



CHEMISTRY

BOOKS - V PUBLICATION

POLYMERS

Question Bank

1. What are polymers?



[Watch Video Solution](#)

2. How are polymers classified on the basis of structures?



[Watch Video Solution](#)

3. Write the names of the monomers of the following polymers:

'(##VPS_HSS_CHE_XII_C15_E01_003_Q01##)'



[View Text Solution](#)

4. Classify the following as addition and condensation polymers:

Terylene, Polyvinyl chloride, polythene



[Watch Video Solution](#)

5. Explain the difference between Buna-N and Buna -S



[Watch Video Solution](#)

6. Arrange the following polymers in the increasing order of their intermolecular forces.

Buna-S, Polythene, Nylon 6,6

 [Watch Video Solution](#)

7. Explain the terms polymer and monomer.

 [Watch Video Solution](#)

8. What are natural and synthetic polymers? Give two example of each type

 [Watch Video Solution](#)

9. Distinguish between the terms homopolymer and copolymer and give an example of each.

 [Watch Video Solution](#)

10. How do you explain the functionality of a monomer?

 [Watch Video Solution](#)

11. Define the term polymerisation.

 [Watch Video Solution](#)

12. Is $(NH - CHR - CO)_n$ A homopolymer or copolymer?

 [Watch Video Solution](#)

13. In which classes, the polymers are classified on the basis of molecular force?

 [Watch Video Solution](#)

14. How can you differentiate between addition and condensation polymerization?

 [Watch Video Solution](#)

15. Explain the term copolymerisation and give two examples.

 [Watch Video Solution](#)

16. Write the free radical mechanism for the polymerization of ethene

 [Watch Video Solution](#)

17. Define thermoplastics and thermosetting polymers with two examples of each

 [Watch Video Solution](#)

18. Write the monomers used for getting the following polymers.
i) Polyvinyl chloride ii) Teflon iii) Bakelite

 [Watch Video Solution](#)

19. Write the name and structure of one of the common initiators used in free radical addition polymerization.

 [Watch Video Solution](#)

20. How does the presence of double bonds in rubber molecules influence their structure and reactivity?

 [Watch Video Solution](#)

21. Rubber is a natural polymer obtained from the bark of rubber trees. Vulcanisation improves elasticity of rubber. What is vulcanisation?

 [Watch Video Solution](#)

22. What are the monomers of Nylon 6 and Nylon 6,6

 [Watch Video Solution](#)

23. Write then names and structure of the monomers of the following polymers: i. Buna - S ii. Buna - N iii. Dacron iv. Neoprene

 [Watch Video Solution](#)

24. Identify the monomer in the following polymeric structures:

'(##VPS_HSS_CHE_XII_C15_E02_018_Q01##)'

 [View Text Solution](#)

25. How is dacron obtained from ethylene glycol and terephthalic acid?

 [Watch Video Solution](#)

26. What is biodegradable polymer? Give an example of a biodegradable aliphatic polyester?

 [Watch Video Solution](#)

27. What is the starting material for the preparation of PVC

 [Watch Video Solution](#)

28. What are the monomers of the following? Nylon 6

 [Watch Video Solution](#)

29. Define plasticizers

 [Watch Video Solution](#)

30. Write the name and structure of the monomer units of terylene.

 [Watch Video Solution](#)

31. Give the name of the polymer which is used for making non-stick utensils

 [Watch Video Solution](#)

32. Name a synthetic polymer which is an ester

 [Watch Video Solution](#)

33. What does PMMA stand for?

 [Watch Video Solution](#)

34. Write the monomers used for getting the following polymers. i) Polyvinyl chloride ii) Teflon iii) Bakelite

 [Watch Video Solution](#)

35. PVC, bakelite and polythene are plastics

Name the monomer units of PVC and bakelite .



