

Roll No. ....

Total No. of Questions : 9]  
(2034)

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**UG (CBCS) IIIrd Year Annual Examination**  
**2994**

**B.Sc. CHEMISTRY**

(Chemical Technology and Society and Business  
Skills for Chemistry)

(SEC-4)

Paper : CHEM 307 TH

**Time : 3 Hours]**

**[Maximum Marks : 70**

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*Note* :- Attempt *five* questions in all, selecting *one* question from each Section. Section-E is compulsory.

**Section-A**

1. (a) What is distillation ? Discuss different types of distillation methods.
- (b) Define adsorption. Discuss its types along with factors affecting it.
- (c) Define pumps. Discuss their classification. 7,5,3

2. (a) What are extruders ? Discuss different types of extrusion.
- (b) Discuss the principle of solvent extraction. What are the characteristics of solvent used for extraction ?
- (c) Define reactors. Discuss different types of reactors. 7,5,3

### Section-B

3. (a) Define nuclear fission. Discuss uncontrolled fission and controlled fission reactions in detail.
- (b) Discuss uses of solar energy.
- (c) Discuss advantages and disadvantages of plastics. 7,5,3
4. (a) Define polymer. What is polymerization ? Discuss classification of polymers in detail.
- (b) Discuss synthesis and uses of Low Density Polythene (LDP) and High Density Polythene (HDP).
- (c) Discuss Homopolymers and copolymers by giving suitable examples of each. 7,5,3



### Section-C

5. (a) Discuss the challenges in Chemical industry.  
(b) Discuss different steps involved in determining market needs.  
(c) How is business plan presented ? Discuss its uses. 5,7,3
6. (a) Discuss different forms of business.  
(b) What is project management ? Discuss various phases of project management.  
(c) Discuss the role of chemistry in world market. 5,7,3

### Section-D

7. (a) Discuss Patent Registration Procedure and Rights of Patentee in detail.  
(b) What is Copyright ? Give the characteristics of copyright.  
(c) What is meant by TRIPs ? Discuss its objectives. 7,5,3
8. (a) Discuss voluntary and compulsory licences in detail. What are the terms and conditions for granting compulsory licence ?  
(b) Discuss financial aspects of chemical industry.  
(c) What do you understand by Infringement of Patents ? Discuss its types. 7,5,3



## Section-E

### (Compulsory Question)

9. (a) What is the general formula for weight of substance left unextracted in the process of extraction ?
- (b) Define isoelectric point.
- (c) What is vulcanisation ?
- (d) Natural rubber is a polymer of .....
- (e) Out of U-235 and U-238, which one is fissionable ?
- (f) IPR stands for .....
- (g) WTO stands for .....
- (h) Define Patent.
- (i) Name the compound that is used as moderator in nuclear reactors.
- (j) LLC stands for :  
(i) Local Liability Company  
(ii) Limited Liability Company  
(iii) Local Liability Concept  
(iv) Limited Liability Concept
- $1 \times 10 = 10$