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5 SEM TDC BOT M 5

2019

(November)

BOTANY

(Major)

Course : 505

(Functional and Chemical Biology)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Choose the correct answer of the following : 1×3=3

(i) Auxin / Gibberellin / Abscisic acid
is the growth inhibiting hormone.

(ii) Glycosidic bonds are seen in
cellulose / protein / cholesterol.

(iii) Fat / Amino acid / Chlorophyll /
Terpenoid is a secondary
metabolite.

(b) Fill in the blanks : $1 \times 3 = 3$

(i) Simple lipids are esters of fatty acids with _____.

(ii) Conjugated protein consists of amino acids and a _____.

(iii) Nucleotide without a _____ is called nucleoside.

(c) Write short notes on the following : $3 \times 3 = 9$

(i) Functions of DNA

(ii) Importance of secondary metabolites

(iii) Storage products in plants

2. What are nucleic acids? Write about the different types of RNAs with their functions.

$2+7+2=11$

Or

What are lipids? Mention different types of lipids. Give a brief account of the biological functions of lipids.

$3+4+4=11$

3. What are auxins? Write briefly the role of auxin in the growth of plants.

$3+7=10$

Or

What are polymeric substances in plants? Give a brief account of polysaccharides mentioning their functions.

$2+4+4=10$

4. Write short notes on (any four) : 3×4=12

- (a) Biomolecules
- (b) Function of chlorophyll
- (c) Metabolic concept
- (d) Alkaloids
- (e) Phytochrome
- (f) Non-protein amino acids

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