

**B.TECH DEGREE EXAMINATIONS: DEC 2014**

(Regulation 2013)

Second Semester

**BIO-TECHNOLOGY**

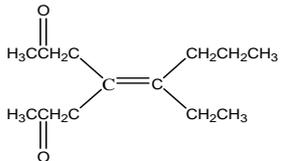
U13CHT205 : Chemistry for Biotechnology

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

- Compound in which carbon use only sp hybrid orbital for bond formation is
  - $\text{CH}_3\text{CH}_2\text{CH}_3$
  - $\text{CH}_2 = \text{CH}_2$
  - $\text{CH}_3\text{-CH=CH}_2$
  - $\text{CH} \equiv \text{CH}$
- Two geometrical isomers A & B has dipole moments 0.01D and 0.85D respectively. Predict which one is *cis* isomer \_\_\_\_\_
- D- Glucose and D- mannose are
  - Optical isomer
  - Epimer
  - Anomer
  - Functional isomer
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is a geometrical isomer. State whether the statement is true or false
- Hardening of plastics often involves Sulphur cross – linking. This process is called
  - Curing
  - Vulcanization
  - Plasticization
  - Compounding
- Expansion of LDPE is -----
- Calgon is -----
  - Sodium hexametaphosphate
  - Sodium hexaphosphate
  - Sodium hexaorthophosphate
  - Sodium metaphosphate
- Temporary hardness is also called as -----



- b) Detail on the different types of hydrogen bonding and discuss its consequences.
23. a) (i) Discuss the free radical mechanism that operates during the process of polymerization of Polyethylene. (7)  
(ii) Detail on lignin. (7)
- (OR)**
- b) (i) Classify polymers and explain each with an example (7)  
(ii) Discuss the chemical structure, preparation and applications of starch. (7)
24. a) Discuss the treatment of sewage water.
- (OR)**
- b) (i) Write a note on Reverse Osmosis process. (7)  
(ii) Detail on the different internal conditioning methods. (7)
25. a) State the principle and elaborate the steps involved in estimation of amount of calcium in milk.
- (OR)**
- b) Paraphrase the estimation of iodine in common salt

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