

SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—OCTOBER, 2014

APPLIED SCIENCE—II (CHEMISTRY)

(Common except DCP and CABM)

[Time : 1½ hours

(Maximum marks : 50)

PART—A

(Answer *all* questions in one or two sentences.
Each question carries 2 marks)

	Marks
I (a) Describe a method to remove Carbon monoxide in a room.	2
(b) What is acid rain? What are its consequences?	2

PART— B

(Answer any *two full* questions. Each question carries 8 marks)

II (a) Explain the working of a galvanic cell with the help of a diagram.	4
(b) Describe different methods to prevent rusting of iron.	4
III (a) Distinguish between thermoplastic and thermosetting plastics.	4
(b) (i) Define calorific value of a fuel.	
(ii) Explain catenation with example.	4
IV (a) Explain the effect of temperature on :	
(i) Adsorption of ammonia on animal charcoal.	
(ii) Adsorption of Hydrogen on palladium.	4
(b) Write short notes on :	
(i) Smog	
(ii) Ozone depletion	4

PART – C

(Answer *one* full question from each unit. Each full question carries 15 marks)

UNIT – I

V (a) Write any four application of adsorption.	4
(b) Mention any four differences between electronic and electrolytic conduction.	4
(c) Explain the mechanism of corrosion takes place when aluminium wire is in contact with Copper in air.	4
(d) Explain the mechanism of electrolysis of molten NaCl.	3

OR

	Marks
VI (a) Distinguish between physisorption and chemisorptions.	4
(b) What is electrochemical series ? Explain the reactions takes place when : (i) Age is placed in dil, H_2SO_4 (ii) Mg is placed in $ZnSO_4$	4
(c) (i) What is galvanization ? (ii) Define corrosion. Write 2 examples.	4
(d) Describe a method to coat Copper on Steelnail.	3

UNIT – II

VII (a) Mention two chemical methods to distinguish alkane and alkene.	4
(b) Explain different types of polymers based on the kind of monomer unit present in it.	4
(c) Describe a method to convert higher hydrocarbon into petrol.	4
(d) What is green chemistry ? What are the advantages of green chemistry over environmental chemistry ?	3

OR

VIII (a) Describe the different types of composites based on matrix.	4
(b) Carbon atom is unique. Comment on the statement.	4
(c) What are propellant ? How will you classify it ? Give examples.	4
(d) Write the monomers of the following polymers : (i) Silicone rubber (ii) Thiokol (iii) Bakelite	3