



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2020

(Under CBCS Pattern)

Semester - V

Subject: ZOOLOGY

Paper: DSE1T & DSE1P

Full Marks : 60

Time : 3 Hours

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

The figures in the margin indicate full marks.

ANIMAL BEHAVIOR AND CHRONOBIOLOGY

Group - A

THEORY

Answer any *two* questions :

20×2=40

1. (a) Define Ethology.
- (b) What is circadian rhythm ?
- (c) What is non-photoc zeitgeber ?
- (d) Define photoperiodism.

- (e) What is biological clock ?
- (f) What is eusocialism ? Give example.
- (g) What is masking ?
- (h) What is intra-sexual selection ? 8×2.5=20
2. (a) What is altruism ? Discuss foraging in honey bees. 5+5
- (b) Write down the advantages of waggle dance. What is sexual dimorphism ? 5+5
- (c) What is intersexual selection ? Give some examples of sexual conflict in parental care. 1+3
- (d) What is biological oscillation ? What is classical conditioning ? What is pheromone ? 1+2+1
4. (a) (i) Write about tidal-rhythms and lunar-rhythms. 2
- (ii) How seasonal reproduction is regulated in vertebrates ? Discuss the role of melatonin in animals. 5+3
- (b) (i) How do honey bees locate food source with relation to solar position. 4
- (ii) Describe Pavlovian experiment on classical conditioning. What is imprinting ? 5+1

Group - B

PRACTICAL

Answer any *one* questions : 20×1=20

1. Describe different types of bird nest and comment on the nesting habit.
 2. Comment on the geotaxis behavior in earthworms.
 3. Comment on the phototaxis behavior of insect larvae. How wood-lice behave in humid conditions.
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FISH AND FISHERIES

Group - A

THEORY

Answer any *two* questions :

20×2=40

1. What are the various types of feeding habitat of fishes ? Classify fishes on the basis of feeding habits.
2. Explain the structure of gills in fishes with schematic diagram. Discuss the mechanism of gaseous exchange in fishes.
3. Discuss various environmental factors influencing the seasonal variations in fish catches in Bay of Bengal ?
4. Describe various fishing crafts and gears used as fishing techniques.

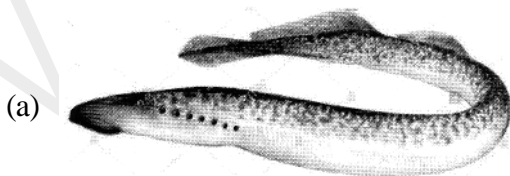
Group - B

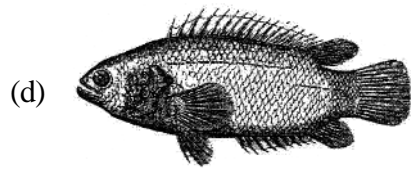
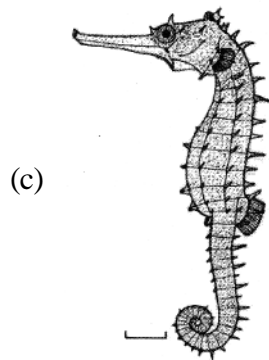
PRACTICAL

Answer any *one* questions :

20×1=20

1. Write scientific name, systematic position and identifying characters of the following specimens.





2. Write the working principle and procedure of estimation of pH of water.
 3. Write notes on crafts and gear in fishery.
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REPRODUCTIVE BIOLOGY

Group - A

THEORY

Answer any *two* questions :

20×2=40

1. Enumerate the histological structure of ovary in human.
2. Describe in brief the process of spermatogenesis in human.
3. State the mechanism of action of steroid hormones.
4. Write the hormonal regulation in female during menstrual cycle.

Group - B

PRACTICAL

Answer any *one* questions :

20×1=20

1. Describe the breeding techniques and care for experimental animals in animal house.
 2. State the principle of tissue fixation and process of embedding.
 3. Write the identifying characteristics of any two of the following
 - (a) Mammalian testis
 - (b) Mammalian uterus
 - (c) Mammalian ovary
 - (d) Epididymis in male
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