

FEDERAL PUBLIC SERVICE COMMISSION



COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT, 2011

Roll Number

ZOOLOGY, PAPER-I

TIME ALLOWED:	(PART-I MCQs) 30 MINUTES	MAXIMUM MARKS: 20
THREE HOURS	(PART-II) 2 HOURS & 30 MINUTES	MAXIMUM MARKS: 80
NOTE: (i) First attempt PART-I (MCQs) 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 MCQs) (COMPULSORY)

- Q.1.** Select the best option/answer and fill in the **appropriate box** on the **Answer Sheet.** (1 x 20=20)
- (i) The disease causing protozoan is:
 (a) Amoeba (b) Paramecium (c) Stentor (d) Trypanosoma (e) None of these
- (ii) Binucleate protozoan is:
 (a) Mastigo-amoeba (b) Toxoplasma (c) Didymium (d) Trichonympha (e) None of these
- (iii) Spicules in sponges are secreted by cells called:
 (a) Chromocytes (b) Thesocytes (c) Scleroblasts (d) Spongoblast (e) None of these
- (iv) Which one of the following coelenterate is also called Portuguese-man of war:
 (a) Hydra (b) Velella (c) Obelia (d) Physalia (e) None of these
- (v) Pseudocoelomate animals are:
 (a) Coelenterates (b) Nematodes (c) Annelids (d) Arthropods (e) None of these
- (vi) Earth worm belongs to:
 (a) Phylum platyhelminthes (b) Nematode (c) Mollusca (d) Arthropoda (e) None of these
- (vii) The number of arms in octopus is:
 (a) Four (b) Six (c) Eight (d) Ten (e) None of these
- (viii) The excretor organ of cockroach is:
 (a) Flame cell (b) Nephridia (c) Coxal gland (d) Green gland (e) None of these
- (ix) The compound eyes are present in:
 (a) Cuttle fish (b) Sea urchin (c) Sea mouse (d) Honey bee (e) None of these
- (x) Balanoglossus belongs to:
 (a) Hemichordata (b) Cephalochordata (c) Urochordata (d) Craniata (e) None of these
- (xi) The extinct vertebrates are:
 (a) Elasmobranchi (b) Placodermi (c) Osteichthyes (d) All of these (e) None of these
- (xii) The type of scales found in shark is:
 (a) Placoid scale (b) Ganoid scale (c) Cosmoid scale (d) Cycloid scale (e) None of these
- (xiii) All of the following animals have three chamber heart except:
 (a) Uromastix (b) Snake (c) Wall lizard (d) Crocodile (e) None of these
- (xiv) An animal group having radially symmetrical adults but bilaterally larvae are:
 (a) Annelids (b) Echinoderm (c) Chordates (d) All of these (e) None of these

ZOOLOGY, PAPER-I

- (xv) Which one of the following is not an extra embryonic membranes?
(a) Pleura (b) Amnion (c) Chorion (d) Allantois (e) None of these
- (xvi) The egg laying mammals such as Duck billed platypus and spiny anteater are found in:
(a) Asia (b) North America (c) South America (d) Australia (e) None of these
- (xvii) Renal portal system is absent in:
(a) Mammals (b) Fish (c) Amphibian (d) Reptiles (e) None of these
- (xviii) Swim bladder is present in:
(a) Amphibia (b) Giant turtle (c) Sea snake (d) All of these (e) None of these
- (xix) Diencephalon is a part of:
(a) Circulatory system (b) Excretory system
(c) Nervous system (d) Respiratory system (e) None of these
- (xx) Microlecithal egg is found in:
(a) Reptiles (b) Birds (c) Amphibian (d) All of these (e) None of these

PART-II

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

SECTION - I

- Q.2. (a)** Describe reproduction in paramecium. **(10)**
(b) Explain the different kinds of spicules in sponges. **(10)**
- Q.3. (a)** Discuss polymorphism in coelenterates. **(10)**
(b) Explain the life cycle of Obelia. **(10)**
- Q.4. (a)** What are platyhelminths. **(10)**
(b) Describe the life cycle of any medically important platyhelminth. **(10)**
- Q.5. Write short notes on:** **(5 x 4 = 20)**
(a) Metamerism **(b)** Mouth parts of insects.
(c) Foot in Mollusca **(d)** Larvae of Echinoderm.

SECTION – II

- Q.6. (a)** Give an account of arterial system of pigeon. **(10)**
(b) Explain hepatic portal system. **(10)**
- Q.7. (a)** What is Gastrulation? Describe gastrulation in frog. **(10)**
(b) Write an essay on parental care in Mammals. **(10)**
- Q.8. Write short notes on the following:** **(5 x 4 = 20)**

(a) Hairs in Mammals **(b)** Development of bone
(c) Fish migration **(d)** Egg types.

