Q.1. Select the best option/answer and fill in the appropriate box on the Answer Sheet. (20)

(i) Chano cysts are found in?
(a) Coelentrate (b) Annelida (c) Porifera
(d) Arthropoda (e) All of these

(ii) House fly is a common insect having ______ legs.
(a) 4 (b) 6 (c) 8 (d) None of these

(iii) Silver fish is included in:
(a) Pisces (b) Arthropoda (c) Annelida (d) None of these

(iv) Number of vertebrae in neck of a giraffe are:
(a) 10 (b) 5 (c) 7 (d) None of these

(v) Flame cell is typical of:
(a) Annelida (b) Chordata (c) Porifera (d) Platyhelminthes
(e) None of these

(vi) Nervous system originates from:
(a) Epidermis (b) Mesodermis (c) Endodermis (d) None of these
(e) All of these

(vii) Mammals are characterized by:
(a) Mammary Glands (b) Hair (c) All of these (d) None of these

(viii) Nucleus is not present in RBC of:
(a) Fish (b) Snake (c) Bird (d) Mammal
(e) None of these

(ix) Scales in fish derive their origin from:
(a) Epidermis (b) Mesodermis (c) Endodermis (d) None of these

(x) Sound in insect is produced through:
(a) Mouth (b) Tracheal movements (c) Wing beat (d) None of these

(xi) Sole of foot in man has _____ location:
(a) Dorsal (b) Ventral (c) lateral (d) None of these

(xii) Coelome in adult mammals is represented by:
(a) Visceral cavity (b) Cavity in brain (c) Both of these (d) None of these

(xiii) The Skeleton in insects is:
(a) Exoskeleton (b) Endoskeleton (c) None of these (d) Both of these
(xiv) Sea horse is included in:
(a) Mammals     (b) Fish     (c) Reptiles   (d) None of these

(xv) Circulatory system is open type in:
(a) Annelida     (b) Insecta   (c) Mammals   (d) None of these

(xvi) The body cavity is regarded as pseudocoele in Nematodes because:
(a) Has ectodermal origin
(b) Not completely lined by Mesodermal epithelium
(c) Has endodermal origin
(d) None of these
(e) All of these

(xvii) True metaneric segmentation is characteristic of:
(a) Molluses     (b) Annelida   (c) Arthropoda (d) None of these

(xviii) Hollow dorsal nervous system is present in:
(a) Amphiexus    (b) Fish      (c) Mammals   (c) None of these
(e) All of these

(xix) Contractile vacuole in protozoa is mainly responsible for:
(a) Excretion    (b) Osmoregulation (c) respiration (d) None of these

(xx) Scorpion is included in:
(a) Insecta      (b) Archnidna  (c) Echinodermata (d) None of these

PART – II

(i) PART-II is to be attempted on the separate Answer Book.
(ii) Attempt ONLY FIVE questions from PART-II, selecting THREE questions from SECTION-I and TWO from SECTION-II. All questions carry EQUAL marks.
(iii) Be precise in your answers and draw labelled diagrams, wherever required.
(iv) Extra attempt of any question or any part of the attempted question will not be considered.

SECTION – I

Q.2. (a) “A protozoan cell is not equal to a cell of multicellular organism”. Discuss the statement. (8)
(b) “Sponges are at colonial level of cellular organization”. Justify the statement. (8)

Q.3. (a) How will you differentiate between corals and coral reefs? How are different types of coral reefs formed? (3+7)
(b) Discuss parasite adaptation with special reference to platyhelminthes. (6)

Q.4. (a) Define metameric segmentation. Explain with reference to Annelida. (2+6)
(b) Discuss metamorphosis with reference to insects. (8)

Q.5. Write short notes on:
(i) Echinoderm affinity   (ii) Shell in Mollusca  (iii) Importance of Nematodes  
(iv) Polymorphism – coelentrata

SECTION – II

Q.6. (a) Discuss Amphioxus as a complete chordate. (8)
(b) “Hemichordates have both chordate and non-chordate character”. Justify. (8)

Q.7. (a) Discuss evolution of heart in different chordate groups. (8)
(b) Give a brief account of embryonic membranes. (8)

Q.8. (a) Define biological migration. Discuss the phenomenon with reference to birds. (8)
(b) “Birds are said to be glorified reptiles”. Justify the statement. (8)

Q.9. Write short notes on:
(a) Scales in Fishes   (b) Exoskeleton in mammals
(c) Feathers in Birds (d) Desert adaptations in Reptiles

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