GOVERNMENT DEGREE COLLEGE (AUTONOMOUS), SIDDIPET

DEPARTMENT OF CHEMISTRY

B.Sc. V- Semester Examination

Paper-VI

Semester end theory model paper

Time: 2:30 hrs **Max.Marks:70**

I. Answer the following **$4\times2^{1/2}=10$**

1. Define the term catalyst?
2. Write three applications of super conductors?
3. Define degree of polymerisation?
4. Define the Chromophore?

II. Answer any four of the following. **4×5=20**

1. Write selection rules in Electronic spectroscopy?
2. Write the types of vibrations.
3. Write chain polymerisation with mechanism?
4. Write about Tacticity.
5. Write a note on particle reinforce composites?
6. Explain the factors which influence Enzyme catalysis.

III. Answer the following **4×10=40**

1. a) Define the following terms?

i) Bathochromic Shift ii) Hypsochromic shift

iii) Hypo chromic Shift iv) Hyper chromic Shift

OR

b). Taking suitable examples, explain the following terms with reference to PMR Spectroscopy.

i) Spin-Spin Coupling ii) Coupling constant

2. a). Discuss the various types of electronic transitions and Explain?

OR

b) State the selection rules for rotation Raman transitions. Derive expression for Stokes and Anti-stokes lines.

3. a) How will you proceed to determine the Molecular weight of polymers by Osmometric method?

OR

b) Write the preparation, properties and application of the following polymers?

i) PVC ii) Nylon 6, 6 iii) Polythene iv) Polystyrene

4. a) What is Michaelis-Menton Law and write the significance of Michaelis-Menton Constant(km) and maximum velocity(Vm)

OR

b) What do you understand by carbon Nano-tubes? Describe the method of preparation of carbon Nano-tubes.

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GOVERNMENT DEGREE COLLEGE (AUTONOMOUS), SIDDIPET
INTERNAL MODEL QUESTION PAPER

III YEAR,

SEMESTER –V, PAPER-VI

Subject: CHEMISTRY

Time: 30 Minutes TOTAL MARKS: 20

I. Answer the following **5×1=5**

1. What is Chemical shift?
2. What is Chromophore?
3. Define Polymer?
4. Define Meisner effect?
5. What is Catalysis?

II. Match the following **5×1=5**

1. 200-400nm	( )	A) Fe/Mo
2. 1650 cm^{-1}	( )	B) Polythene
3. 1-Signal	( )	C) C=O
4. Ethylene	( )	D) UV
5. Heber process	( )	E) CH_4

III. Fill in the blanks **5×1=5**

1. Stretching frequency of "OH" …….
2. ……..types of protons in Benzene.
3. Nano-meter =.....cm
4. Bio-Catalysts are .....
5. Monomer of polystyrene ……

IV. Multiple choice questions **5×1=5**

1. No. of vibration modes in CO_2 ( )
   a) 3 b) 2 c) 4 d)1
2. In which polymerisation Nylon 66 is formation takes place ( )
   a) Addition polymerisation b) Condensation polymerisation c) a & b d) None
3. At what temperature metals act as super conductors ( )
   a) Normal temperature b) Critical temperature c) Room temperature d) None
4. PAN is prepared from which of the following monomers ( )
   a) Ethylene b) Vinyl Chloride c) Acrylonitrile d) Styrene
5. If Km is increases what is the change in rate of reaction ( )
   a) Increases b) Decreases c) No change d) None

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GOVERNMENT DEGREE COLLEGE (AUTONOMOUS), SIDDIPET
INTERNAL MODEL QUESTION PAPER

III YEAR,

SEMESTER –V, PAPER-V

Subject: CHEMISTRY

Time: 30 Minutes TOTAL MARKS: 20

I. Answer the following **5×1=5**

1.

2.

3.

4.

5.

II. Match the following **5×1=5**

1. ( ) A)

2. ( ) B)

3. ( ) C)

4. ( ) D)

5. ( ) E)

III. Fill in the blanks **5×1=5**

1.

2.

3.

4.

5.

IV. Multiple choice questions **5×1=5**

1. ( )

a) b) c) d)

2. In which polymerisation Nylon 66 is formation takes place ( )

a) Addition polymerisation b) Condensation polymerisation c) a & b d) None

3. At what temperature metals act as super conductors ( )

a) Normal temperature b) Critical temperature c) Room temperature d) None

4. PAN is prepared from which of the following monomers ( )

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