



Marks : 70

Time : 1.30 pm to 4.30 pm

Note:

- 1) All sections (A, B, C, D) are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw neat labelled diagrams wherever necessary.

Q.1 Select and rewrite the most appropriate answer from the given alternatives from each sub-question. (15)

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- vii) The pairing of nonsister chromatids of homologous chromosomes called synapsis takes place during _____.
- a) pachytene b) zygotene
c) leptotene d) diakinesis
- viii) The pathway of photosynthesis that involves chloroplast, peroxisomes and mitochondria is _____.
- a) CAM b) Calvin cycle
c) Photorespiration d) glycolysis
- ix) Bone is characterized by hard matrix called _____.
- a) Ossein b) Chondrin
c) Plasma d) Fat
- x) The reaction called “Connecting link” between Glycolysis and Kreb’s cycle is _____.
- a) Carboxylation b) Combustion
c) Acetylation d) Decomposition
- xi) _____ is a worm like organ that arises from caecum.
- a) Pylorus b) Appendix
c) Epiglottis d) Anus
- xii) Find the odd man out.
- a) Thyroid gland b) Pitutary gland
c) Salivary gland d) Adrenal gland
- xiii) The number of molecules of GTP (ATP) produced during oxidation of every molecule of citric acid is _____.
- a) One b) two
c) three d) four
- xiv) _____ stones are formed in response to bacterial infection by urea splitting bacteria.
- a) Uric acid b) Cystine
c) Calcium d) Struvite
- xv) _____ is defined as the process by which complex food substances are converted into simple diffusible substances.
- a) Nutrition b) Digestion
c) Egestion d) Injection

Q.2 Answer in one sentence.

(10)

- i) What are oxidoreductases?
- ii) Define "Cell cycle".
- iii) Name the Nitrogen bases present in DNA molecule.
- iv) What is a Pseudofruit?
- v) Name the phase of mitosis where 2 groups of chromosomes are moving towards opposite poles.
- vi) What is glomerules?
- vii) Name the essential and necessary pigments of photosynthesis.
- viii) Which cycle is called Amphibolic pathway?
- ix) Name the muscles present in the myocardium of heart wall.
- x) What is the cause of Kwashiorkor?

Section B

Answer the following in short. (Any Eight)

(16)

Q.3 Give the name of the organelle -

- i) Sucidal bag of the cell
- ii) Power House of the cell

Q.4 Draw a neat labelled diagram of "Telophase" of Mitosis.

Q.5 Give the example of -

- i) Marginal placentation
- ii) Parietal placentation

Q.6 What are disaccharides?

- Q.7** i) What is CAM pathway?
- ii) Give two examples of CAM plants.

Q.8 Write a note on "Alcohol Fermentation"

Q.9 Name the type of cartilage present in -

- i) Larynx
- ii) Earlobe

Q.10 Give the example of following -

- i) Hormone that stimulates reabsorption of water in kidneys
- ii) Hormone essential for production of RBCs in kidneys.

Q.11 What is Dentition? Give the dental formula of adult human.

Q.12 Match the following

A	B
i) Pleated sheet	a) Myoglobin
ii) Tertiary structure	b) Keratin of hair
iii) Quaternary structure	c) Silk Fibres
iv) Spiral helix	d) Hemoglobin

Section C

Answer the following. (Any Seven)

(21)

Q.13 Sketch and label Ultrastructure of Nucleus.

Q.14 Write a note on Squamous Epithelium

Q.15 Explain the structure and function of m-RNA with the help of a suitable diagram.

Q.17 Give the schematic representation of Cyclic photophosphorylation.

Q.18 Write a note on "Ammonotelism"

Q.19 List the functions of Liver of man.

Q.20 Give the schematic representation of Glycolysis.

Q.21 Distinguish between C_3 and C_4 pathway of photosynthesis.

Section D

Answer in detail. (Any Two)

(8)

Q.22 Describe the structure of "Areolar Connective Tissue"

Q.23 Explain the structure of cell wall of plant cell.

Q.24 Draw a neat labelled diagram of "Nephron" of Kidney.

