

2020

SERICULTURE

Paper: Course-04 (Gr. A & B)

Full Marks : 60 Time : 2½ Hours

The figures in the right-hand margin indicate marks.

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

GROUP-A

(Marks: 30)

(Biochemistry and Biophysical Phenomenon)

1. Answer any **five** questions: $1 \times 5 = 5$
- Define Michelis Constant.
 - What is beta oxidation of fatty acids?
 - Why Kreb's cycle is also known as TCA cycle?
 - Name the amino acid which is essential in young but not in adults.
 - How glycosidic linkage is formed?
 - What are prostaglandins?
 - What are neurohormones? Give one example.

2. Answer any **three** of the following : $5 \times 3 = 15$
- Mention the enzymatic steps of Pyruvate oxidation.
 - What do you understand by Hydrogen ion concentration?
 - Distinguish oxidative and non-oxidative deamination.
 - Mention the effect of substrate specificity and temperature related to enzyme activity.
 - What is monosaccharide? Give an account of various monosaccharides having physiological importance.
3. Answer any **one** of the following : $10 \times 1 = 10$
- Describe the general sequence of events in Citric acid cycle. Which steps are oxidative? What are the total inputs and outputs of the cycle?
 - Classify proteins based on increasing complexity of structure. Mention examples in each case.

GROUP-B

(Physiology, Histology and Endocrinology)

(Marks: 30)

4. Answer any **five** of the following : $1 \times 5 = 5$
- a) What is glomerular filtrate?
 - b) What is vasa recta?
 - c) Name the organ responsible for secreting moulting hormones in silkworm.
 - d) What is Bohr's effect?
 - e) Define pheromone.
 - f) Name hormones secreted from neurohypophysis.
 - g) Name one exocrine gland.
5. Answer any **three** of the following : $5 \times 3 = 15$
- a) Discuss the role of Hemoglobin in oxygen transport.
 - b) Write in short on the mode of action of ecdysone in Mulberry silkworms.
 - c) Discuss the phenomenon of plasma clearance.
 - d) Write a note on Chloride shift phenomenon.
 - e) Give an account of histological details of adrenal gland in human.

6. Answer any **one** of the following: $10 \times 1 = 10$
- a) State the applications of insect hormones in Sericulture management.
 - b) Write notes on:
 - i) Animal hormone.
 - ii) Counter current mechanism.
-

Date of Examination:

20.7.2021, Time: 12:00 Noon – 02:30 PM