

2017

(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) A protein having two or more polypeptide chains is called Monomeric / Oligomeric / Polymeric protein.
 - (ii) Animals, bacteria and fungi store carbohydrates as cellulose / dextrose / glycogen.
 - (iii) Non-reducing commercial sugar is glucose / sucrose / fructose.

(2)

(b) Fill in the blanks :

1×3=3

(i) Nucleotide without a _____ is called nucleoside.

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

(iii) _____ is a growth inhibiting hormone.

(c) Write short notes on the following :

2½×4=10

(i) Polysaccharides as reserve food matter

(ii) Storage products in plants

(iii) Phytochrome

(iv) Role of lipid in organisms

2. (a) Explain why proteins have been called 'biological polymers'. Give the importance of tertiary structures of protein. Give one example of a tertiary protein.

4+5+1=10

Or

(b) What are auxins? Discuss briefly the role of auxins in the growth of plants.

3+7=10

(3)

3. (a) What do you mean by metabolic concept? Explain the pathways of metabolic concept. What are the regulations of metabolic pathways? 10

Or

(b) What are carbohydrates? What is the main source of carbohydrate? Explain how glycosidic bonds are formed in carbohydrates. Name three common disaccharides. 2+1+4+3=10

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

(a) Biomolecule

(b) Function of chlorophyll

(c) Terpenoids

(d) Anabolism and catabolism

(e) Use of cellulose

(f) Anthocyanins
