[This question paper contains 2 printed pages.]

Sr. No. of Question Paper: 6967 D Your Roll No......

Unique Paper Code : 217263

Name of the Course : B.Sc. (APS) Applied Physical Sciences

Name of the Paper : Industrial Chemistry – II (ICPT-202)

Semester : II

Duration: 3 Hours Maximum Marks: 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.

- 2. Attempt six questions in all.
- 3. Question No. 1 is compulsory.
- 1. (i) Differentiate between renewable and non renewable energy sources.
 - (ii) What are Surfactants? Give its classification.
 - (iii) What is meant by calorific value of a fuel? How is it determined?
 - (iv) Define saponification value and iodine number.
 - (v) Write a note on solid lubricants. $(3\times5=15)$
- 2. Write short note on the following:
 - (i) Producer gas
 - (ii) Coal gasification
 - (iii) Coal tar distillation
 - (iv) Requisites of a good metallurgical coke $(3\times4=12)$
- 3. (i) Write a short note on cloud point.
 - (ii) Explain the difference between solid and semi-solid lubricants.
 - (iii) Give with suitable examples the classification of lubricants. What is the function of a lubricant in a machine?

	(iv)	What is Viscosity Index of a lubricant? Discuss its importance.	$(3\times 4=12)$
4.	(i)	Discuss non anionic surfactants.	
	(ii)	Differentiate between oils and fats.	
	(iii)	Differentiate between soaps and detergents.	
	(iv)	What are detergent builders?	(3×4=12)
5.	Wri	te short note on the following:	
	(i)	Catalytic Cracking	
	(ii)	CNG	
	(iii)	Octane Number	
	(iv)	LPG	(3×4=12)
6.	(i)	Explain the cleansing action of soaps and detergents.	
	(ii)	Discuss Rancidity as applied to fats.	
	(iii)	Write a short note on production of water gas.	
	(iv)	Give the preparation of isoprene and its uses.	(3×4=12)
7.	(i)	Discuss carbonization of coal.	
	(ii)	Write a note on production of vinyl acetate.	
	(iii)	Describe the industrial production of propylene oxide. Give its u	ises.
	(iv)	Write a note on Artificial Sweetners.	$(3 \times 4 = 12)$
8.	(i)	What are the disadvantages of phosphate builders? Name some a for Phosphate builders.	Iternatives
	(ii)	Write a note on preservatives.	
	(iii)	Write a note on food colours.	

(iv) Give composition of crude petroleum.

 $(3 \times 4 = 12)$