

Note: There are three sections in this paper i.e. Section A, B & C.

Time Allowed: 20 Minutes

"Section-A"

Marks: 18

INSTRUCTIONS:

- Attempt this section on the MCOs Answer Sheet only.
- Use black ball point or marker for shading only one circle for correct option of a question.
- No mark will be awarded for cutting, erasing, over writing and multiple circles shading.

Q. 1. Choose the correct option i.e. A, B, C, or D.

1. The average adult human has a lung capacity of
 - (A) 4 liters
 - (B) 5 liters
 - (C) 5.6 liters
 - (D) 6 liters
2. The cells of Bowman's capsule that wrap around the capillaries of glomerulus are
 - (A) Microcytes
 - (B) Macrocytes
 - (C) Lanocytes
 - (D) Podocytes
3. Demineralization of bone resorption is carried by
 - (A) Chondrocyte
 - (B) Osteocyte
 - (C) Osteoblast
 - (D) Osteoclast
4. Reflexes like heart beat, swallowing, coughing and sneezing are concerned with
 - (A) Cerebrum
 - (B) Medulla oblongata
 - (C) Pons
 - (D) Cerebellum
5. Exophthalmia and grave disease are concerned with
 - (A) Hypothyroidism
 - (B) Hyperthyroidism
 - (C) Hyperglycemia
 - (D) Hypercalcemia
6. Kinesis and taxis are concerned with
 - (A) Learning
 - (B) Orientation behavior
 - (C) Tropic movement
 - (D) Territorial behavior
7. The middle muscular layer of ovary wall is called
 - (A) Perimetrium
 - (B) Myometrium
 - (C) Endometrium
 - (D) Pericardium
8. Between the age of 30 and 40 years due to loss of lower minerals content from the bone lead to condition....
 - (A) Osteoporosis
 - (B) Osteomalacia
 - (C) Osteopenia
 - (D) Osteoarthritis
9. When red flower is crossed with white flower, it produces pink flower, this is called
 - (A) Complete dominance
 - (B) Incomplete dominance
 - (C) Over dominance
 - (D) Co dominance
10. The loss of single chromosome from a diploid set is called
 - (A) Nullisomy
 - (B) Monosomy
 - (C) Trisomy
 - (D) Tetrasomy
11. Speciation occurs when populations are separated not by geographical barrier but due to extreme change in habitat, it is called
 - (A) Sympatric
 - (B) Parapatric
 - (C) Allopatric
 - (D) Both A & B
12. Average rise in earth's temperature is because of
 - (A) Green house effect
 - (B) Global warming
 - (C) Ozone depletion
 - (D) All of these
13. The collection of bacterial or bacteriophage clones containing at least one copy of every DNA sequence in a genome of an organism is known as
 - (A) Sonication
 - (B) DNA finger printing
 - (C) Genomic library
 - (D) DNA sequencing
14. Liquid prepared from fermentation of maltose by yeast is
 - (A) Beer
 - (B) Wine
 - (C) Vinegar
 - (D) Alcohol
15. The external feature of nose depends upon the
 - (A) Frontal bone
 - (B) Parietal bone
 - (C) Temporal bone
 - (D) Ethmoid bone
16. All are true about juxtamedullary nephron except
 - (A) Long loop of henle
 - (B) Short loop of henle
 - (C) Renal corpuscle in junction of cortex and medulla
 - (D) Deal with blood volume
17. Axial skeleton of human consist of ribs, vertebral column and
 - (A) Skull
 - (B) Pectoral girdle
 - (C) Pelvic girdle
 - (D) Pore arms
18. The human hind brain consists of pones, medulla oblongata and
 - (A) Cerebellum
 - (B) Cerebrum
 - (C) Thalamus
 - (D) Hippocampus

"Section-B"

Marks: 40

- Q. 2. * Write short answers of any Ten (10) of the following parts. Each part carries equal marks.
- (i) What is the main cause of lung cancer? Mention six common symptoms of lung cancer.
 - (ii) Describe the mechanism of ultra filtration.
 - (iii) What is synovial joint? Mention its two types.
 - (iv) How does an impulse move from one neuron to another neuron across the synapse?
 - (v) How positive feedback enables child birth by enhancing labour contraction?
 - (vi) What is orientation behavior? Differentiate between Kinesis and Taxis.
 - (vii) Define Pregnancy. What conditions are necessary for pregnancy?
 - (viii) How nucleus play role in development of an organism?
 - (ix) What is gene linkage?
 - (x) What is translocation?
 - (xi) Define Hardy Weinberg theorem and name only four conditions necessary to keep gene population in Equilibrium.
 - (xii) Define Productivity. Differentiate between Gross Primary Productivity (GPP) and Net Primary Productivity (NPP).
 - (xiii) Write four applications of DNA analysis.

"Section-C"

Marks: 27

Note: Answer any Three (3) questions. Each question carries equal marks.

- Q. 3. Describe briefly the Human Respiratory System.
- Q. 4. Explain the endocrine function of Human Pancreas.
- Q. 5. Describe Morgan's historic work on sex linkage in Drosophila.
- Q. 6. Write notes on the following.
 - (a) Advantages of Breast feeding and disadvantages of bottle feeding.
 - (b) Female infertility.