

Note: Answer any 14 Parts from section B and any two questions from section C, on separately provided answer Book.

Section B (Marks 42)

Question 02. Answer any 14 Parts. The answer to each part should not exceed three to four lines.

- i. What is respiratory surface? Write its properties. 01+02
- ii. Describe the structure and functions of pleura. 1.5+1.5
- iii. What do you know about anhydrobiosis? Give an Example. 02+1
- iv. Write the common causes of urinary tract infections. 03
- v. Investigate feedback mechanism. 03
- vi. Differentiate between structure of Compact bone and spongy bone. 1.5+1.5
- vii. Describe the four curvatures of vertebral column. 03
- viii. Differentiate between dendrite and axon. 1.5+1.5
- ix. How does an impulse move from one neuron to another neuron across the Synapse. 03
- x. What measure can be taken to eradicate drug addiction from society? 03
- xi. How can you justify that kidney is an also gland? 03
- xii. What are the effects of over secretion of thyroxin? 03
- xiii. Differentiate between Stimulus and response. 1.5+1.5
- xiv. How are reflexes important in maintaining body homeostasis? 03
- xv. Justify the role of ovary in human female. 03
- xvi. Write the names of extra embryonic membranes .1+1+1
- xvii. How gene linkage in counter the independent assortment? 03
- xviii. How did human population effect environment? 03
- xix. How can we locate gene of interest from DNA Libraries? 03
- xx. How can you justify the importance of vaccines? 03

Section C (Marks 26)

Note: Attempt any two Questions. All Questions carry equal marks.

- Q3.
- a. What are the kidney stones? Describe two types of renal dialysis. 05
 - b. Describe the structure of neuron. 04
 - c. What is gastrulation ? Explain the events of gastrulation. 04
- Q4.
- a. What is epistasis? Explain it with polygenic inheritance. 04
 - b. Describe the bones of cranium. 05
 - c. Describe the neuro secretory roe of hypothalamus. 04
- Q5.
- a. Describe migration of salmon as instinct behavior. 04
 - b. Compare the parallel behavior of genes and chromosome during meiosis .04
 - c. Give an account of the role of bacteria in nitrogen cycle. 05

Note: Section A is compulsory. All Parts of this section are to be answered on the question paper itself.

It should be completed in first 25 minutes and handed over to center superintendent.

Deleting/overwriting is not allowed. Do not use Led pencil.

Q1. Encircle the correct option i.e. A/B/C/D . Each part carries 01 mark.

- i. Structure, which closes passage to lungs, when food is coming is called.
A. Glottis. B. Epiglottis. C. Larynx. D. Pharynx.
- ii. A drug reduces mitochondrial activity in kidney nephrons, which chemical will be present increased amount in the urine.
A. Ammonia, B. Glucose. C. Uric acid. D. Urea
- iii. Plumage fluffing is common in.
A. Birds. B. Human. C. Reptiles. D. Amphibians
- iv. Narrowing of the space between the two vertebrae is called
A. Osteoporosis. B. Spondylosis. C. Disk slip. D. Rickets
- v. The part of a neuron that sends information towards another cell is the
A. Glia. B. Soma. C. Dendrite. D. Axon.
- vi. How many pairs of cranial nerves are there in humans?
A. 12. B. 23. C. 31. D. 32
- vii. Steroid hormones are secreted by
A. Adrenal cortex. B. Gonads C. Thyroid. D. Both A & B
- viii. Which of the following hormones has broadest range targets
A. ADH. B. TSH. C. Oxytocin. D. Epinephrine
- ix. The strongest and oldest adult male gorilla is called
A. Silver back. B. King. C. Golden back. D. Beta
- x. The inherited Behavior is called
A. Imprinting. B. Learning. C. Maturation. D. Instinct.
- xi. The periodic shedding of the endometrium is known as
A. Ovulation. B. Oogenesis. C. Secretory phase. D. Menstruation
- xii. Study of aging is called
A. Teratology B. Paleozoology C. Gerontology D. Biotechnology
- xiii. X-Linkage was discovered for the first time in
A. Ants B. Mice C. Fruit fly D. Chicken
- xiv. What are the coding segments of stretch of eukaryotic DNA called
A. Introns B. Exons C. Codons D. Replicons
- xv. The ultimate source of organic variation is
A. Sexual Reproduction B. Hormonal action C. Natural Selection. D. Mutation
- xvi. Nitrogen is essential for living organism to make
A. Lipid B. Protein C. Carbohydrates D. Sulfates
- xvii. Which of the following is a combine vaccine
A. BCG B. OPV C. DT D. DPT