2017

ZOOLOGY

[Honours]

PAPER – IV

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*) State the features of Normal distribution.

name any two statistical tests employed for judging compliance of biological data to normal distribution.

(*b*) In a study with insect abundance an investigator collected the following insects from 10 light traps during monsoon and autumn.

Monsoon	27	39	21	51	47	23	29	19	21	24
Autumn	12	23	19	23	23	17	24	11	16	18

Examine with the help of a suitable test of significance whether these is a variation in the insect abundance during two reasons (Given $t_{0.05(18)} = 2.101$)

(*c*) Discuss about the properties of mean.

$$(4 + 2) + 6 + 3$$

2. Distinguish between male prawn and a female prawn. Discuss briefly the method of brakish water prawn culture adopted in India. Give a note on different diseases and their control measures of prawn.

$$2 + 8 + 5$$

3. Discuss the major processes that contribute to air pollution. Explain the phenomenon of "Ozone hole" and the consequences of it. Write down the harmful effect of air pollution on human health.

$5 + 5 + 5$

4. Describe in brief about life history, nature of damage caused and control of a stored grain pest with diagram.

$8 + 3 + 4$

5. Answer any *three* of the following : 5×3

   (a) Coccidiosis in poultry birds

   (b) Extraction of silk

   (c) Bandh breeding

   (d) Eutrophication

   (e) Minamata disease.

GROUP – B

Answer any **five** questions of the following : 8×5

6. In a given age group, the mean systolic blood pressure is 85 and the variance is 100. What probability the mean of a random sample of 25 will be greater than 87 ?

8

7. Describe about the causative agents, symptoms and control measures of two helminthic diseases of fishes growing in ponds. 8

8. What is greenhouse effect ? State its impact in the environment. 3 + 5

9. Explain correlation and regression. What is scatter diagram ? 6 + 2

10. What is 'Mortality of fish' ? Write note on epizootic ulcerative disease of fish. 2 + 6

11. What do you mean by "Economic threshold level" and "Economic injury level". Explain with proper illustration(s). State their role in insect control. 2 + 4 + 2

12. Write a note on application of Mohua oil cake in pond management system and post stocking management of a nursery pond. 4 + 4

13. Name the natural enemies and diseases of silk worm. Describe the measures usually taken to control these. 4 + 4

14. Write notes on :   4 + 4

   (*i*) Biomagnification

   (*ii*) Bhopal gas disaster.

GROUP – C

Answer any **five** questions of the following : 4 × 5

15. Differentiate between pollutants and toxicants with example.   4

16. Mention the extent of damage caused by Sitophilus and their control measures.   2 + 2

17. Write a note on Arsenic pollution.   4

18. Give a brief account on internet with special reference to its use in information collection.   4

19. What is propils ? State its use in bee colony ? 1 + 3

20. What is culling ? Write its significance.   1 + 3

21. Give a brief idea about 'Dairy management practices'.   4

22. Find out the standard deviation of IQ scores of five monkeys in a certain test.

IQ Scores : 7, 2, 5, 3, 15.   4

23. Comment on the advantages and disadvantages of biological pest control.   4

24. Write a note on use of hormones in pisciculture.   4

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