[Watch Video Solution](#)

 [Watch Video Solution](#)

36. Name a synthetic polymer which is an amide

 [Watch Video Solution](#)

37. Name a natural elastomer

 [Watch Video Solution](#)

38. Distinguish between the terms homopolymer and copolymer and give an example of each.

 [Watch Video Solution](#)

39. What is the function of sulphur in the vulcanisation of rubber

 [Watch Video Solution](#)

40. Natural rubber obtained from rubber latex is soft and sticky
Classify the following into natural and synthetic polymers:
Nylon, starch, cellulose, PVC

 [Watch Video Solution](#)

41. Bakelite on heating become a hard-non- fusible mass? Which property of bakelite is responsible for this change?

 [Watch Video Solution](#)

42. Find-the copolymers from the following polymers:

Polystyrene, Polythene, PVC, Nylon6,6, Terylene, Nylon 6 .

 [Watch Video Solution](#)

43. X' is a polymer formed from an unsaturated halogen compound which is chemically inert and is used for making frying pans. a. Identify the polymer X b. Why do we use X for making non- sticky frying pan?

 [Watch Video Solution](#)

44. A copolymer could be formed in both addition polymerisation and condensation polymerisation. Do you agree?

Substantiate.

 [Watch Video Solution](#)

45. Consider the polymers Nylon6 and Nylon 6,6. Establish the significance of the numbers -given: along with the name of the monomers

 [Watch Video Solution](#)

46. The characteristic properties of natural rubber can be varied by vulcanisation. Illustrate.

 [Watch Video Solution](#)

47. SBR is synthetic polymer. One of its monomers is $CH_2 = CH - CH = CH_2$. Write the second monomer and construct the equation showing its formation.

 [Watch Video Solution](#)

48. The structural formula of a polymer is given below equation

'(##VPS_HSS_CHE_XII_C15_E03_022_Q01##)'

Predict whether it is an addition polymer or a condensation polymer. Justify

 [View Text Solution](#)

49. Some polymers are given below. . PVC 'Teflon, Nylon-6, 6 Make a table using the above representing Name of polymer, Name of monomers and type, of polymerisation "(addition/condensation).

 [Watch Video Solution](#)

50. In a science exhibition, one student mixes two transparent liquids in a beaker and draws out a sticky material from the interface of two liquids and he claims that the material formed is nylon 6, 6 . i. Name the two liquids he mixed. ii. Suggest two uses of nylon6,6. iii. Name the monomer of nylon6.

 [Watch Video Solution](#)

51. Observe the following

'(##VPS_HSS_CHE_XII_C15_E03_026_Q01##)'

i. Identify the polymers A, B and C ii. Write the monomers of A and B iii. Write one use of nylon 6

 [View Text Solution](#)

52. "Addition polymerisation is used for the production of important polymers. a. Give one example for the addition polymer. b. What is the mechanism in addition polymerisation?"

 [Watch Video Solution](#)

53. Write the monomers of the polymers given: Teflon, Bakelité and natural rubber.

 [Watch Video Solution](#)

54. What does PMMA stand for?

 [Watch Video Solution](#)

55. Name one thermosetting and one thermoplastic polymer

 [Watch Video Solution](#)

56. Name a synthetic polymer which is an amide

 [Watch Video Solution](#)

57. Write equation for the preparation of polyacrylonitrile?

 [Watch Video Solution](#)

58. Why is bakelite a thermosetting polymer?

 [Watch Video Solution](#)

59. Give the differences of low density and high density polymers?

 [Watch Video Solution](#)

60. Write the name and structure of the monomer of terylene or dacron?

 [Watch Video Solution](#)

61. What is the main constitution of bubble gum?

 [Watch Video Solution](#)

62. What is plasticizer?



[Watch Video Solution](#)

63. What are the monomers of SBR?



[Watch Video Solution](#)

64. Give examples for homopolymers?



[Watch Video Solution](#)

65. Give examples for copolymers?



[Watch Video Solution](#)

66. Polymers are macro molecules formed by union of monomers.

Name natural polymers and synthetic polymer

 [Watch Video Solution](#)

67. Give examples for semisynthetic polymers?

 [Watch Video Solution](#)

68. Give examples for synthetic polymers?

 [Watch Video Solution](#)

69. Classify the following into linear, branched chain and cross linked polymers: amylopectin, bakelite, glycogen, urea - formaldehyde polymer, polyvinyl chloride, polythene.

