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**5 SEM TDC BOT M 5**

**2014**

( November )

**BOTANY**

( Major )

Course : 505

( **Functional and Chemical Biology** )

Full Marks : 48

Pass Marks : 19

Time : 2 hours

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

1. (a) Write correct answer of the following :

1×3=3

(i) Glycosidic bonds are seen in cellulose/keratin/cholesterol.

(ii) The alkaloid reserpine/quinine/atropine is available in Rauwolfia plant.

(iii) Collagen is present in blood vessel/skin/connective tissue.

- (b) Fill in the blanks : 1×2=2
- (i) Simple lipids are esters of fatty acids with —.
- (ii) Phenols are also known as —.
2. Write short notes on the following : 3×3=9
- (a) Function of terpenoids
- (b) Mucopolysaccharide
- (c) Importance of secondary metabolite
3. (a) What are proteins? How are proteins divided basing on the degree of complexity of their molecular structure? Give at least one example of each type.

1+8+2=11

Or

- (b) Write in detail about the occurrence, structure and function of a chlorophyll molecule. 1+5+5=11
4. (a) What are nucleic acids? Write about the different types of RNAs mentioning their functions. 2+7+2=11

Or

- (b) What are phytohormones? Give the physiological role of gibberellin in plants. 3+8=11

5. Write explanatory notes on any *four* of the following : 3×4=12

- (a) Alkaloids
- (b) Use of cellulose
- (c) Non-proteinogenic amino acid
- (d) Function of lipid
- (e) Biomolecule
- (f) Anthocyanin

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