

2022

Zoology

[HONOURS]

(CBCS)

(B.Sc. Third Semester End Examination-2022)

PAPER-C7T

Full Marks: 40

Time: 02 Hrs

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 of the following: 5x2=10**
- a) Differentiate between epiness and anomess.
 - b) What do you mean by reducing sugar?
 - c) What do you mean by hypochromic shift of nucleic acid?
 - d) What do you understand by terminal electron acceptor? Is this molecule universal?
 - e) What is carnitine shuttle?
 - f) Differentiate between A, B and Z DNA.
 - g) Describe the zero order reaction with help of MME 1+1
 - h) Deduce V_0 and mention its position in graph when $[S]$ is many fold of K_m .

(2)

2. Answer any four questions of the following: $4 \times 5 = 20$

- a) Compare between α helix and β pleated sheet.
- b) What is rate limiting steps in glycolysis? Mention the name of these enzymes. Why it is required? $2+1+2$
- c) Describe steps of mitochondrial oxidation of a saturated fatty acid.
- d) Mention the significance of Pentose phosphate pathway. Why is it also called HMP shunt?
- e) What do you mean by hyperchromicity in DNA? What is melting temperature? $3+2$
- f) Mention the sources of N atoms of purine in nucleotide synthesis. Write a note on allosteric modulation of enzyme.

3. Answer any one question: $1 \times 10 = 10$

- a) i) Discuss the difference between mitochondrial and peroxisomal β -oxidation.
ii) Add a note on how do mitochondrial enzymes deal with a double bond.
iii) Why all PUFA are essential in our diet & not produced in our body? $4+4+2$
- b) Short note
i) Differentiate between nonregulatory and allosteric enzyme.

(3)

- ii) Mention the enzyme kinetics (K_m and V_{max} value) of all enzyme inhibition i.e. competitive, non-competitive and uncompetitive against without inhibition. $5+5$
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