

B.Sc. Semester. 6

Polymer

: નોંધ : 28 OCT 2020

Sub code. 21869

૧. દરેક પ્રશ્નનો [a] અથવા [a(i)] અને [a(ii)] જ લખવાના રહેશે.  
 ૨. પ્રશ્ન : ૧[a] અથવા ૧[a(i)] અને ૧[a(ii)] તથા ૨[a] અથવા ૨[a(i)] અને ૨[a(ii)] ના 14 માર્ક્સ ના બદલે ૧૮ માર્ક્સ રહેશે.  
 ૩. પ્રશ્ન : ૩[a] અથવા ૩[a(i)] અને ૩[a(ii)] તથા ૪[a] અથવા ૪[a(i)] અને ૪[a(ii)] ના 14 માર્ક્સ ના બદલે ૧૭ માર્ક્સ રહેશે.  
 ૪. દરેક પ્રશ્નનો પ્રશ્ન નં ૧(b), પ્રશ્ન નં ૨(b), પ્રશ્ન નં ૩(b) તથા પ્રશ્ન નં ૪(b) (ટુંકા પ્રશ્નો) વિદ્યાર્થીએ લખવાના નથી.

- Que.1 (A) Give brief account on natural rubber? How neoprene rubber is industrially produced? [14]
- OR
- Que.1 (A-1) Give physical properties, chemical properties and application of NBR rubber. [07]  
 (A-11) Discuss industrial production of butadiene. [07]
- Que.1 (B) Give the answer of following question. (Any four) [04]
- (1) What is polymerization?
  - (2) In which two types plastic is classified?
  - (3) What is liquid type of rubber called?
  - (4) Which monomer compounds are used for the manufacturing of Buna-S rubber?
  - (5) Give the name of vulcanizing agent.
  - (6) Which catalyst is used in co-polymer reactor in the manufacturing process of SBR rubber?
- Que.2 (A) Detail physical properties, chemical properties, applications and manufacturing process of teflon. [14]
- OR
- Que.2 (A-1) Give detailed account on manufacturing process of polyvinyl acetate. [07]  
 (A-11) Discuss physical, chemical properties and applications of polypropylene. [07]
- Que.2 (B) Give the answer of following question. (Any four) [04]
- (1) Give the full form of HDPE.
  - (2) Which basic monomer compound is used for the synthesis of polyvinyl chloride?
  - (3) What is the chemical structure of polyvinyl alcohol?
  - (4) Give any two application of polystyrene.
  - (5) What is thermoplastic polymer?
  - (6) Give the chemical structure of polyethylene.
- Que.3 (A) Explain amino resin with manufacturing process of urea formaldehyde. [14]
- OR
- Que.3 (A-1) Discuss epoxy resin in detail. [07]  
 (A-11) How resol resin is formed? Explain with synthesis. [07]

- Que.3 (B) Give the answer of following question. (Any three) [03]
- (1) Which are the raw materials for the manufacturing of epoxy resins?
  - (2) What temperature is required for to produce phenol formaldehyde?
  - (3) Which catalyst is used in the synthesis of amino resin?
  - (4) What is the chemical structure of phthalic anhydride?
  - (5) Which type of reaction takes place in amino resin and phenolic resin?
- Que.4 (A) Explain industrial production of cellulosic fibre with physical properties, chemical properties and application. [14]
- OR
- Que.4 (A-1) Explain synthetic fibre vinyon in detail. [07]
- (A-11) Give physical properties, chemical properties, applications and synthesis of orlan. [07]
- Que.4 (B) Give the answer of following question. (Any three) [03]
- (1) Give the structure of caprolactam.
  - (2) What is the chemical reaction of saran?
  - (3) Which natural compound is used to manufacture cellulosic fibre?
  - (4) What is the temperature of aging tank in in synthesis of cellulose fibre?
  - (5) Which are the polymer compounds of polyamide group?