

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-I (CtoD) • EXAMINATION – WINTER • 2014****Subject Code: C312301****Date: 24-12-2014****Subject Name: Basic Polymer Chemistry****Time: 02:30 pm – 04:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumption wherever necessary.
3. Each question is of 1 mark.
4. Use of SIMPLE CALCULATOR is permissible. (Scientific/Higher Version not allowed)
5. English version is authentic.

No.	Question Text and Option			
1.	----- is a polymer.			
	A.	Iron	B.	Calcium
	C.	Polypropylene	D.	Carbon
2.	----- is a synthetic polymer.			
	A.	Wool	B.	Cotton
	C.	Silk	D.	PVC
3.	----- is an inorganic polymer.			
	A.	PP	B.	PVC
	C.	PE	D.	Silicone.
4.	----- is a thermoplastic polymer.			
	A.	PVC	B.	MF
	C.	UF	D.	PF
5.	----- is a thermosetting polymer.			
	A.	MF	B.	PE
	C.	PP	D.	PS
6.	Ethylene has a functionality of -----			
	A.	One	B.	Two
	C.	Three	D.	Four
7.	Polyethylene adipate has is a ----- polymer.			
	A.	Natural	B.	Fibre
	C.	Organic heterochain	D.	Inorganic.
8.	CH ₂ CHCL is a ----- monomer.			
	A.	Vinyl	B.	Allyl
	C.	Olefins	D.	Dienes.
9.	Benzoyl peroxide is a -----			
	A.	Initiator	B.	Gas
	C.	Plastic	D.	Rubber
10.	After initiation comes----- step.			
	A.	Suspension	B.	Emulsion
	C.	propagation	D.	bulk
11.	After propagation comes----- step.			
	A.	termination	B.	Emulsion
	C.	Solution	D.	suspension
12.	Water has ----- bond.			
	A.	Bulk	B.	Emulsion
	C.	Suspension	D.	Hydrogen
13.	Carbon atom has -----bond.			
	A.	covalent	B.	Pc
	C.	Mf	D.	Pvac
14.	----- resins is produced by condensation of urea with formaldehyde.			

	A.	Epoxy	B.	Alkyd
	C.	Amino	D.	Phenolic
15.	----- tubes are substitutes for human blood vessels during bypass operation.			
	A.	PE	B.	Pvc
	C.	Ps	D.	Teflon
16.	A raw material used in making nylon is -----			
	A.	Adipic acid	B.	Ethylene
	C.	Butadiene	D.	Mma
17.	PE is -----			
	A.	Random copolymer	B.	Alternate copolymer
	C.	Homopolymer	D.	Crosslinked polymer
18.	----- group is most likely to participate in dipole interaction.			
	A.	Aromatic ring	B.	Ketone
	C.	Alcohol	D.	Alkene
19.	Which of the following is not a polyamide.			
	A.	Nylon66	B.	Glyptal
	C.	Protein	D.	Nylon6
20.	The product of addition polymerization reaction is -----			
	A.	Monomer	B.	Polymer
	C.	Dimer	D.	Oligomer
21.	Thermoplastic are -----			
	A.	Linear	B.	Crosslinked
	C.	Both A&B	D.	Crystalline
22.	Which of the following is a fibre?			
	A.	Silk	B.	Nylon66
	C.	Dacron	D.	All of these.
23.	The present atomic weight scale is based on			
	A.	C12	B.	C13
	C.	O16	D.	H1
24.	Buna-s is also known as -----			
	A.	Teflon	B.	Ptfe
	C.	Sbr	D.	Polyacrylates
25.	Density of which material is highest from the following?			
	A.	Ldpe	B.	Lldpe
	C.	Hdpe	D.	Uhmwpe
26.	Most commonly used rubber vulcanisation agent is-----			
	A.	Sulphur	B.	Bromine
	C.	Platinum	D.	Alumina
27.	Which of following has the weakest intermolecular forces?			
	A.	Polyisoprene	B.	Nylon66
	C.	Polystyrene	D.	Bakelite
28.	Properties of polymer is affected by the			
	A.	Chain length	B.	Intermolecular force
	C.	Branching	D.	All of above
29.	Which of the following is a copolymer			
	A.	Ps	B.	Sbr
	C.	Ptfe	D.	Pp
30.	Cross linked polymers are -----			
	A.	Thermoplastic	B.	Thermosetting
	C.	A or B	D.	Fibres only
31.	Molecular weight of plastics ranges from			
	A.	1000-5000	B.	5000-10000
	C.	20000-25000	D.	100000-1000000
32.	Commercial production of pp employs ----- polymerization.			

