

B. Sc. (Micro.)-II Year

3503

B. Sc. (Micro.) Examination, May 2016

BIOLOGY-IV

(B-210)

Time : Three Hours

Maximum Marks : 50

Note : Attempt any five questions. All questions carry equal marks.

1. What is growth? Explain cell growth with reference to auxetic and multiplicative growth.

2. Differentiate between the following:

- (a) Photoperiodism and Photomorphogenesis
- (b) Phytochrome and Phytohormone.

3. Discuss the discovery, structure and mode of action of two plant hormones stimulating plant growth in height/length.

4. Write short notes on the following:

- (a) Antiauxins
- (b) MCPA
- (c) Auxanometer
- (d) Apical dominance.

5. Describe the structure of neuron and explain the nature and conduction of nerve impulses.

6. Explain the following hormonal irregularities:

- (a) Hashimoto's disease
- (b) Addison's disease
- (c) Acromegaly
- (d) Diabetes mellitus.

7. What is intermediary metabolism? With the help of flow chart only, explain the Embden-Meyerhoff-Parnas pathway, along with energy yield in terms of ATP molecules.

(3)

8. Discuss the following:
- (a) Basal metabolic rate (BMR)
 - (b) Modifications for heat loss in mammals.
9. Differentiate between types of simple and complex behaviours. What is associative learning? Explain giving examples of 'Pavlovian Experiment' and 'Operant Conditioning'.
10. Write short notes on the following:
- (a) Konrad Lorenz
 - (b) FAP
 - (c) IRM
 - (d) Social insects
 - (e) Circadian rhythm.