



OECH211

Reg. No.

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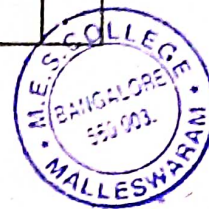
II Semester B.Sc. (NEP) Degree Examination, October - 2022

**CHEMISTRY**

**Molecules of Life**

**(CBCS Scheme)**

**Paper : OE-II**



**Time : 2½ Hours**

**Maximum Marks : 60**

**Instructions to Candidates:**

1. Question Paper has three parts.
2. Answer all the parts

**PART-A**

**Answer any Five of the following questions. Each question carries Two marks.**

**(5×2=10)**

1. Classify the following into mono di and polysaccharides: ;Sucrose, starch, lactose and Glucose.
2. What is zwitter ion?
3. What is active site of an enzyme?
4. Write a note on drug receptor theory.
5. What are nucleotides?
6. Which molecule is called the universal currency of cellular energy and why?

**PART-B**

**Answer any Four of the following questions. Each question carries Five marks.**

**(4×5=20)**

7. a) Give the classification of carbohydrates.  
b) List any two general properties of Fructose. **(3+2)**
8. a) What are reducing and non reducing sugars? Give an example for each.  
b) Write the components present in starch **(4+1)**

**[P.T.O.]**



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9. Describe briefly koshlands induced fit theory of enzyme substrate interaction. (5)
10. a) Give the classification of lipids with an example for each  
b) Mention the importance of B complex vitamins. (3+2)
11. Name the different types of RNA. Mention their roles. (5)
12. a) Define transcription  
b) What is glycolysis? (3+2)

### PART - C

Answer any THREE of the following questions. Each answer carries TEN marks.

(3×10=30)

13. a) What are essential and non essential amino acids? Give an example for each.  
b) Write a note on Primary structure of Proteins. (6+4)
14. a) Define the terms:  
i) Apoenzymes  
ii) Coenzymes  
iii) Holoenzymes  
iv) Cojactors.  
b) Give one example each for group, absolute and stereospecificity of enzymes.  
c) Mention the biological importance of Cholesterol. (4+3+3)
15. a) Write a note on Watson and Crick model of DNA.  
b) What is catabolism and Anabolism? (6+4)
16. a) What are the four levels of structural organization of proteins.  
b) Mention the differences between nucleosides and nucleotides  
c) What is a codon? List the general features of genetic code. (4+3+3)
17. a) Outline the steps involved in Kreb's cycle.  
b) What is translation?  
c) Give the differences between RNA and DNA. (6+2+2)
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