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BMLT/IIS/B & B/V(U-9)/19

BMLT 2nd Semester Examination, 2019

BIOCHEMISTRY AND BIOPHYSICS

PAPER — V(Unit-9)

Full Marks : 40

Time : 2 hours

Answer Q.No.1 and any three from the rest

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any five questions : 2 × 5

(a) Give one example of each of aldopentose and ketohexose with definition.

(b) Give one example of each of omega-3-fatty acid and omega-6-fatty acid.

(Turn Over)

- (c) Differentiate nucleotide and nucleoside.
 - (d) Differentiate amphoteric and amphipathic molecule with example.
 - (e) What is the site of β -oxidation process of fatty acid in a cell ?
 - (f) Differentiate entropy and enthalpy.
 - (g) Define pKa.
 - (h) Define hyper kalemia and hyponatremia.
2. (a) Write the different steps of TCA cycle with its energetics.
- (b) Describe briefly the neoglucogenesis process with schematic diagram from amino acids and pyruvate. (4 + 2) + (2 + 2)
3. (a) Describe any two inborn error of metabolism with cause and symptoms.
- (b) State the biological significance of phospholipids. 6 + 4

(3)

4. (a) Discuss how is ammonia detoxified in ureotelic organisms.
(b) Elaborate the flow of electron from electron donors to electron acceptors in mitochondria. 5 + 5
5. (a) How does acid-base balance take place in Kidney? How does the osmotic pressure of cell is maintained?
(b) Discuss the risk factors of $\text{Na}^+ - \text{K}^+$ imbalance in human. Discuss the role of radioactive iodine in disease diagnosis. (3 + 2) + (3 + 2)
6. (a) What is K_M value?
(b) Discuss the role of pH and temperature on enzyme action.
(c) What do you mean by allosteric inhibition?
(d) Define deamination. 2 + 4 + 2 + 2