

# FEDERAL PUBLIC SERVICE COMMISSION



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

Roll Number

### ZOOLOGY, PAPER-I

<b>TIME ALLOWED:</b>	<b>(PART-I MCQs) 30 MINUTES</b>	<b>MAXIMUM MARKS: 20</b>
<b>THREE HOURS</b>	<b>(PART-II) 2 HOURS &amp; 30 MINUTES</b>	<b>MAXIMUM MARKS: 80</b>
<b>NOTE: (i) First attempt PART-I (MCQs) on separate Answer Sheet which shall be taken back after 30 minutes.</b>		
<b>(ii) Overwriting/cutting of the options/answers will not be given credit.</b>		

### (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) Diencephalons 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 ponfera. (10)
- Q.3.** (a) Discuss polymorphism in coelenterates. (10)  
(b) Explain the life cycle of obelia.. (10)
- Q.4.** (a) What are platehelminths. (10)  
(b) Describe the life cycle of any medically important platehelminths. (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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# FEDERAL PUBLIC SERVICE COMMISSION



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

Roll Number

### ZOOLOGY, PAPER-II

<b>TIME ALLOWED:</b>	<b>(PART-I MCQs) 30 MINUTES</b>	<b>MAXIMUM MARKS: 20</b>
<b>THREE HOURS</b>	<b>(PART-II) 2 HOURS &amp; 30 MINUTES</b>	<b>MAXIMUM MARKS: 80</b>
<b>NOTE: (i) First attempt PART-I (MCQs) on separate Answer Sheet which shall be taken back after 30 minutes.</b>		
<b>(ii) Overwriting/cutting of the options/answers will not be given credit.</b>		

### (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

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

### 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.

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