

BOT - 504

Biochemistry and Plant Physiology

M.Sc Botany (MSCBOT) (12/13/16/17)

First Year, Examination - 2019

Time: 3 Hours

Max. Marks: 80

Note:- This paper is of Eighty (80) marks containing three (03) Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

Section-A (Long Answer Type Questions)

Note:- Section 'A' contains four (04) long-answer-type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

(2×19=38)

1. Describe structure and function of plasmamembrane.
2. Describe the B- oxidation of fatty acids.
3. What are C₃ plants? Describe in detail Calvin cycle.

4. What is stress? How do plants respond to water stress?

Section-B
(Short Answer Type Questions)

Note:- Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer any four (04) questions only.

(4×8=32)

1. Explain laws of thermodynamics especially with relation to biological system.
2. Describe polysaccharides.
3. What are Proteins? Give classification of proteins.
4. Water logged soils physiologically dry soil comment upon this.
5. Explain the role of light in flowering.
6. Differentiate between scarification and stratifications.
7. What is glycolysis? Describe its various reactions and energy output.
8. Outline Hatch-slack pathway of CO₂ fixation.

Section-C
(Objective Type Questions)

Note:- Section 'C' contains ten (10) objective type questions of 01 (one) mark each. All the questions of this section are compulsory. (10×1=10)

Fill in the blanks:

1. RQ (Respiratory Quotient) is unity if the respiratory substrate is.....
2. In a cell..... is the site of protein synthesis
3. Gibberellin was first isolated from the seedlings of rice infected with.....disease
4. Fruit ripening hormone is.....
5. Whiptail disease in cauliflower plants is caused due to deficiency of.....
6.and.....are two sulphur containing aminoacids incorporated in protein.
7. ATP.....ADP.....
8. When there are more than one codons for a particular aminoacid then code is called.....code.

9. Seeds of certain plant do not germinate immediately after harvest even under favourable conditions for seed germination due to.....of seeds.
10.are these codons which do not code any aminoacid