 [Watch Video Solution](#)

70. What is Teflon?

 [Watch Video Solution](#)

71. What is novalac?

 [Watch Video Solution](#)

72. What is neoprene?

 [Watch Video Solution](#)

73. Name the polymer formed by adipic acid and hexamethylene diamine.

 [Watch Video Solution](#)

74. Polypropylene contains a large number of chiral carbon atoms. Would you, therefore, expect samples of either isotactic, syndiotactic or atactic polypropylene to rotate plane polarised light, explain?

 [Watch Video Solution](#)

75. Explain how does 1,3 butadiene polymerise by different routes?

 [Watch Video Solution](#)

76. A monomer of a polymer on ozonolysis gives two moles of CH_2O and one mole of CH_3COCHO . Write the structure of monomer and write all cis - configuration of polymer chain.

 [Watch Video Solution](#)

77. Why should we always use purest monomer in free radical polymerisation?

 [Watch Video Solution](#)

78.

Arrange the following alkenes towards order of increasing reactivity in cationic polymerisation?

'CH₂=CH CH₃, CH₂=CH Cl, CH₂=CH C₆H₅, CH₂=CH COO CH₃'



Watch Video Solution

79. Why is cationic polymerisation preferred in case of vinyl monomers containing electron donating groups.



Watch Video Solution

80. Arrange the following alkenes in order of increasing reactivity towards anionic polymerisation

$CH_2 = CHCH_3$, $CH_2 = CF_2$, $CH_2 = CHCN$, $CH_2 = CHC_6H_5$



Watch Video Solution

81. $\text{CF}_2 = \text{CF}_2$ is a monomer of:

A. Teflon

B. Glyptal

C. Nylon-6

D. Buna-5

Answer: A



Watch Video Solution

82. Which of the following a natural polymer

A. Polyestser

B. Glyptal

C. Starch

D. Nylon-6

Answer: C



Watch Video Solution

83. Which one of the following is used to make non-stick cookware?

A. PVC

B. Polystyrene

C. poly (ethylene terephthalate)

D. poly tetrafluoroethylene

Answer: D



Watch Video Solution

84. Nylon threads are made of

- A. Polyethylene polymer
- B. Polyvinyl polymer
- C. polyesterpolymer
- D. Polyamide polymer

Answer: D



Watch Video Solution

85. The monomers of Buna -s rubber are

- A. Styrene and butadiene
- B. Isoprene and butadiene
- C. vinyl chloride and sulphur
- D. Butadiene

Answer: A



Watch Video Solution

86. Which is not a polymer

- A. Sucrose
- B. Enzyme
- C. Starch
- D. Teflon

Answer: A



Watch Video Solution

87. Interparticle forces present in Nylon-6,6 are

- A. vander Waals
- B. Hydrogen bonding
- C. dipole-dipole interaction
- D. none of the above

Answer: B



Watch Video Solution

88. Natural rubber is

A. polyisoprene

B. Chloroprene

C. Adipic acid

D. caprolactam

Answer: D



Watch Video Solution

89. Nylon - 6 is made from

A. 1, 3 butadiene

B. caprolactam

C. Buna S

D. All cis - polyisoprene

Answer: D



Watch Video Solution

90. Which of the following a chain growth polymer

- A. Starch
- B. Nucleic acid
- C. Polystyrene
- D. Proteins

Answer: C



Watch Video Solution

91. Which is a copolymer

- A. Polyethylene
- B. polyvinyl chloride
- C. Polytetrafluoroethylene
- D. Nylon6,6

Answer: D



Watch Video Solution

92. Which of the following is an addition polymer?

- A. Nylon 6
- B. Nylon 66
- C. High density polythene
- D. Dacron

Answer: C

 [Watch Video Solution](#)

93. $\text{NH}(\text{CH}_2)_6\text{NHCO}(\text{CH}_2)_4\text{CO}]_n$ is a:

- A. Homopolymer
- B. Copolymer
- C. Addition polymer
- D. Thermosetting polymer

Answer: B

 [Watch Video Solution](#)

