

University of Mumbai
Online Examination 2020

Program: BE Chemical Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VII

Course Code: **CHE704**

Course Name: **Department Elective II : Polymer Technology**

Time: 1 hour

Max. Marks: 50

Note to the students:- All Questions are compulsory and carry equal marks .

Q1.	Which of the following reaction is not accompanied by elimination of a byproduct molecule
Option A:	addition polymerization
Option B:	condensation polymerization
Option C:	both addition and condensation polymerisation
Option D:	neither addition nor condensation polymerisation
Q2.	The process in which the molecular weight of polymer almost remains unchanged with the progress of reaction is a _____
Option A:	addition polymerization
Option B:	condensation polymerization
Option C:	copolymerisation
Option D:	ideal copolymerisation
Q3.	What is the expression for the rate of chain initiation of free radical chain growth polymerization
Option A:	$fk_d[I]$
Option B:	$2fk_d[I]$
Option C:	$k_d[I]/2$
Option D:	$k_d[I]$
Q4.	Which of the following polymerization proceeds without the change in the composition of feed as well as copolymer?
Option A:	block polymerization
Option B:	ideal polymerization
Option C:	azeotropic polymerization
Option D:	alternate polymerization

Q5.	How is the solvent in solution polymerization, more useful to overcome the disadvantages of bulk polymerization?
Option A:	it reduces the viscosity gain
Option B:	increases the rate of reaction
Option C:	causes chain transfer
Option D:	it reduces the viscosity gain and causes chain transfer
Q6.	Main constituent of cotton fibre is
Option A:	Lignin
Option B:	Cellulose
Option C:	Starch
Option D:	Gelatine
Q7.	Which of the following factors are responsible for reactivity ratio of monomers?
Option A:	initiation rate
Option B:	reaction medium
Option C:	substituent group on monomer double bond
Option D:	Termination rate
Q8.	What can be the maximum pressure to be given to plastic for blow molding process?
Option A:	700 kPa
Option B:	750 kPa
Option C:	800 kPa
Option D:	850 kPa
Q9.	Which of the following is not an important factor of cooling in extrusion?
Option A:	Reduction in shrinkage
Option B:	Reduction in distortion
Option C:	Ease of adding colours
Option D:	Rate of cooling
Q10.	Which of the following additives are used in the least amount with polymer in general?
Option A:	plasticizers
Option B:	fillers
Option C:	cross linking agents
Option D:	lubricants
Q11.	What kind of additives prevent the degradation of polymers while their processing and storage?
Option A:	stabilizers
Option B:	cross-linking agents
Option C:	plasticizers
Option D:	fillers

Q12.	Polypropylene is preferred to polythene, because the former is
Option A:	Non-inflammable
Option B:	Harder
Option C:	Stronger
Option D:	Harder and Stronger
Q13.	Which of the following is not an application of phenolic resins?
Option A:	Finishing of cotton textiles
Option B:	Distributor heads of car
Option C:	Domestic plugs and switches
Option D:	Adhesives for grinding wheels
Q14.	Natural rubber is obtained from latex, which is a colloidal dispersion of rubber in water. Which of the following is used as a coagulant in latex?
Option A:	Ammonium alum
Option B:	Potassium alum
Option C:	both Ammonium alum and Potassium alum
Option D:	Neither Ammonium alum and Potassium alum
Q15.	Which of the following is a demerit of solution polymerization
Option A:	handling of inflammable solvents
Option B:	recovery of solvent
Option C:	chain transfer to solvent
Option D:	handling of inflammable solvents, recovery of solvent and chain transfer to solvent
Q16.	Polystyrene is a _____ plastic at room temperature.
Option A:	Ductile
Option B:	Brittle
Option C:	Malleable
Option D:	alloyable
Q17.	Cross linked polymers formed from bi-and trifunctional groups in which cross-linkage in three dimensions via few chemical bonding across linear chains occur imparts to the polymer_____ properties.
Option A:	Thermoplastic
Option B:	Thermosetting
Option C:	Elastomeric
Option D:	Brittleness
Q18.	Nylon-6 as compared to nylon 66 has lower
Option A:	Abrasion resistance
Option B:	Thermal stability
Option C:	Adhesion to rubber
Option D:	Hardness

Q19.	Molecular weights of plastics ranges from
Option A:	1000 to 5000
Option B:	5000 to 1000
Option C:	20000 to 25000
Option D:	10^9 to 10^{11}
Q20.	_____ moulding is used for shaping of thermosetting plastics exclusively
Option A:	Compression
Option B:	Injection
Option C:	Transfer
Option D:	Extrusion
Q21.	Polyesters are manufactured by the Polycondensation reaction of
Option A:	Dibasic acid with dihydric alcohol
Option B:	A single monomer
Option C:	Carboxylic acid with ethylene
Option D:	Inorganic acid with ethylene glycol
Q22.	Which of the following polymers are produced by employing all bulk polymerisation, solution polymerisation & suspension polymerisation technique of addition (chain) polymerisation?
Option A:	PVC
Option B:	Bakelite
Option C:	PTFE
Option D:	Epoxy resin
Q23.	The only natural thermoplastic resin, which is a product of animal life is
Option A:	Rosin
Option B:	Shellac
Option C:	Amber
Option D:	Copal
Q24.	Commercial production of polypropylene employs _____ polymerisation
Option A:	Emulsion
Option B:	Suspension
Option C:	Solution
Option D:	Bulk
Q25.	Which of the following is not required for the degradation process
Option A:	Micro-organism
Option B:	Environment conditions
Option C:	Adhesives
Option D:	Substrate

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	A
Q3.	B
Q4	C
Q5	A
Q6	B
Q7	C
Q8.	C
Q9.	C
Q10.	D
Q11.	A
Q12.	D
Q13.	A
Q14.	C
Q15.	D
Q16.	B
Q17.	C
Q18.	A
Q19.	C
Q20.	C
Q21.	A
Q22.	A
Q23.	B
Q24.	C
Q25.	C