

(a) PMMA (b) Lexan (c) Nomex

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Assignment Sheet - Polymers

Polymer of chloroprene	is					
(a) isoprene	(b) neoprene	13. A condensation polymer among the following is				
(c) both		(a) Polystyrene (b) Teflon				
2. Synthetic rubber is poly	(d) none.	(c) Dacron (d) PVC				
(a) Vinylene chloride		14. Ziegler-Natta catalyst is				
(c) 2-chloro-1,3-butadie	(b) 1, 3-butadine	(a) a mixture of titanium (V) chloride and triethyl aluminium				
Synthetic human hai	ene (d) cis-isoprene.	(b) a mixture of zirconium (III) chloride and triethyl aluminium				
chloride and acrylonism	igs are made from a copolymer of vinyl	(c) a mixture of zirconium (III) chloride and dimethyl				
chloride and acrylonitr (a) PVC	ne and is known as	aluminium				
(c) cellulose nitrate	(b) polyacrylonitrile	(d) a mixture of titanium (III) chloride and dimethyl				
	(d) Dynel.	aluminium.				
4. Plexiglass is the comme	ercial name of	The vulcanized rubber has				
(a) polymethyl methaci	rylate	(a) high water absorption, resistant to oxidation and good				
(b) glyptal		elasticity				
(c) polyacrylonitrile	(d) polyethylacrylate.	(b) high water absorption, susceptible to oxidation and no				
Glyptal polymer is obta	ained from glycol on treatment with	elasticity				
(a) maionic acid	(b) phenol	(c) low water absorption, resistance to oxidation and good				
(c) phthalic acid	(d) terephthalic acid.	elasticity				
The commercial name	of polymethyl methacrylate is	(d) low water absorption, susceptible to oxidation and no				
(a) Lucite	(b) Plexiglass	elasticity.				
(c) Perspex	(d) all of these.	16. Which of the following is a biodegradale polymer?				
PDI for natural polyme	ers is generally close to	(a) Cellulose (b) Polythene				
(a) zero (b) 1	(c) 10 (d) 100.	(c) Polyvinyl chloride (d) Nylon-6.				
Ebonite is	3.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.000 (0.	17. Which one of the following is a chain-growth polymer?				
(a) natural rubber	(b) synthetic rubber	(a) Starch (b) Nucleic acid				
(c) highly vulcanized r		(c) Polystrene (d) Protein.				
(d) polypropene.		18. Nylon is not a				
9. Which of the follo	owing polymers do not involve	(a) condensation polymer (b) polyamide				
cross-linkages ?		(c) copolymer (d) homopolymer.				
(a) Melmac	(b) Bakelite	19. Which of the following is not correct regarding terylene?				
(c) Polythene (d) Vulc		(a) Step-growth polymer (b) Synthetic fibre				
0. Monomer of urethane is		(c) Condensation polymer (d) It is also called dacron				
	О	(e) Thermoplastic.				
(a) $H_2N.C \equiv N$	(;) II N G OV	20. Which of the following is a polyamide?				
$(a) \Pi_2 \Pi_3 C = \Pi$	$(\dot{\nu}) H_2 N - C - OH$	(a) Teflon (b) Nylon-6,6 (c) Terylene (d) Bakelite.				
	O II	White the second				
$(c) HO - C \equiv N$	(d) $H_2N - C - OC_2H_5$.	21. Which of the following is fully fluorinated polymer?				
	eding bottles are generally made up of	(a) Neoprene (b) Teflon (c) Thiokol (d) PVC.				
(a) polyester	(b) polyurethane	T				
(c) polyurea	(d) polyamide	22. The monomers of Buna-S rubber are				
(e) polystyrene.	(a) polyamide	(a) butadiene and styrene				
 Polymer used in bullet 	proof gloss is	(b) vinyl chloride and sulphur				
(a) PMMA (b) Love		(c) butadiene (d) isoprene and butadiene.				

(d) Kevlar.