94. Terylene is a condensation polymer of ethylene glycol and

A. Benzoic acid

B. phthalic acid

C. Salicylic acid

D. Terephthalic acid

Answer: D



Watch Video Solution

95. Which of the following monomers gives neoprene on polymerisation?

A. $\text{CH}_2=\text{CHCl}$

B. ' $\text{CCl}_2=\text{CCl}_2$ '

C. $\text{CH}_2=\text{CClCH}=\text{CH}_2$

D. $\text{CF}_2=\text{CF}_2$

Answer: C



Watch Video Solution

96. Which is a biodegradable polymer?

A. Cellulose

B. Polythene

C. Polyvinyl chloride

D. Nylon -6

Answer: A



Watch Video Solution

97. Chain transfer reagent is

A. CCl_4

B. CH_4

C. O_2

D. H_2

Answer: A



Watch Video Solution

98. Which of the following is a fully fluorinated polymer :

Neoprene, Teflon, Thiokol, PVC

A. Neoprene

B. Teflon

C. Thiokol

D. PVC

Answer: B



Watch Video Solution

99. Soft drinks and baby feeding bottles are generally made up of

- A. Polyester
- B. polyurethane
- C. Polystyrene
- D. polyamide

Answer:



Watch Video Solution

100. Which of the following is used in paints?

- A. Terylene
- B. Nylon
- C. Glyptal
- D. chloroprene

Answer: C



Watch Video Solution

101. Orlon has a unit of

- A. Vinyl cyanide
- B. Acrolein
- C. Glycol

D. Isoprene

Answer: A

 [Watch Video Solution](#)

102. Which of the following polymers is prepared by condensation polymerisation : Styrene, Nylon - 66, Teflon, Rubber

A. Styrene

B. Nylon - 66

C. Teflon

D. Rubber

Answer: B

 [Watch Video Solution](#)

103. Which of the following is a biodegradable polymer of polyamide class : Dextran, Nylon -2-nylon-6, Nylon -66, PHBV

A. Dextran

B. Nylon -2-nylon-6

C. Nylon -66

D. PHBV

Answer: B



Watch Video Solution

104. Perlon is

A. Rubber

B. Nylon

C. Terylene

D. Oxion

Answer: B



Watch Video Solution

105. Caprolactam is the starting material for

A. Nylon 6

B. Terylene

C. Nylon -6,10

D. Nylon -6,6

Answer: A

 [Watch Video Solution](#)

106. Which of the following polymers is a homopolymer?

A. Bakelite

B. Nylon-6,6

C. Terylene

D. Neoprene

Answer: D

 [Watch Video Solution](#)

107. Synthetic polymer prepared by using ethylene glycol and terephthalic acid is known as : Teflon, Terylene, Nylon, PVC

A. Teflon

B. Terylene

C. Nylon

D. PVC

Answer: B



Watch Video Solution

108. Polymers are

A. Micromolecules

B. Macromolecules

C. Sub- micromolecules

D. none of the above

Answer: B



Watch Video Solution

109. Which percentage of sulphur is used in the vulcanisation of rubber?

A. 0.05

B. 0.03

C. 0.3

D. 0.55

Answer: A



Watch Video Solution

110. Glyptal polymer is obtained from glycerol by reacting it with

A. Malonic acid

B. phthalic acid

C. Maleic acid

D. Acetic acid

Answer: B



[Watch Video Solution](#)

111. Acrilan is a hard, horny and a high melting material. Which of the following represents its structure.

A. F

B. F

C. F

D. F

Answer: A



View Text Solution

112. Which of the following polymers can be used for lubrication and as an insulator?

A. SBR

B. PVC

C. PTFE

D. PAN

Answer: C

113. Which one of the following statements is not true?

- A. Buna S is a copolymer of butadiene and styrene
- B. Natural rubber is a 1,4 - polymer of isoprene
- C. In vulcanisation, the formation of sulphur bridges between different chains makes rubber harder and stronger.
- D. Natural rubber has the trans - configuration at every double bond

Answer: D