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Reg. No. | | | | | | | | |

VI Semester B.Sc. Degree Examination, September/October - 2022

ZOOLOGY

Developmental Biology and Organic Evolution

(CBCS Scheme F+R 2020-21 Onwards)

Paper : VII

Time : 3 Hours Maximum Marks : 70

Instructions to Candidates :

1. Draw neat labelled diagrams wherever necessary.
2. Answer should be completely in English.

PART - A

I. Answer the following with ONE word or ONE sentence each. (10 × 1 = 10)

1. What is amphimixis?
2. What is teleolecithal egg?
3. Define radial cleavage.
4. Define metamorphosis
5. Name the foetal membrane in chick that helps in nutrition.
6. Give an example for deciduate placenta.
7. Define regeneration
8. What is gene pool?
9. What is sympatric speciation?
10. What is atavism?

PART - B

II. Answer any FIVE of the following (5× 3 = 15)

11. Explain briefly viviparity with an example.
12. Sketch and label the V.S of blastula of amphioxus.

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13. What are fate maps? Mention any two methods of construction.
14. Explain arhenotoky with an example.
15. What is morphollaxis? Give an example.
16. With reference to speciation explain mutation.
17. What are fossils? Explain casts.

PART - C

III. Answer any FIVE of the following. **(5 × 5 = 25)**

18. Sketch and label the Hen's egg.
19. What is polyspermy. Explain with an examples.
20. Explain the planes of cleavage.
21. Describe the gastrula of frog with a neat labelled diagram.
22. Write a note on yolk sac placenta
23. Homologous organs are evidences of evolution substantiate.
24. List the salient features of Neanderthal Man

PART - D

IV. Answer any TWO of the following. **(2 × 10 = 20)**

25. Explain the mechanism of fertilization.
26. What is cell lineage? Explain with reference to Nereis.
27. Describe the transplantation experiments of spemann and mangold
28. What is isolation? Explain Premating mechanism.

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VI Semester B.Sc. Degree Examination, September/October - 2022

ZOOLOGY

Animal Physiology and Techniques in Biology

(CBCS Scheme F+R 2020-21 Onwards)

Paper : VIII

Time : 3 Hours Maximum Marks : 70

Instructions to Candidates :

1. Answer should be completely in English
2. Draw diagrams wherever necessary.

PART-A

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

1. What are cud - chewing animals called?
2. Which group of animals possess Haemocyanin Pigment?
3. What is 'Sarcomere'?
4. Name the Pigment present in rods.
5. Which disorder is caused by hypothyroidism in man?
6. What are homeothermic animals?
7. Which hormone is responsible for diabetes mellitus?
8. What is differential staining?
9. Expand 'ELISA'.
10. Define 'Endoscopy'.

PART - B

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

11. With reference to Haemoglobin answer the following.
    a) Metallic element
    b) Function
    c) Example.
12. Explain transport of oxygen in blood.
13. What is Ornithine cycle? Where does it occur?
14. Define positive feedback mechanism. Give an example.
15. Mention any three methods of heat loss in homeotherms.
16. List any three applications of TEM.
17. Explain the principle of chromatography.

PART - C

III. Answer any FIVE of the following. **(5 × 5 = 25)**

18. Explain hormonal control of digestive secretion.
19. Define oxygen dissociation curve. Explain any two factors affecting it.
20. Sketch and label ultrastructure of skeletal muscle.
21. Explain 'Haemodialysis'.
22. Write a note on hormonal control of metamorphosis in Amphibia.
23. Explain the principle and applications of centrifugation.
24. Comment on 'Fixation' and 'embedding' in microtechnique.

PART - D

IV. Answer any TWO of the following. **(2 × 10 = 20)**

25. Give a detailed account on axonal transmission of Nerve impulse.
26. Name the hormones secreted by the adrenal gland and mention two functions for each.
27. Explain osmoregulatory mechanisms in migratory fishes.
28. Write short notes on:
    a) Visual cycle
    b) Fractionation.

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VI Semester B.Sc. Degree Examination, September/October - 2022

ZOOLOGY

Comparative Anatomy, Human Anatomy, Cell Biology & Histology

(CBCS Scheme Freshers & Repeaters 2019-20 & onwards)

Paper : IV

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates :

1. Draw labelled diagrams wherever necessary
2. Answers should be completely in English.

PART - A

I. Answer All the questions in One word or One sentence each. **(10 × 1 = 10)**

1. What are swim bladders?
2. Define Venous heart.
3. What type of kidney is found in mammals.
4. Name the structure which connects the cerebral hemispheres in rabbit.
5. What is active immunity?
6. Name the only movable bone of the skull
7. What is pinocytosis?
8. Define apoptosis.
9. Mention the cells present between the thyroid follicles.
10. Name the connective tissue capsule which covers the liver.

PART - B

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

11. Write a note on airsacs in birds.
12. Name the layers of meninges.

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13. Draw a neat labelled diagram of atlas vertebra.
14. List any three functions of golgi complex.
15. With respect to cancer, explain gene therapy.
16. What are leydig cells? Mention the function.
17. Mention the zones of adrenal cortex.

PART - C

III. Answer any FIVE of the following. **(5 × 5 = 25)**

18. Describe the structure of amphibian lung.
19. List any five differences between the brain of fish and frog.
20. Explain the structure of humerus bone.
21. Describe the ultra structure of mitochondria.
22. Write a note on myasthenia gravis.
23. Describe the histology of Islets of langerhans.
24. With a neat labelled diagram, describe the histological structure of a graafian follicle.

PART - D

IV. Answer any TWO of the following. **(2 × 10 = 20)**

25. Trace the evaluationary trends in the development of aortic arches in reptiles and mammals.
26. Explain :
    a) Mesonephric kidney.
    b) Histology of mammalian stomach.
27. Describe the structure of human brain with a neat labelled diagram.
28. Explain
    a) Fluid mosaic model of plasma membrane.
    b) Properties of cancer cells.