23. The monomer of the polymer,

$$CH_{3}$$
 $-CH_{2} - C - CH_{2} - C < CH_{3}$
 CH_{3} is:

(a)
$$H_2C = C CH_3$$
 (b) $CH_3CH = CHCH_3$

$$(b)$$
 CH₃CH = CHCH₃

$$(c)$$
 CH₃CH = CH₂

$$(d)(CH_3)_2C = C(CH_3)_2$$

- 24. Three dimensional molecules with cross-links are formed in the case of a
 - (a) thermoplastic
- (b) thermosetting plastic

(c) both

- (d) none.
- 25. Which is not a polymer?
 - (a) Sucrose (b) Enzyme
- (c) Starch
- (d) Teflon.
- 26. The number average molecular mass and mass average molecular mass of a polymer are respectively 30,000 and 40,000. The polydispersity index of the polymer is
 - (a) < 1(e)-1.
- (b) > 1
- (d)0
- 27. [NH (CH₂)₆NHCO(CH₂)₄CO] is a
 - (a) addition polymer
- (b) thermosetting polymer
- (c) homopolymer
- (d) copolymer.
- 28. Which of the following polymers is prepared by condensation polymerization?
 - (a) Teflon
- (b) Natural rubber
- (c) Polystyrene
- (d) Nylon-6,6
- 29. Bakelite is obtained from phenol by reaction with
 - (a) HCHO
- (b) (CH₂OH)₂
- (c) CH₃CHO
- (d) CH₃COCH₃
- 30. 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 vulcanization, the formation of sulphur bridges between different chains makes rubber harder and stronger
 - (d) Natural rubber has the trans-configuration at every double bond
- 31. Among cellulose, poly (vinyl chloride), nylon and natural rubber, the polymer in which the intermolecular force of attraction is weakest is
 - (a) Nylon
- (b) Poly (vinyl chloride)
- (c) cellulose
- (d) Natural rubber
- 32. The catalyst used for olefin polymerization is
 - (a) Ziegler-Natta catalyst
- (b) Wilkinson catalyst
- (c) Raney nickel catalyst
- (d) Merrified resin

- 33. The monomer used to produce orlon is
 - $(a) CH_2 = CHF$
- (c) CH₂ = CHCl
- (b) $CH_2 = CCl_2$ (d) $CH_2 = CH CN$
- 34. Structures of some common polymers are given below: Which one is not correctly represented?

(a) Neoprene
$$+ CH_2 - C = CH - CH_2 - CH_2 + \frac{1}{n}$$

- (b) Terylene + OC - COOCH₂CH₂ O +
- (c) Nylon 66 + NH(CH₂)₆ NHCO(CH₂)₄) CO +_n
- (d) Teflon $+ CF_2 CF_2 + \frac{1}{n}$
- 35. Buna-N synthetic rubber is a copolymer of
 - (a) $H_2C = CH CH = CH_2$ and $C_6H_5CH = CH_2$
 - (b) $H_2C = CH CN$ and $H_2C = CH CH = CH_2$
 - (c) $H_2C = CH CN$ and $H_2C = CH C = CH_2$ CH₃

$$Cl$$
|
(d) $H_2C = CH - C = CH_2$ and $H_2C = CH - CH = CH_2$

- 36. The polymer containing strong intermolecular forces, e.g., hydrogen bonding is
 - (a) natural rubber
- (b) teflon
- (c) nylon-6, 6
- (d) polystyrene
- 37. Which one of the following is an example of copolymer?
 - (a) Buna-S
- (b) Teflon

(c) PVC

- (d) Polypropylene
- 38. The following process gives rise to a polymer familiarly known

$$CF_2 = CF_2 \xrightarrow{[(NH_4)_2S_2O_8]} ?$$

- (a) Teflon
- (b) Polypropene

(c) Orlon

- (d) Rayon
- 39. In bakelite, the rings are joined to each other through

$$(a) - CH_2 - (b) - O - (c) - C - H (d) - C - H O$$

- 40. Which of the following statements is not correct?
 - (a) Caprolactum is the monomer of nylon-6
 - (b) Terylene is a polyester polymer
 - (c) Phenol-formaldehyde resin is known as bakelite
 - (d) The monomer of natural rubber is butadiene

