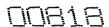
Maximum Marks: 70

DIPLOMA IN CIVIL ENGINEERING DCLE(G) / DIPLOMA IN MECHANICAL ENGINEERING (DME) / DCLEVI / DMEVI / DELVI / DECVI / DCSVI / ACCLEVI / ACMEVI / ACELVI / ACECVI / ACCSVI

Term-End Examination



Time: 2 hours

June, 2016

BET-013: CHEMISTRY

Note: Attempt five questions in all. Question number 1 is compulsory. Answer any four questions from questions no. 2 to 8. All questions carry equal marks.

Answer the following questions in brief: 1.

- Write the two abundant components of air (a) along with their percentage content in the atmosphere.

2

- (b) Write the configuration electronic C(6) and Mg(12). 2
- What is an alloy? Give two examples. (c) 2
- (d) Name four important ores of iron. 2
- (e) What is crude oil? 2
- Name any four colouring materials of glass. (f)
- What are addition polymers? (g)

2

2

BET-013

P.T.O.

2.	(a)	Why is an anion always larger than its	
		parent atom?	4
	(b)	Explain the periodic trends of the following	
		properties:	8
		(i) Atomic Radius	
		(ii) Ionisation Energy	
		(iii) Metallic Character	
		(iv) Ionic Radius	
	(c)	Name two important zones of atmosphere.	2
3.	(a)	Describe the preparation, properties and	
		uses of chlorine.	8
	(b)	Explain the Ammonia Synthesis by Haber	
		process.	4
	(c)	Give the oxidation states of Nitrogen in NO_2	
		and HNO ₂ .	2
4.	(a)	Draw a neat diagram of Blast furnace.	4
	(b)	Write a short note on Intermetallic	
		compounds, giving two examples.	6
	(c)	If the pH of a solution is 5, find its pOH.	
		$(pk_w = 14)$	4
5.	(a)	Write a detailed note on boiler corrosion and	
		its prevention methods.	10
	(b)	Write any four characteristics of a good fuel.	4
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6.	(a)	What do you understand by free radical polymerisation? Explain in detail with examples.	8
	(b)	What is meant by 'Synthetic Petrol'? Give any one method for its synthesis.	6
7.	(a)	Compare and write the differences between sliding friction and rolling friction.	8
	(b)	Write short notes on the following: (i) Nylon (ii) Polyesters	6
8.	(a)	What is glass? What are the functions of borax and alumina used in the manufacture of glass?	8
	(b)	What are ceramics ? How are these classified ?	6