

2022

ZOOLOGY (Honours)

Paper Code : ZOOL-H-DSE-3 (A/B)

**(Animal Behaviour and Chronobiology/Toxicology,
Environmental Biology and Public Health)**

(CBCS)

Full Marks: 25

Time: Two hours

The figure in the margin indicates full marks.

Candidates are required to give answers

*(by selecting either DSE-3A: Animal Behaviour and Chronobiology
Or DSE-3B: Toxicology, Environmental Biology and Public Health)
with their own words as far as practicable.*

DSE 3A: Animal Behaviour and Chronobiology

1. Answer any *eight* questions :

$\frac{1}{2} \times 8 = 4$

- a) A chick pecking at the red spot on the mother's beak is an example of learning behavior. (True/False)
- b) Name the ethologist who gave the famous four questions of causation, development, survival value, and evolution.
- c) Asian openbill stork is an example of migratory bird. (True/False)
- d) In honey bee colony worker bees arises from fertilized egg. (True/False)
- e) In Sea horse, males undergo pregnancy rather than females. (True/False)
- f) In Hamilton's rule, 'r' represents _____. (Fill in the blank)
- g) Who is known as 'Birdman of India'?
- h) The decrease in response to repeated or continuous stimulation is called _____. (Fill in the blank)
- i) Chemicals that are synthesized by one organism and that affect the behavior of another member of the same species are called _____. (Fill in the blank)
- j) The difference in form between male and female of the same species is called _____. (Fill in the blank)
- k) Spinning of web by spiders is an example of _____ behavior. (Fill in the blank)
- l) Reflex actions are controlled by _____. (brain/ spinal cord)

2. Answer any *two* questions :

$2\frac{1}{2} \times 2 = 5$

- a) Explain FAP with suitable example.
- b) Give a brief account of imprinting.
- c) Write a short note on Kinesis.
- d) What is altruism? Give an example.

$1\frac{1}{2} + 1$

3. Answer any *four* questions : 4×4=16

- a) Write a note on waggle dance language of honey bee.
- b) Discuss the different types of fish migration.
- c) What is parental care? Briefly discuss the parental care in amphibians. 1+3
- d) Explain classical conditioning with an example. State the laws of classical conditioning. 2+2
- e) How instinctive behavior is different from learned behavior?
- f) 'Males are more parental compared to females in fish'. Explain.
- g) Write a short note on circadian rhythm.

DSE 3B: Toxicology, Environmental Biology and Public Health

1. Answer any *eight* questions : $\frac{1}{2} \times 8 = 4$

- a) PAN is an example of secondary pollutant. (True/False)
- b) Which type of toxicity can occur due to single exposure?
- c) The most common target organ of toxicity is CNS. (True/ False)
- d) Tuberculosis is caused by _____. (Fill in the blank)
- e) Expand NOAEL.
- f) 'Black foot' disease is caused by _____. (Fill in the blank)
- g) Which toxic gas was responsible for Bhopal gas tragedy?
- h) Give an example of ionizing radiation.
- i) Typhoid is a viral disease. (True/False)
- j) Which metal is responsible for Itai-Itai disease?
- k) CO₂ participate in the formation of photochemical smog. (True/ False)
- l) The intensity of sound is usually measured in _____. (Fill in the blank)

2. Answer any *two* questions : $2\frac{1}{2} \times 2 = 5$

- a) Write a short note on biomagnification.
- b) How BOD is different from COD?
- c) Write briefly on xenobiotic.
- d) Write a short note on Minamata disease.

3. Answer any *four* questions : 4×4=16

- a) Write the cause, symptoms and control measures of cholera. 1+1+2
- b) Classify pesticides on the basis of mode of action.

(3)

c) Give an account of global warming.

d) Give a brief account of acid rain.

e) What do you mean by LD₅₀ and LC₅₀?

2+2=4

f) State the sources and effects of air pollution.

g) State the causes and effects of ozone layer depletion.
