



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours Part-III Examination, 2020

ZOOLOGY

PAPER-ZOOA-VIII

Time Allotted: 2 Hours

Full Marks: 50

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer any **five** questions from the following: 2×5 = 10
- (a) Define Pathogenicity.
 - (b) Differentiate between El Nino and La Nino.
 - (c) Define placenta.
 - (d) What is exflagellation?
 - (e) What is xenobiotics?
 - (f) Define IPM.
 - (g) What do you mean by fate map?
 - (h) Define secondary pollutants.
 - (i) What is blackfoot disease?
 - (j) What causes the lustre of silk thread?
 - (k) Define 'Mother of Pearl'.
 - (l) Name two indigenous cattle breeds.
 - (m) What is bee venom?
 - (n) What is meant by definitive host? Give example.
 - (o) Name two dust mite allergen.
 - (p) Distinguish between 'phunki' and 'ari' lac.
 - (q) What is bee language?
 - (r) Name two hormones used for induced breeding in fish.
 - (s) Define poultry. Write two scientific names of poultry bird.
 - (t) What do you mean by photochemical smog?
 - (u) Why do we study LD₅₀?
2. Answer any **two** questions from the following: 5×2 = 10
- (a) What is Spemann's organizer? State the acrosomal reaction in sea urchin. 2+3
 - (b) What is Hensen's node? Comment on different types of cell movement during organogenesis. 1+4
 - (c) What is totipotency? Give two examples of totipotent cells. How does it differ from pluripotency? 1+2+2
 - (d) Differentiate between holoblastic and meroblastic cleavage. What is the role of yolk material in cleavage? 3+2
 - (e) Distinguish primitive streak and primitive knot in chick embryo. Describe the migration of cells through Primitive Streak. 2+3
 - (f) Short notes: 2½+2½
 - (i) Hox gene
 - (ii) Fate map in chick.

3. Answer any **two** questions from the following: 5×2 = 10
- (a) What are ecotoxicology and adulteration of food? Write the significance of invitro toxicity. 2+2+1
- (b) Differentiate between BOD and COD. Name a RAMSAR site in West Bengal. 4+1
- (c) What is decibel? State the causes, hazards and remedies of sound pollution. 1+1 $\frac{1}{2}$ +1+1 $\frac{1}{2}$
- (d) Explain dosage-response relationship. Elaborate MATC and NOAEL. 3+2
- (e) Short notes: (any **two**) 2 $\frac{1}{2}$ +2 $\frac{1}{2}$
- (i) Minamata disease
- (ii) Ozone-hole
- (iii) Detoxication mechanism of drinking water.
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4. Answer any **two** questions from the following: 5×2 = 10
- (a) Differentiate between ticks and mites. Elaborate symptoms of any two tick borne diseases in human. 2+3
- (b) Mention the serotypes of classical dengue fever. Write the control measures. 2+3
- (c) Describe the sexual stage of lifecycle of *Plasmodium vivax* with suitable diagram. 3+2
- (d) Write short notes on: 2 $\frac{1}{2}$ +2 $\frac{1}{2}$
- (i) Nocturnal periodicity in microfilaria
- (ii) Cellular changes due to parasitic infection.
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5. Answer any **two** questions from the following: 5×2 = 10
- (a) What is estuary? Mention any one shell fish species found in estuary. Differentiate between penaeid and non-penaeid shrimp. 1+1+3
- (b) Write the composition of silk. Differentiate between multivoltine and bivoltine races. What are Harold's gland and Ishiwata's gland? 2+2+1
- (c) Explain the deep litter system of poultry farming. Write one advantage and one disadvantage of battery cage-system. 3+2
- (d) Describe Langstroth box and its advantages. Write the names of causative agents of one bacterial and one fungal disease of honeybee. 4+1
- (e) Describe induced breeding. Mention the advantages of it. Write two names of major carp and minor carp (Scientific names). 2+2+1
- (f) What is pasteurization? Give one advantage of it. Write the names of two mediterranean and two American breed of cow. 1+1+1 $\frac{1}{2}$ +1 $\frac{1}{2}$
- (g) How castes are formed in a bee colony? Mention the duties of worker bee. What is 'bee dance'? 2+2+1
- (h) Name the breed where you can get Pashmina. Name one indigenous breed of goat. Write down its characteristic feature. 1+1+3
- (i) Write short notes on: (any **two**) 2 $\frac{1}{2}$ +2 $\frac{1}{2}$
- (A) Polyculture
- (B) Breeds of duck
- (C) Chandraki.
- (j) Write a brief note on problems related to wild prawn seed collections in Sunderbans. 5

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