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COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT, 2011

Roll Number

ZOOLOGY, PAPER-II

TIME ALLOWED:	(PART-I MCQs)	30 MINUTES	MAXIMUM MARKS: 20
THREE HOURS	(PART-II)	2 HOURS & 30 MINUTES	MAXIMUM MARKS: 80
NOTE: (i) First attempt PART-I (MCQs) on separate Answer Sheet which shall be taken back after 30 minutes.			
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(PART-I MCQs) (COMPULSORY)

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

(i) Which one of the enzyme is present in saliva:

- (a) Tyaline (b) Pepsin (c) Enterokinase (d) Lipase (e) None of these

(ii) Which one of the following act as Secondary Messenger after hormonal action on target cells:

- (a) ATP (b) CTP (c) CAMP (d) ADP (e) None of these

(iii) Besides nucleus of cell, which organelles also contain DNA?

- (a) Golgibodies (b) Lysosome (c) Mitochondria (d) Cell Membrane (e) None of these

(iv) Lysosome in a cell is responsible for:

- (a) Autolysis (b) Autophagy (c) Intracellular digestion (d) All of these (e) None of these

(v) ABO blood system in human is example of:

- (a) Epistasis (b) Linkage (c) Polygenic inheritance (d) Multiple allele (e) None of these

(vi) Who describe sex linkage in Drosophilla:

- (a) Sutton (b) Garth Nicolson (c) Jhonathan Singer (d) Robertson (e) None of these

(vii) The number of cranial nerves in man is:

- (a) 8 (b) 10 (c) 12 (d) 14 (e) None of these

(viii) Wings of Birds and fly are example of:

- (a) Homologus organ (b) Analogus organ
(c) Vestigeal organ (d) All of these (e) None of these

(ix) The main chemical composition of ribosome is:

- (a) RNA + Protein (b) DNA + Protein
(c) Protein + Carbohydrate (d) Protein + Lipids (e) None of these

(x) The hormone cortisone is secreted by:

- (a) Pituitary gland (b) Ovary (c) Pancreas (d) Adrenal gland (e) None of these

(xi) In pond ecosystem the primary consumer are:

- (a) Zooplankton (b) Insect larvae (c) Fish (d) All of these (e) None of these

(xii) The xx, xo sex determination mechanism is present in:

- (a) Man (b) Grasshopper (c) Birds (d) All of these (e) None of these

(xiii) The DNA replication is:

- (a) Conservative (b) Semi conservative
(c) Dispersive (d) Equatorial (e) None of these

ZOOLOGY, PAPER-II

- (xiv) Which one of the following genetic disorder is dominant in man:
(a) Colour blindness (b) Haemophilia (c) Tay-Sachs (d) All of these (e) None of these
- (xv) The abiotic factor that bring sudden changes in ecosystem is:
(a) Light (b) Soil (c) In organic nutrients (d) Fire (e) None of these
- (xvi) In human, blood clotting is due to the presence of protein called:
(a) Albumin (b) Globulin (c) Haemoglobin (d) Actin (e) None of these
- (xvii) Male sex hormones are collectively known as:
(a) Estrogen (b) Androgen (c) Cortisone (d) Somatotrophic (e) None of these
- (xviii) Which one of the following is not a Membrane bound cell organelle:
(a) Mitochondria (b) Endoplasmic Reticulum
(c) Ribosome (d) Chloroplast (e) None of these
- (xix) The enzyme pepsin is present in:
(a) Pancreatic Juice (b) Bile (c) Saliva (d) Gastric Juice (e) None of these
- (xx) The change in species composition of a community over a long period of time is called:
(a) Food chain (b) Food web
(c) Ecological succession (d) Nich (e) None of these

PART-II

NOTE:(i)	PART-II is to be attempted on separate Answer Book.
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SECTION - I

- Q.2. (a)** Describe the structure, chemical composition and function of Golgi complex. **(10)**
(b) Explain Transport mechanism of plasma membrane. **(10)**
- Q.3. (a)** Differentiate between Mitosis and Meiosis cell division. **(10)**
(b) Define linkage with examples. **(10)**
- Q.4. (a)** What are respiratory pigments? Describe haemoglobin in detail. **(10)**
(b) Explain digestion of protein. **(10)**
- Q.5. (a)** Describe the main component of nervous system **(10)**
(b) How nerve impulse is generated in neuron. **(10)**

SECTION - II

- Q.6. (a)** Explain the Darwin theory about evolution. **(10)**
(b) Give an account of species concept. **(10)**
- Q.7. (a)** Differentiate between complete and incomplete ecosystem. **(10)**
(b) Describe Air Pollution. **(10)**
- Q.8.** Write short notes on the following: **(5 x 4 = 20)**

(a) Evolutionary trend (b) Phylogeny
(c) Multiple alleles (d) Fossils.
