

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Second Semester)

Branch - CHEMISTRY

INDUSTRIAL CHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No	Question No.	Question	K Level	CO
1	1	Choose an example of insulator among the following. a) Wood b) Boron c) Germanium d) Iron	K1	CO1
	2	Show the suitable temperature range for using askarels a) -90 to 220° C b) -50 to 200° C c) -50 to 110° C d) -50 to 100° C	K2	CO1
2	3	Anti fouling paint used in. a) Emulsion b) Marine c) Cement d) Latex	K1	CO2
	4	Name the main ingredient of paint among the following a) Driers b) Thinners c) Plasticizers d) Pigment	K2	CO2
3	5	Enzyme which is used for the preparation of ethyl alcohol from molasses a) Zymase b) lyase c) reductase d) invertase	K1	CO3
	6	Name which chemical is used in soda pulping a) NaOH b) KOH c) Na ₂ CO ₃ d) K ₂ CO ₃	K2	CO3
4	7	What is the common by-product in the manufacture of soap a) Glycerol b) Fatty acid c) Ethanol d) Sulphonic acid	K1	CO4
	8	Soaps which are prepared by using NaOH and high grade oil is called a) Soft soap b) Transparent soap c) Medicated soap d) Hard soap	K2	CO4
5	9	Chromium removal is accomplished by a) Chemical reduction by SO ₂ b) Chemical oxidation c) Neutralised by lime d) Membrane separation	K1	CO5
	10	Choose the important job of industrial safety officer a) Reducing the hazards b) Controlling the hazards c) Eliminating the hazards d) All the above	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Module No	Question No.	Question	K Level	CO
1	11.a.	Discuss the classification of semi conductors.	K2	CO1
	(OR)			
	11.b.	Explain the electrical characteristics of dielectrics.		
2	12.a.	Illustrate the method of manufacture of emulsion paints.	K4	CO2
	(OR)			
	12.b.	Formulate the processes of manufacturing of paint.		

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3	13.a.	Develop the chemical process to synthesis the sulphite and sulphite pulp.	K3	CO3
	(OR)			
	13.b.	Analyze the conditions which are favourable for fermentation.		
4	14.a.	Develop the cold process for the manufacture of soaps.	K3	CO4
	(OR)			
	14.b.	Apply the mechanism to relate the cleansing action of soaps.		
5	15.a.	Interpret the treatment procedure of waste with organic and inorganic impurities.	K4	CO5
	(OR)			
	15.b.	Examine the important measures on role and responsibilities of safety officer.		

SECTION -C (30 Marks)Answer **ANY THREE** questions**ALL** questions carry **EQUAL** Marks

(3 × 10 = 30)

Module No	Question No.	Question	K Level	CO
1	16	i) Analyze the effect of temperature on conductivity of intrinsic and impurity semi conductors. (5 Marks) ii) Examine the classifications of insulating materials with suitable examples. (5 Marks)	K4	CO1
2	17	Categorize the various constituents of paint and their roles.	K4	CO2
3	18	Interpret the various steps involved in manufacturing of sugar from sugar cane.	K4	CO3
4	19	i) Examine the classification of surface active agents. (5 Marks) ii) Discuss about principle groups of synthetic detergents. (5 Marks)	K4	CO4
5	20	i) Analyze the importance of industrial safety. (5 Marks) ii) Discuss the treatment of important chemical waste from sugar and metal industries. (5 Marks)	K4	CO5

Z-Z-Z

END