

22223

3 Hours / 80 Marks



20223

Seat No.

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- Instructions* –
- (1) All Questions are Compulsory.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (6) In case student has attempted sub-question of Question no. 3 more than once, only first attempt should be considered for assessment.

Marks

1. **Answer any SIX of the following:** **30**
 - a) Discuss TCA cycle along with its energetics.
 - b) What are carbohydrates? Classify them with suitable example.
 - c) What is enzyme Inhibition? Explain competitive and Non-competitive inhibition.
 - d) What is Embden-Meyerhof Pathway? Discuss various stages of the pathway.
 - e) Explain primary and secondary structure of protein.
 - f) Explain routinely performed tests to assess the functions of kidney.
 - g) Discuss in brief about B-oxidation of fatty acids.

2. **Answer any TEN of the following:** **30**
 - a) Write biochemical role, deficiency condition and symptoms of Vitamin C.
 - b) Explain the process of ETC.
 - c) What are abnormalities of red cells? Explain.
 - d) What are lipids? Classify them with suitable examples.
 - e) Discuss the functions, deficiency and recommended dietary requirement of calcium.
 - f) Explain structure and functions of DNA.
 - g) Define dehydration. Explain causes, symptoms and treatment of dehydration.
 - h) Draw the structure of cholesterol and give functions of it.
 - i) Enlist different abnormal constituents of urine.
 - j) Discuss in detail about Lipolysis.
 - k) What is the clinical significance of lipid profile?

3. **Answer all of the following:** **20**
 - a) Draw the structure of glucose.
 - b) Write any two functions of RNA.
 - c) Name any two sulfur containing amino acids.
 - d) Give two Pharmaceutical application of enzymes.
 - e) Write any two functions of lymphocytes.
 - f) The chemical name of vitamin D is _____.

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- g) Define biotechnology.
- h) Co-enzyme form of vitamin riboflavin is _____.
- i) Name the site for protein synthesis in the cell.
- j) Write deficiency diseases of vitamin Thiamin.
- k) The extra cellular fluid comprises _____
- i) Tissue cells
 - ii) Plasma
 - iii) Plasma and interstitial fluid
 - iv) Interstitial fluid
- l) Synthesis of cholesterol and steroid is the function of _____.
- i) Nucleus
 - ii) Golgi apparatus
 - iii) Endoplasmic reticulum
 - iv) Peroxisomes
- m) The nitrogen base found in RNA but not in DNA is _____.
- n) The protein part of holoenzyme is known as
- i) Active site
 - ii) Allosteric site
 - iii) Co-enzyme
 - iv) Apoenzyme
- o) Where does oxidative phosphorylation take place?
- p) Body water is regulated by the hormone _____.
- i) ADH
 - ii) ACTH
 - iii) FSH
 - iv) Epinephrine
- q) Biotechnology has made contribution in which areas _____.
- i) Medicine
 - ii) Industrial
 - iii) Environmental
 - iv) All of these
- r) Give significance of SGPT Test.
- s) Write full form of ECF and ICF.
- t) Rothera's test is for detection of _____ in the urine.
- _____