	A.	Emulsion	B.	Bulk
	C.	Suspension	D.	Solution
33.	Branched chain polymers compared to linear polymers have higher			
	A.	Density	B.	Tensile strength
	C.	Melting point	D.	Degree of irregular packing
34.	Silicone is a -----			
	A.	Monomer	B.	Inorganic polymer
	C.	Thermoplastic	D.	Natural polymer
35.	Polymers are -----			
	A.	Micromolecules	B.	Macromolecules
	C.	Sub micro	D.	None of above
36.	----- is an inhibitor			
	A.	Nitrobenzene	B.	Silicon
	C.	Magnesium	D.	Sulphur
37.	----- is a surfactant.			
	A.	CH ₄	B.	Oxygen
	C.	H ₂ O	D.	CH ₃ (CH ₂) ₆ COONa
38.	The concentration beyond which only micelle formation is possible is called			
	A.	AMC	B.	SMC
	C.	ZMC	D.	CMC
39.	Polycarbonate is manufactured by ----- polymerization.			
	A.	Methathical	B.	Ionic
	C.	Cationic	D.	Condensation
40.	----- bond is formed by sharing of electrons			
	A.	Super	B.	Loose
	C.	Covalent	D.	Technical
41.	Which of the following has a triple bond			
	A.	HC≡CH	B.	CH ₂ =CH ₂
	C.	CH ₃ -CH ₃	D.	CCL ₃
42.	----- is a styrene monomer			
	A.	CH ₂ =CHC ₆ H ₅	B.	CH ₂
	C.	CH ₃	D.	COOH
43.	Functionality is determined by number of ---- group present per molecule			
	A.	Atomic	B.	Phenolic
	C.	Functional	D.	Hydrogen
44.	Bulk polymerization is also known as			
	A.	Indirect reaction	B.	Auto acceleration
	C.	Deceleration	D.	Direct
45.	Nylon 6,6 is prepared by			
	A.	Bulk	B.	Solution
	C.	Suspension	D.	Melt condensation
46.	----- is present in water			
	A.	Hydrogen	B.	Ionic
	C.	Liquid	D.	Solid
47.	Which of the following is not plastic material			
	A.	PE	B.	PMMA
	C.	Iron	D.	PS
48.	Bond angle is defined as -----			
	A.	Size	B.	Electron
	C.	Angle between atoms	D.	proton
49.	OH is a ----- functional group			
	A.	Ketone	B.	Carboxylic
	C.	Nitride	D.	Alcoholic
50.	Cooh is a ----- functional group			

	A.	Cyanide	B.	Carboxylic
	C.	Alcohol	D.	Ketone
51.	Which of the following is not a polyolefin			
	A.	PP	B.	PS
	C.	Neoprene	D.	None of these
52.	---- is an addition polymer			
	A.	Nylon	B.	PE
	C.	None of these	D.	Bakelite
53.	----- is a homopolymer			
	A.	Nylon66	B.	Neoprene
	C.	Bakelite	D.	Terylene
54.	Which element is present in all organic compound			
	A.	Carbon	B.	Nitrogen
	C.	Oxygen	D.	Phosphorous
55.	Which compound is a saturated hydrocarbon			
	A.	Ethane	B.	Ethene
	C.	Ethyne	D.	Ethanol
56.	What is the maximum number of covalent bond an atom of carbon can form			
	A.	1	D.	2
	C.	3	C.	4
57.	During fractional distillation, hydrocarbons are separated according to their			
	A.	Boiling point	B.	Melting point
	C.	Triple point	D.	Saturation point
58.	Which compound is an organic acid			
	A.	CH ₃ OH	B.	CH ₃ OCH ₃
	C.	CH ₃ COOH	D.	CH ₃ COOCH ₃
59.	Parachutes are made from which fibre			
	A.	Nylon	B.	Terylene
	C.	Ge	D.	Rayon
60.	----- is a condensation polymer			
	A.	Nylon	B.	Pvc
	C.	Natural rubber	D.	Teflon
61.	Which of the following is a artificial rubber			
	A.	Neoprene	B.	Isoprene
	C.	Chloroprene	D.	Teflon
62.	Which of the following is an IUPAC name			
	A.	Propanoic acid	B.	Ethyl alcohol
	C.	Formic acid	D.	Acetaldehyde
63.	Automobile steering wheel are made of			
	A.	PE	B.	PS
	C.	PC	D.	Cellulose acetate
64.	PMMA is known as -----			
	A.	perspex	B.	bakelite
	C.	teflon	D.	Nylon6
65.	----- is not a polyester fibre.			
	A.	terylene	B.	Dacron
	C.	Nylon	D.	Pc
66.	Teflon is a homopolymer of -----			
	A.	Styrene	B.	Vinyl
	C.	Tetraflouroethylene	D.	Oxygen
67.	Polyethylene has the repeating unit-----			
	A.	Ethylene	B.	Propylene
	C.	Vinyl fluoride	D.	styrene
68.	----- is a step growth polymer.			

	A.	PE	B.	PVC
	C.	PS	D.	Nylon
69.	----- is a chain growth polymer.			
	A.	PVC	B.	Nylon
	C.	Bakelite	D.	None of these
70.	The main sources of most organic compound is-----			
	A.	Coal tar	B.	Petroleum
	C.	Both A&B	D.	Methane
