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VI Semester B.Sc. (Theory) Degree Examination, August/September - 2023

ZOOLOGY

Developmental Biology and Organic Evolution
(CBCS Scheme Freshers and Repeaters 2020-21 Onwards)

Paper : VII**Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates:**

1. Draw diagram wherever necessary.
2. Answer should be in English.

PART-A**I. Answer the following in one word or one sentence.****(10×1=10)**

1. State epigenetic theory.
2. What is a regulative egg?
3. Define holoblastic cleavage.
4. Define cell lineage.
5. What is archenteron?
6. Define metamorphosis.
7. What is epimorphosis?
8. Define gene frequency.
9. What is allopatric speciation.
10. What are moulds.

PART - B**II. Answer any five of the following.****(5×3=15)**

11. Mention the significance of cleidoic egg.
12. What is viviparity? Give an example.
13. Draw a diagram showing the fate map of chick.

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14. Describe chorio - allantoic placenta with an example.
15. What is thelytoky? Explain with an example.
16. State Hardy - Weinberg's law and mention its significance.
17. Write a note on fission track method of fossil dating.

PART - C

III. Answer any **five** of the following questions.

(5×5=25)

18. Classify the eggs based on amount of yolk with an example each.
19. With reference to polyspermy explain fast block and slow block.
20. With a neat labelled diagram. Explain blastula in frog.
21. Write a note on chemistry of organizer.
22. Explain the formation, structure and function of chorion in chick.
23. Give an account on post - zygotic isolating mechanisms.
24. Explain analogous organs as evidence for evolution with an example.

PART - D

IV. Answer any **two** of the following.

(2×10=20)

25. Explain the menstrual cycle and its hormonal regulation.
 26. Describe gastrulation in amphioxus with neat labelled diagram.
 27. Explain histological types of placenta with example.
 28. Explain the salient features of
 - a. Neanderthal man.
 - b. Cromagnon man.
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VI Semester B.Sc. Degree Examination, August/September - 2023

ZOOLOGY

Animal Physiology and Techniques in Biology
(CBCS Scheme Fresher and Repeater 2020-21 onwards)

Paper : VIII**Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates :**

Draw neat labelled diagrams wherever necessary.

Answer should be completely in English.

PART - A**I. Answer ALL the questions in ONE word or ONE sentence.****(10×1=10)**

1. Expand GIP hormone.
2. Name the metallic ion present in haemocyanin.
3. Give an example for uricotelism.
4. What is the function of ear ossicles?
5. Name the birth hormone.
6. What is anaemia?
7. Give an example for catadromous migratory fish.
8. Mention the role of alcohol in microtechnique.
9. Define fractionation.
10. What is resolution?

PART - B**II. Answer any FIVE of the following.****(5×3=15)**

11. Write a note on Fuld and spiro's theory of blood clotting.
12. Explain Bohr's effect?
13. Write a note on neurotransmitters.
14. What is negative feedback mechanism? Give an example.
15. List any three causes of renal failure.
16. Give the applications of Electrophoresis.
17. What is autoradiography? Mention any two applications.

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PART - C

III. Answer any **FIVE** of the following.

(5×5=25)

18. Explain symbiotic digestion in Ruminants.
19. Explain oxygen transport in blood.
20. Explain synoptic transmission of nerve impulse.
21. Discuss the hormonal control of metamorphosis in insects.
22. Give the cause, symptoms and prevention of diabetes mellitus.
23. Write the principle and applications of immunoassay.
24. What is endoscopy? Mention it's applications.

PART - D

IV. Answer any **TWO** of the following.

(2×10=20)

25. Explain the sliding filament theory of muscle contraction.
 26. Give an account of the anterior pituitary gland hormones and mention their functions.
 27. With reference to thermoregulation, explain the role of hypothalamus.
 28. Explain:
 - a) Ornithine cycle
 - b) Fluorescent microscopy
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