



Mavinay

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 2021
VI Semester

Class : III UG
Major : Chemistry

Time : 3 Hours
Max. Marks: 100

18BCHC25 Applied Chemistry –II

Part A
Choose the Correct Answer

10 x 1 = 10

1. Which of the following represents natural rubber chemically? CO1 K1
a. cis 1,4-polyisoprene b. trans 1,4-polyisoprene
c. cis 1,3-polyisoprene d. trans 1,3-polyisoprene
2. A polymer made of identical monomer units is called CO1 K1
a. Homopolymer b. Linear polymer
c. Copolymer d. Branched polymer
3. Pigments which are ----- variant of organic dyes are called vat dyes CO2 K1
a. Soluble b. Insoluble
c. Acidic d. Basic
4. An azo dye is formed by interaction of an aromatic diazonium chloride with CO2 K1
a. phenol b. aliphatic amine
c. benzene d. nitrous acid
5. Which of the following is used as in gram staining? CO3 K1
a. Hematoxyline b. Acetocarmine
c. Crystal violet d. Rhodamine
6. Which of the following vitamin helps in blood clotting? CO3 K1
a. Vitamin K b. Vitamin A
c. Vitamin D d. Vitamin C
7. On increasing the temperature, the strength of adhesive — CO4 K1
a. remain same b. increases
c. decreases d. first increases than decreases
8. The epoxy resins are the ---products of epichlorohydrin and bisphenol. CO4 K1
a. Free radical b. Addition
c. Ion-exchange d. Condensation
9. The amount of carbon present in low carbon steels is CO5 K1
a. 5% to 7% b. 0.70% to 2.2% c. 0.10% to 0.30% d. 0.6% to 0.8%

10. Mild steel is used for aircraft nuts. CO5K1
a. phosphorus b. nickel c. silicon d. carbon

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. Discuss the various tacticity of polymers. CO1 K2
(or)
- 11.b. Distinguish between thermoplastic and thermosetting polymers. CO1 K2
- 12.a. Explain the requisites for true dyes. CO2 K3
(or)
- 12.b. How are dyes classified based on mode of application. CO2 K2
- 13.a. Outline the preparation and uses of sulphapyridine. CO3 K4
(or)
- 13.b. List the sources and deficiencies of vitamin B12. CO3 K3
- 14.a. Explain the preparation and uses of animal glue. CO4 K2
(or)
- 14.b. Discuss about silicate adhesives. CO4 K2
- 15.a. Classify steel and explain the composition. CO5 K2
(or)
- 15.b. List the composition and uses of nickel-copper alloys. CO5 K3

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 16.a. Classify polymers based on sources and structure. CO1 K2
(or)
- 16.b. Explain compression and injection moulding process. CO1 K2
- 17.a. Explain the following: i. Chromophore ii. auxochrome iii. bathochromic shift CO2 K2
iv. hypsochromic shift
(or)
- 17.b. Discuss the direct, vat and disperse dyeing process. CO2 K2
- 18.a. Explain the analgesic effects of methadone and heroine. CO3 K2
(or)
- 18.b. i. Discuss the production of penicillin. CO3 K3
- ii. Explain preparation of paludrine.
- 19.a. Discuss the preparation and uses of phenolic, epoxy and alkyd resin adhesives. CO4 K2
(or)
- 19.b. Explain preparation and uses of acrylic and vinyl adhesives. CO4 K2
- 20.a. Illustrate the manufacture of steel by LD process. CO5 K2
(or)
- 20.b. Explain the composition and uses of heat resistant stainless steel. CO5 K2