41.	. The monomer of polystrene is		52.	Which of these is not a monomer for a high molecular mass				
	$(a) C_2H_5CH = CH_2$	$(b) CH_2 = CHCl$		sificone poryr	HEI!	7-		
	$(c) C_6 H_5 CH = CH_2$	(d) CH ₂ = CHCHO		(a) Me ₃ SiCl	(b) PhSiCl ₃	(c) MeSiCl ₃	(d) Me ₂ SiCl ₂	
	(e) C ₆ H ₅ -CH ₂ =CHCHO					560		
42.	Of the following which one is classified as polyester polymer?			Which is the monomer of Neoprene in the following				
	(a) Terylene	(b) Bakelite		(a) CH ₂ =CH	-CH-CH-	(b) CH CH		
	(c) Melamine	(d) Nylon-66			cm-cm ₂	$(b) CH_2 = CH$	-C=Cn	
				(a) $CH_2 = CH - CH = CH_2$ (b) $CH_2 = CH - C \equiv CH$				
43.	Monomers of bakelite are			(c) $CH_2=CH-C\equiv CH$ (d) $CH_2=C-CH=CH_2$			$-CH = CH_2$	
	(a) phenol and formaldehyde	e					en e	
	(b) phenol and acetaldehyde			(c) CH ₂ =CH-C≡CH (d) CH ₂ = C - CH = CH ₂ CH ₃ 54. The repeating unit present in Nylon-6 is			H ₃	
	(c) quinol and formaldehyde							
	(d) none of the above		54.					
44.	Protein is a			(a) $+NH(CH_2)_6NHCO(CH_2)_4CO +$				
10.00	(a) polyester	(b) polyamide		(b) + CO(CH2)5NH+ (c) + CO(CH2)6NH+		$_{2})_{6}NH-$		
	(c) polyethylene	(d) polyanhydride		(d)+CO(CH ₂) ₄ NH-}-			
	(, , I - 3 3	(a) polyamiyariac		(e)-{NH(CH ₂)	4NHCO(CH ₂)	₅ CO-}-		
45.	Which one of the following	is not a condensation polymer?	55. A polymer of prop-2-enenitrile is called					
	(a) Melamine	(b) Glyptal		(a) saran	(b) orlon	(c) dacron	(d) teflon	
	(c) Dacron	(d) Neoprene					8 5	
		(a) 1 respiene	56.			condensation j	polymer?	
46.	Which of the following state	ements is false?		(a) Acrylonitri	le	(b) Dacron		
Water Control	(a) Artificial silk is derived f		42 000	(c) Neoprene (d) Teflon Which of the following organic compounds polymerizes to				
	(b) Nylon-66 is an example of		57.			anic compound	is polymerizes to	
	(c) The repeat unit in natura		form the polyster Dacron? (a) Propylene and para HO-(C ₆ H ₄) – OH (b) Benzoic acid and ethanol					
	(d) both starch and cellulos							
	(a) boar states and centilose are polymers of glacose			(c) Terephthalic acid and ethylene glycol				
47.	Which one of the following	ng set forms the biodegradable		(d) Benzoic acid and para $HO - (C_6H_4) - OH$				
02/2/2	polymer? (a) $CH_2 = CH - CN$ and $CH_2 = CH - CH = CH_2$ (b) $H_2N - CH_2 - COOH$ and $H_2N(CH_2)_5COOH$ (c) $HO - CH_2 - CH_2 - OH$ and $HOOC - \bigcirc - COOH$			(a) Belizore ac	io uno para 110	(06114)-01	1	
				 58. Which one of the following is an example of thermosetting polymer? (a) (CH₂-C=CH-CH₂) (b) (CH₂-CH) (b) 				
				Cl				
(d) $\langle \bigcirc \rangle$ - CH = CH ₂ and CH ₂ = CH - CH = CH ₂			(c) + (N - (CH2)6 - N - C - (CH2)4 - C)n					
				(c) $+(N - (CH_2)_6 - N - C - (CH_2)_4 - C)_n$				
48	48. The species which can best serve as an initiator for the cationic polymerization is			ОН		1		
101				CH ₂ CH ₂				
	(a) HNO_3 (b) $AlCl_3$	(c) BuLi (d) LiAlH ₄		(d)	01.12 Y	0112		
						/2		
49.	49. Neoprene is the polymer of (a) cis-isoprene (b) butadiene		50	Novolao the l	inaan nalumaa	/ "		
			39.	59. Novolac, the linear polymer used in paints is (a) Copolymer of 1, 3-butadiene and styrene				
	(c) chloroprene	(d) trans-isoprene		(b) obtained by the polymerization of methylmethaacrylate				
				(c) initial product obtained in the condensation of phenol and				
50. A thermoplastic among the following is			formaldehyde.					
	(a) bakelite (b) polystyrene			(e) Copolymer of melamine and formaldehyde.				
	(c) terylene (d) urea-formaldehyde resin							
	(e) nylon		60.			of polymers t	from respective	
51.	Nylon is an example of	(b) Dobaha-		monomers is called		20		
	(a) Polyamide	(b) Polythene		(a) polyacrylo		(b) Copolymer		
	(c) Polyester	(d) Polysaccharide		(c) polymeriza	tion	(d) none of the	e above	