

Seat No.	
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Set **P**

**B.Sc.(Semester - VI) (New) (CBCS) Examination Oct/Nov-2019**  
**Entrepreneurship**  
**TECHNIQUES IN INDUSTRIAL CHEMISTRY**

Day & Date: Friday, 11-10-2019  
 Time: 08:00 AM To 10:30 AM

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.  
 2) Figures to the right indicate full marks.  
 3) Draw neat labeled diagram wherever necessary.

**Q.1 Fill in the blanks by choosing correct alternatives given below. 14**

- 1) The Zeolite is regenerated by soaking it in \_\_\_\_\_ solution.
 

a) 10% NaCl	b) 10% HCl
c) 10% NaOH	d) 10% H <sub>2</sub> SO <sub>4</sub>
- 2) It is better to \_\_\_\_\_ waste than to treat or clean up waste after it is formed.
 

a) Burn	b) Burry
c) Prevent	d) Dump in sea
- 3) Separation of Volatile Components of the mixture can be done by \_\_\_\_\_ chromatography.
 

a) Gas	b) Column
c) Paper	d) TLC
- 4) According to first law of electrolysis, amount of substance deposited or dissolved at any electrode is directly proportional to the quantity of \_\_\_\_\_ passed through the electrolyte.
 

a) Currents	b) Protons
c) Electrons	d) Electricity
- 5) Biocatalytical reactions are catalysed by \_\_\_\_\_.
 

a) Enzymes	b) Protein
c) Carbohydrates	d) Alcohols
- 6) Titanium and aluminium materials can be classified under which of the following categories?
 

a) A	b) C
c) D	d) B
- 7) Anodised plate has ability to absorb \_\_\_\_\_ which enables to use it in jewellery, Kitchen wares.
 

a) Color	b) Pickling
c) Dye-stuffs	d) Oxide
- 8) Which of the following colors allows you to identify a foam fire extinguisher?
 

a) Blue	b) Red
c) Yellow	d) Cream
- 9) \_\_\_\_\_ is commonly used adsorbent in column chromatography.
 

a) Na <sub>2</sub> CO <sub>3</sub>	b) Na <sub>2</sub> HCO <sub>3</sub>
c) Na <sub>2</sub> C <sub>2</sub> O <sub>3</sub>	d) NaOH

- 10) In Electroplating of Chromium, \_\_\_\_\_ is main component of the bath solution.
- a) HCl  
b) H<sub>2</sub>CrO<sub>4</sub>  
c) H<sub>2</sub>SO<sub>4</sub>  
d) H<sub>3</sub>PO<sub>4</sub>
- 11) \_\_\_\_\_ is basic material of the paper used in paper chromatography.
- a) Cotton  
b) Cellulose  
c) Pulp  
d) None of these
- 12) Most of the enzymatic reactions are in the range of pH \_\_\_\_\_.
- a) 1-5  
b) 6-10  
c) 4-9  
d) 9-12
- 13) \_\_\_\_\_ metal is preferred for anodic oxidation.
- a) Iron  
b) Nickel  
c) Aluminum  
d) Silver
- 14) The ratio of distance travelled by solute to that of solvent is known as \_\_\_\_\_.
- a) Constant value  
b) Partition coefficient  
c) R<sub>f</sub> value  
d) Capillary action
- Q.2 A) Answer the following questions. (Any Four) 08**
- 1) What are general Principles of Chromatography?
  - 2) Define Zeolite and write structure of Zeolite
  - 3) What is cathode and anode efficiency?
  - 4) Name the different class of fire extinguishers.
  - 5) How will you prepare benzoic acid from toluene?
- B) Answer the following questions (Any Two) 06**
- 1) Explain the term Antifreeze extinguishers.
  - 2) What are different types of chromatography based on nature of operating forces?
  - 3) Define Electrolysis and explain Faradays laws of electrolysis.
- Q.3 A) Answer the following questions. (Any Two) 08**
- 1) Explain the basic principles of electroplating.
  - 2) What are the applications of TLC?
  - 3) Describe Halon-1301.
- B) Answer the following questions. (Any One) 06**
- 1) Write short note on Cleaning of Articles.
  - 2) Explain the microwave assisted reaction with suitable example.
- Q.4 A) Answer the following questions. (Any Two) 10**
- 1) Explain Friedel craft's alkylation and acylation reaction.
  - 2) Discuss in details how Paper Chromatography is carried out?
  - 3) Write note on Anodizing.
- B) Answer the following questions. (Any One) 04**
- 1) What are the biocatalysts? Write the factors affecting on enzyme activity.
  - 2) Explain the High pressure liquid chromatography.
- Q.5 Answer the following questions. (Any Two) 14**
- a) Explain the electroplating of Nickel.
  - b) Explain classification of Water and foam as fire extinguishers.
  - c) Define Green chemistry and give twelve principles of Green Chemistry.