

ZOOLOGY, PAPER-I

**FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION FOR
RECRUITMENT TO POSTS IN BPS-17 UNDER
THE FEDERAL GOVERNMENT, 2009**

S.No.	
R.No.	

ZOOLOGY, PAPER-I

TIME ALLOWED:	(PART-I) 30 MINUTES	MAXIMUM MARKS:20
	(PART-II) 2 HOURS & 30 MINUTES	MAXIMUM MARKS:80

- NOTE:** (i) First attempt **PART-I (MCQ)** on separate **Answer Sheet** which shall be taken back after **30 minutes**.
(ii) **Overwriting/cutting of the options/answers will not be given credit.**

PART – I (MCQ)
(COMPULSORY)

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

- (i) What is the function of contractile vacuole?
(a) respiration (b) reproduction (c) osmoregulation
(d) digestion (e) None of these
- (ii) Specules are secreted by special mesenchymal amoebocytes called:
(a) scleroblasts (b) microscleres (c) myocytes
(d) collencytes (e) None of these
- (iii) True nerve cells or ganglion cells occur for the first time in:
(a) Protozoa (b) Porifera (c) Coelenterata
(d) Annelida (e) None of these
- (iv) The process by which an organism can replace its lost or damaged body parts is called:
(a) reformation (b) regeneration (c) reclamation
(d) reconstruction (e) None of these
- (v) Nematocysts are found in:
(a) Protozoa (b) Porifera (c) Annelida
(d) Mollusca (e) None of these
- (vi) In polychaetes the locomotory organ is:
(a) pseudopodium (b) neuropodium (c) notopodium
(d) parapodium (e) None of these
- (vii) Worms belonging to phylum platyhelminthes are commonly known as:
(a) round worms (b) ring worms (c) segmented worms
(d) earth worms (e) None of these
- (viii) Bipinnaria is a larval form of:
(a) Coelenterate (b) Polychaeta (c) Echinodermata
(d) Cestoda (e) None of these
- (ix) Closed type of circulatory system is found in:
(a) Platyhelminthes (b) Annelida (c) Porifera
(d) Arthropoda (e) None of these
- (x) The two common mosquito genera, Anopheles and Culex, can be easily identified by their:
(a) colour (b) flying speed (c) size
(d) sitting posture (e) None of these
- (xi) Sweat glands are epidermal glands and are found in:
(a) all birds (b) reptiles and mammals (c) mammals only
(d) birds and reptiles (e) None of these
- (xii) Sternum is absent in:
(a) mammals (b) birds (c) amphibians
(d) fishes (e) None of these
- (xiii) Amphioxus belongs to:
(a) Cephalochordata (b) Hemichordata (c) Urochordata
(d) Cyclostomata (e) None of these

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- (xiv) The urochordates or tunicates are marine animals, commonly known as:
 - (a) Sea cucumber (b) Sea squirts (c) Sea urchin
 - (d) Sea star (e) None of these
- (xv) Optic lobes are found in:
 - (a) fore brain (b) mid brain (c) hind brain
 - (d) medulla (e) None of these
- (xvi) The number of cervical vertebrae in most mammals is:
 - (a) two (b) four (c) nine
 - (d) eleven (e) None of these
- (xvii) Lymph hearts are absent in:
 - (a) fishes (b) amphibians (c) reptiles
 - (d) mammals (e) None of these
- (xviii) The lymph capillaries coming from intestinal villi are called:
 - (a) veins (b) lymph nodes (c) lacteals
 - (d) lymph duct (e) None of these
- (xix) How many caudal vertebrae are found in man?
 - (a) 1 – 2 (b) 3 – 4 (c) 5 – 6
 - (d) 7 – 8 (e) None of these
- (xx) The inner membrane of the two foetal membranes in reptiles, birds and mammals is called:
 - (a) chorion (b) amnion (c) peritoneum
 - (d) pericardium (e) None of these

PART – II

NOTE:	<p>(i) PART-II is to be attempted on the separate Answer Book.</p> <p>(ii) Attempt ONLY FOUR questions from PART-II, selecting at least TWO questions from EACH SECTION. All questions carry EQUAL marks.</p> <p>(iii) Extra attempt of any question or any part of the attempted question will not be considered.</p>
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SECTION – I

- Q.2.** (a) Write an essay on “Protozoa and diseases”. (10)
- (b) What are coral reefs? Give an account of the various forms of coral reefs. (6)
- (c) Coelenterates show some resemblances with Porifera. Discuss briefly. (4)
- Q.3.** (a) Give an account of the canal system in sponges. (10)
- (b) What is adaptation? Briefly discuss parasitic adaptations in platyhelminthes. (6)
- (c) Define the following terms: (4)
 - (i) Polymorphism (ii) Metamerism (iii) Parasitism (iv) Osmoregulation
- Q.4.** (a) Describe the water vascular system of Echinodermata. (10)
- (b) Give an account of human diseases caused by nematodes. (7)
- (c) What is conjugation? Briefly discuss its significance. (3)
- Q.5.** Write short notes on: (20)
 - (i) Torsion in gastropods (ii) Flame cells (iii) Spicules (iv) Coelom

SECTION – II

- Q.6.** (a) Write an essay on “Flight adaptations of birds”. (10)
- (b) What is cleavage? Describe different types of cleavages, with example, found in chordata. (6)
- (c) What are the functions of blood? (4)
- Q.7.** (a) What is placenta? Give classification of placenta in mammals according to the mode of implantation. (8)
- (b) Describe various types of heart found in vertebrates. (8)
- (c) Give the classification of vertebrate eggs according to the quantity of yolk they contain. (4)
- Q.8.** Write short notes on: (5+5+5+5)
 - (i) Uriniferous tubule of a mammal (ii) Neuron
 - (iii) Functions of the skin (iv) Structure of the bone
