



**FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2017
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT**

Roll Number

ZOOLOGY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80
<p>NOTE: (i) Part-II is to be attempted on the separate Answer Book. (ii) Attempt ONLY FOUR questions from PART-II. ALL questions carry EQUAL marks. (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places. (iv) Candidate must write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper. (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed. (vi) Extra attempt of any question or any part of the attempted question will not be considered.</p>		

PART-II

- Q. No. 2.** How has the role of forests been identified in mitigating climate change? What are the various mechanisms designed in this regard? Also describe various controversies attached to these mechanisms? **(20)**
- Q. No. 3.** How the ecology of Arthropod vectors and their breeding habitats may be manipulated at different levels to introduce novel strategies for integrated pest management? **(20)**
- Q. No. 4.** How members of Hemichordata are different from Chordates? Highlight Phylogenetic significance of different classes of Hemichordata. **(20)**
- Q. No. 5.** Explain in detail the digestion of carbohydrates and fats in various segments of the gastrointestinal tract in simple stomach animals. **(20)**
- Q. No. 6.** One of the important functions of the hypothalamus is to link the nervous system to the endocrine system via the pituitary gland (hypophysis). Enlist the releasing factors/hormones of hypothalamus and explain their effects on target cells/tissue/glands. **(20)**
- Q. No. 7.** Describe the synthesis, transport and functions of thyroid hormones. How the secretion of thyroid hormones is regulated in hyper-and-hypo thyroidism? **(20)**
- Q. No. 8.** Write short notes on any **FOUR** of the following: **(5 each) (20)**
- (a) Control of nematode parasites
 - (b) Neo-Darwinian theory
 - (c) Adaptability pattern of mammals
 - (d) Advantages and disadvantages of allosteric regulation versus covalent modification
 - (e) Concept of second messenger in hormone action
 - (f) Adaptation of fishes in cold and hot water
