MODEL PAPER (INTER PART-II)

BIOLOGY (OBJECTIVE TYPE) Time Allowed : 20 Minutes
PAPER – II Maximum Marks : 17

Note : Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1	Which of the following is not an endothermic animal : (A) Bird (B) Amphibian (C) Flying insect (D) Mammal
2	An example of unpaired bone is : (A) Mandible (B) Zygomatic (C) Palatine (D) Lacrimal
3	Which represents smooth muscles correctly : (A) Unstriped, Branched, Cylindrical (B) Unstriped, one nucleus per cell, spindle shaped (C) Unstriped, one nucleus per cell, voluntary (D) Irregular stripes, slow speed of contraction, spindle shaped
4	The part of brain that controls breathing, heart rate and blood pressure is : (A) Midbrain (B) Pons (C) Medulla (D) Cerebellum
5	Which in your opinion is not a pyrimidine : (A) Thymine (B) Cytosine (C) Adenine (D) Uracil
6	The number of chromosomes in mosquito and corn is : (A) 6 & 20 (B) 6 pairs & 20 pairs (C) 26 & 80 (D) 13 pairs & 20
7	The form of appearance of a trait is called : (A) Genotype (B) Phenotype (C) Pleiotropy (D) Sex limited trait
8	In chick embryo the folding of neural plate is clearly visible at --- stage : (A) 18 hours (B) 25 hours (C) 24 hours (D) 22 hours
9	Which respiratory protein is of common presence in all aerobic organisms : (A) Cytochrome-b (B) Hemoglobin (C) Cytochrome-c (D) Myoglobin
10	The Essay on Principle of Population was written by : (A) Malthus (B) Cuvier (C) Darwin (D) Wallace
11	Whose paper, along with extracts from Darwin's unpublished 1844 essay, were presented to Linnaean society of London : (A) Wallace (1913-23) (B) George Cuvier (1769-1832) (C) Malthus (1766-1834) (D) Charles Lyell (1797-1875)
12	What in your opinion is an example of biotic factor : (A) Air (B) Water (C) Soil (D) Plant
13	One of the following is a macronutrient : (A) Iron (B) Iodine (C) Molybdenum (D) Phosphorus
14	Homo sapiens have been on the earth for about --- years : (A) 10,000 (B) 20,000 (C) 40,000 (D) 60,000
15	What apparatus would you suggest for 'PCR' to be carried out in : (A) Spectrometer (B) Centrifuge (C) Homogenizer (D) Thermocycler
16	A lake is divided into how many zones : (A) Two (B) Three (C) Four (D) Five
17	As panting is to dogs, application of urine and saliva is to : (A) Humans (B) Birds (C) Bats (D) Frogs

MODEL PAPER (INTER PART-II)
(ESSAY TYPE)

BIOLOGY
PAPER – II

Time Allowed : 2.40 hours
Maximum Marks : 68

SECTION – I

2. Write short answers to any EIGHT (8) questions : **16**

(i) Differentiate shivering and non-shivering thermogenesis.
(ii) What is hyperoxaluria? Give its causes.
(iii) Why dialysis is done?
(iv) How tetanus is different from tetany?
(v) Give two adaptations of flight in birds.
(vi) Trace the path of urine from kidney to outside the body.
(vii) How turgor pressure is produced? Give its importance.
(viii) Predict the role of epinasty and hyponasty.
(ix) Differentiate hydrophytes and xerophytes.
(x) What could you invent to boost uptake of dopamine?
(xi) Write the natural mechanism by which plants protect themselves from high temperature.
(xii) What information would you use to assess renal failure?

3. Write short answers to any EIGHT (8) questions : **16**

(i) What is your opinion about arthritis?
(ii) Define rickets. Write its cause and cure.
(iii) Differentiate identical twins and fraternal twins.
(iv) Rank the importance of homoeostasis for living organisms.
(v) Write the characteristics of collenchyma cells.
(vi) What would happen if palatine processes of maxilla and palatine fail to fuse?
(vii) How would you grade uricotely as evolutionary adaptation?
(viii) What is cartilage? Write its types.
(ix) Write the commercial applications of Cytokinins.
(x) Write any two functions of callus.
(xi) How kidney is different from excretory structures of ancestors of vertebrates?
(xii) What is synapse? Write its role.

4. Write short answers to any SIX (6) questions : **12**

(i) How would you portray the effects of auxins on root and shoot regarding their movement?
(ii) Write the name of any three types of kidney stones and their occurrence percentage.
(iii) Differentiate Etiolation and Chlorosis.
(iv) What are sertoli cells? Mention their functions.
(v) How would you compare Osmoregulation with Thermoregulation?
(vi) Determine the value of Anhydrobiosis.
(vii) What is commercial application of gibberellins?
(viii) Define pyrexia. Write its causes.
(ix) How would you develop the environment in which cell maintains its shape?

SECTION – II

Note : Attempt any THREE questions.

5. (a) Categorize various types of joints as per their structure and function. 4
   (b) How can you sort the bones of forelimb and hind limb in distal sequence? 4

6. (a) How would you compile the facts for human female reproductive system? 4
   (b) Explain osmoregulation in cartilaginous fishes and bony fishes in marine environment. 4

7. (a) Give an account of human urinary system. 4
   (b) Describe the events of birth in detail. 4

8. (a) Describe different types of parthenogenesis. 4
   (b) How the structure of skeletal muscle fibre relates with its features? 4

9. (a) How would you assess the disorders of thyroid gland? 4
   (b) Write down role of phytochromes in detail. 4