



Maintenance

**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)  
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B  
Coimbatore - 641 043, Tamil Nadu, India

**Bachelor's Degree Examination – June/July 2021**  
**II Semester**

**Class : I UG**  
**Major : Food Science and Nutrition**

**Time : 3 Hours**  
**Max. Marks : 100**

**18BFNI02 DSE II Chemistry Theory for Food Science and Nutrition**

**Part A**

**10 x 1 = 10**

**Choose the Correct Answer**

1. Select the organic acid among the following:  
a. Hydrochloric acid  
b. Acetic acid  
c. Sulphuric acid  
d. Nitric acid
2. Choose the alkali chemical from the following:  
a. Sodium chloride  
b. Sodium sulphate  
c. Potassium chloride  
d. Sodium hydroxide
3. Pick up the aromatic compound from the following:  
a. Methane  
b. Ethyl alcohol  
c. Phenol  
d. Glycerol
4. Choose the chemical which is called table salt  
a. sodium chloride  
b. calcium chloride  
c. sodium hydroxide  
d. potassium chloride
5. Select the carbohydrate among the following:  
a. Glucose  
b. Keratin  
c. Sericin  
d. Fibroin
6. Pick up the carbohydrate with only hydroxyl groups  
a. protein  
b. polyethyleneterephthalate  
c. cellulose  
d. lignin
7. Which class of compound is glycine?  
a. Oil  
b. Amino acid  
c. Carbohydrate  
d. Fat
8. Select the enzyme among the following:  
a. Glucose  
b. Fructose  
c. Cellulose  
d. Cellulase
9. The spectroscopy in which the sample examined in the form of an atom is  
a. TEM  
b. Flame photometry  
c. SEM  
d. XRD
10. A technique used to isolate non-volatile mixtures is  
a. SEM  
b. FTIR  
c. TLC  
d. XRD

**Part B**

**5 x 6 = 30**

**Answer ALL questions**

**Each answer should not exceed 400 words or two pages**

- 11.a. Discuss on the hazardous volatile chemicals.  
(or)  
11.b. Discuss on waste chemical handling.
- 12.a. Explain the classification of organic compounds.  
(or)  
12.b. Give a brief note on the Hess's law of heat of summation.
- 13.a. Discuss the important properties of glucose and fructose.  
(or)  
13.b. Explain the important uses of starch and cellulose.
- 14.a. Explain how is protein formed from amino acids?  
(or)  
14.b. Describe about the catalytic power required in the enzyme actions.
- 15.a. Write the principle and instrumentation of fluorometry.  
(or)  
15.b. Describe the applications of electrophoresis.

**Part C**

**5 x 12 = 60**

**Answer ALL questions**

**Each answer should not exceed 800 words or four pages**

- 16.a. Elaborate on the necessities of personal protection equipment with respect to corrosive chemicals.  
(or)  
16.b. Give a detailed note on Normality, Molarity, Molality and Mole fractions.
- 17.a. With suitable examples, elaborate on the structural representation of aliphatic and aromatic compounds.  
(or)  
17.b. Explain about Kirchoff's equation with respect to the variation of heat of reaction with temperature.
- 18.a. Give a elaborate note of open chain and ring structures of glucose and fructose.  
(or)  
18.b. Explain with structural representation about starch and cellulose.
- 19.a. Elaborate on the primary and secondary structures of proteins.  
(or)  
19.b. Classify the enzymes and discuss on their properties.
- 20.a. Explain the principle and applications of spectrophotometry.  
(or)  
20.b. Explain the principle and applications of coloumn chromatography.

\*\*\*\*\*