological community. Define autecology and synecology. 4 + 4

GROUP -- C

Answer any five questions of the following : 4 × 5

15. Classify with example various types of zoonosis.
16. Provide scientific names of four microbes used in dairy biotechnology.
17. Give an outline procedure of gel diffusion technique.

(5)

18. Highlight the drawback of existing wildlife protection Act.
 19. Explain different stages of development in ecological succession.
 20. How does B-cell T-cell cooperation operate ?
 21. Differentiate sanctuary from national park.
 22. Add a note on the social ecology.
 23. What are J-shaped and S-shaped growth curve ?
-