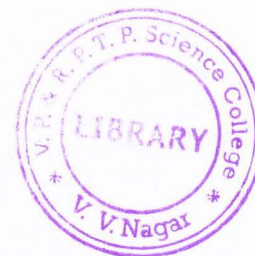


V.P& R.P.T.P SCIENCE COLLEGE
B.Sc. (Semester-VI)
INDUSTRIAL CHEMISTRY (Vocational)
13/03/2019 [Wednesday]
Subject code: US06CICV06
Internal Exam



Time: 10:00 am to 12:00 pm

Total marks: [50]

Q1.	Select the right option from among the given in following question.	[08]
1.	The practical objective of process research is providing _____ data. a. Scientific b. Theoretical c. Primary d. None of these	
2.	Which of the following is used to translate written description of chemical process into workable pattern? a. Engineering flow diagram b. Process estimation c. Process equipment d. Process research	
3.	Distribution of tiny liquid particles in liquid matrix is called: a. Emulsion b. Suspension c. Surface tension d. Humectants	
4.	What are the commonly used catalysts for the Fisher Tropsch synthesis? a. Nickel b. Cobalt c. Iron d. All of these	
5.	PH range in nano-filtration should be: a. 3 - 9 b. 9 - 10 c. 1 - 3 d. 9 - 12	
6.	PH range in cellulose acetate membrane should be: a. 3 - 7 b. 1 - 3 c. 7 - 10 d. 10 - 12	
7.	Property which introduced time lag due to time required to carry change in the process is termed as: a. Dead time leg b. Resistance time c. Time d. All of these	
8.	In an automatic control system which of the following element is not used? a. Oscillator b. Error detector c. Final control element d. Sensor	
Q.2	Answer the following in short. (Attempt five, each two marks)	[10]
1.	Enlist the objective of good plant layout.	
2.	State the various properties important for process development.	
3.	Enlist the various characteristics of enzymes.	
4.	Define: 1. Promoter 2. Catalytic poisoning	
5.	Give the structure of polyether sulfone and polysulfone	
6.	Enlist the different solutes which are rejected by FT30.	
7.	What is mean by final control element?	
8.	Explain the terms: 1. Dead time 2. Set point.	

Q.3	a.	Explain various stages for logical evolution of process.	[04]
	b.	Compare Urban and Rural area for site selection.	[04]
OR			
Q.3	a.	Explain engineering flow diagram in detail.	[04]
	b.	Enlist with brief various factors affecting plant location (Localization).	[04]
OR			
Q.4	a.	Define emulsion and explain its phases in details.	[04]
	b.	Discuss Homogeneous catalysis.	[04]
OR			
Q.4	a.	Explain industrially important catalytic processes and its applications.	[04]
	b.	Write a note on surfactants.	[04]
OR			
Q.5	a.	Write a note on nano filtration	[04]
	b.	Discuss in brief about phase inversion.	[04]
OR			
Q.5	a.	Explain the electro dialysis method for separation using neat diagram.	[04]
	b.	Explain the membrane for RO system in liquid separation.	[04]
OR			
Q.6	a.	Explain three types of variables associated with process.	[04]
	b.	Write a note on process time lag.	[04]
OR			
Q.6	a.	Discuss feedback control system giving block diagram for temperature control of the process.	[04]
	b.	Define control valve and explain its elements.	[04]

