

23242

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) Assume suitable data, if necessary.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any SIX of the following:

30

- a) Define carbohydrate and write classification with examples.
- b) What are Proteins? Briefly explain their biological role. Explain secondary structure of proteins.
- c) Discuss different factors affecting enzyme activity.
- d) What is kreb cycle? Mention steps in kreb cycle.
- e) Explain biological oxidation with ETC and oxidative phosphorylation.
- f) Discuss urea cycle and decarboxylation.
- g) Discuss the functions of liver. Explain liver function test.

2. Attempt any TEN of the following:

30

- a) Draw the structure and enlist any two functions of cholesterol in the body.
- b) Explain the following -
 - i) Triglycerides
 - ii) Fatty liver
 - iii) Emulsification test
- c) Explain the structure of DNA.
- d) Describe Vitamin A. Its chemical nature and deficiency diseases.
- e) Give an account of metabolism of fats with reference of β -oxidation.
- f) What are ketone bodies? Discuss formation of Ketone bodies.
- g) Give the functions of following -
 - i) Sodium
 - ii) Chloride
 - iii) Cobalt
- h) What is dehydration? Discuss its causes and ORT.
- i) Write in detail about renal function test.
- j) Discuss about abnormal constituents of urine and their significance.
- k) Write about abnormal RBCs and related diseases.

P.T.O.



3. Attempt ALL of the following:

- Which one is the largest organelle in the cytoplasm?
 - Lysosomes
 - Mitochondria
 - Golgi apparatus
 - Endoplasmic reticulum
- The cellular organelles called suicidal bags are _____.
 - Lysosome
 - Ribosome
 - Nucleolus
 - Golgi complex
- Draw the structure of glucose.
- Name one optically inactive amino acid.
- Name any two sulfur containing amino acids.
- Define Vitamins.
- Write any two functions of RNA.
- What is holoenzyme?
 - Enlist any two functions of lipids.
 - Write any two functions of Vitamin C.
- The deficiency of Vitamin B₁ causes _____.
 - Xerophthalmia
 - Beri-Beri
 - Pellagra
 - Scurvy
- Name the coenzymes of Vitamin B₆ and Vitamin B₁₂.
- What is Glycogenolysis?
- Body water is regulated by the hormone _____.
 - ADH
 - ACTH
 - FSH
 - Epinephrine
- Enlist any two functions of water.
- Explain the terms ECF and ICF.
- The term biotechnology was coined in 1919 by _____.
 - Karl Ereky
 - Alexander Flemming
 - James Watson
 - Francis Crick
- Define "biotechnology".
- ALT is also known as _____.
 - Alanine amino transferase
 - Amino leucine transferase
 - Aspartate amino transferase
 - None of these
- What is Rother's test?
