B.Sc. Punjab University 2008

Subject: Zoology

Marks: 20

Paper: A

Time: 2 Hrs.

Fort Part II & Part III

Answer the question of Part-II & Part-III on Separate Answer Sheet Provided.

Part-II

Attempt any THREE of the following questions.

4. Write a short note on CYTOSKELETON.

5. Describe the metabolism of ENZYMES.

6. A man with blood group A marries a woman of blood group B. Their child has blood group O. What are the genotypes of these individuals? What other genotype and what frequencies, would you expect in offspring’s of their marriage?

7. Describe DNA replication in Eukaryotes?

8. How does Parasitism differ from Commercialism and Mutualism?

9. Describe Nitrogen cycle?

Part-III

Attempt any ONE of the following questions.

10. What is a GENETIC CODE? Describe its characteristics.

11. Write short notes on (1) Adipose tissue (2) Cartilage (3) Bone (4) Lymph
(Objective Paper)

1. This type of injury is caused by a sharp object.
   - B.B. Bullet
   - Scalpel
   - Knife

2. Which of the following conditions is characterized by swelling and redness of the skin?
   - Malaria
   - Erythroderma
   - Acne

3. Chronic discitis is best treated with:
   - Steroids
   - Antibiotics
   - Physical therapy

4. The mystery of the yen's value explosion can be explained primarily by:
   - A sharp increase in the yen's demand
   - A decrease in the yen's supply
   - An increase in the yen's supply

5. Which method is used to measure the blood flow to the heart?
   - ECG
   - Blood pressure
   - Doppler ultrasound

6. The red blood cells are running through the veins due to:
   - High plasma protein concentration
   - High plasma glucose concentration
   - High plasma calcium concentration

7. Which type of injury is caused by a sharp object?
   - Cut
   - Stab
   - Scratch

8. All birds have extra cells on their feathers that:
   - Attract predators
   - Repel predators
   - Attract mates

9. Which organ is responsible for regulating the body's fluid balance?
   - The liver
   - The kidneys
   - The lungs

10. The opening of the Frozen Tundra during the summer months can be explained by:
    - Permafrost melting
    - Ice melt
    - Snow melt

11. The target area for a study of the formation of antacid is in:
    - The stomach
    - The small intestine
    - The large intestine

12. The result of the study following the above question is:
    - The formation of acid in the stomach
    - The formation of antacid in the stomach
    - The formation of acid in the small intestine

13. The diagram shows:
    - The formation of antacid
    - The formation of acid
    - The digestive process

14. The diagram illustrates:
    - The digestive process in the stomach
    - The formation of antacid in the stomach
    - The absorption of nutrients in the small intestine
4- Write short answer to any 10 of the following questions: (10)

(i) What is coelom?
(ii) Give three diagnostic features of Phylum Saronina.
(iii) What is rhopalium and its functions?
(iv) Describe Nervous system in planaria.
(v) Define and describe Parthenogenesis in Gastrotriches.
(vi) Describe locomotion in Gastropods.
(vii) Describe ingestion of food in cephalopods.
(viii) Describe excretion in Hirudinea (Leeches).
(ix) Describe courtship behavior (display) in chilopods.
(x) What is respiratory tree and its function in Holothuroidea.
(xi) What are three fundamental characteristics of chordates.
(xii) Name the chambers of heart in Amnians.
(xiii) Name the structures (Bones) involved in the formation of shell in turtle.
(xiv) What are atrialia? Birds?
(xv) Give two reptilian and two mammalian characters in Duck-bill Platypus.

5- (a) Describe the role of neuroendocrine glands in Ecdysis (Metamorphosis) in Insects. (5)
(b) What is metamorphosis, describe its different types of Hexapoda along with examples. (5)

OR

(a) Classify the class Amphibian. Describe the characteristics of each order with examples. (5)
(b) Describe Blood circulation and gas exchange in Amphibians. (5)
Cutting and overcutting is not allowed among the questions.

1. a) Pearls are commonly known as b) Water is the common solvent c) At the surface of a crystal d) In a medium of higher density e) In a medium of lower density

2. a) On the rise b) On the fall c) On the level d) On the depression e) On the peak

3. a) Attack b) Defense c) Escape d) Capture e) Communication

For Pearl

Man (Marks)

4. a) Multiple Choice Questions (MCQs) with one correct answer.

5. There are several sound effects associated with various types of human activities.

6. a) Pigmentation b) Respiration c) Excretion d) Digestion e) Elimination

7. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

8. a) Hemoglobin b) Myoglobin c) Cytochrome d) Enzyme e) Hormone

9. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

10. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

For Pearl

Man (Marks)

11. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

12. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

13. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination

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100. a) Photosynthesis b) Respiration c) Excretion d) Digestion e) Elimination
Answer the questions of Part-II & Part-III on Separate Answer Sheet Provided.

(Subj ective Portio n)

Part-II

Attempt any THREE of the following:

4- Write a note on digestion in insects. (4+4+4)
5- Discuss ciliary and flagellar movement in the invertebrates.
6- Give an introduction of GEORECEPTORS.
7- Discuss the temperature-regulation in fishes.
8- What is meant by the following:
   (a) Skin
   (b) Synapse
   (c) Lateral-line System
   (d) Hoof

Part-III

Attempt any ONE question.

9- Describe the vertebrate fore-brain.
10- Briefly describe the development of frog. Give diagrams.