

**DIPLOMA IN CIVIL ENGINEERING
(DCLEC(G))/
DIPLOMA IN MECHANICAL ENGINEERING
(DME)**

**DCLEVI/DMEVI/DELVI/DECVI/DCSVI/
ACCLEVI/ACMEVI/ACELVI/ACECVI/ACCSVI**

Term-End Examination

June, 2013

BET-013 : CHEMISTRY

Time : 2 hours

Maximum Marks : 70

-
- Note :** (i) Question Number 1 is **compulsory**.
(ii) Answer any other **four** questions from question numbers 2 to 8.
(iii) All questions carry **equal** marks.
-

1. (a) Write down electronic configuration of Mg₍₁₂₎ and Mn₍₂₅₎. 2
(b) Name any two important zones of atmosphere. 2
(c) Define an alloy and give two examples. 2
(d) Name four important ores of iron. 2
(e) List different types of hardness of water. 2
(f) What is sliding friction ? 2
(g) Name any four colouring materials of glass. 2

2. (a) Explain the variation of following periodic properties : 6
 (i) Atomic radius
 (ii) Metallic character
 (iii) Ionisation Energy
- (b) Describe the preparation, properties and uses of chlorine. 8
3. (a) Explain how do you extract Aluminium from its ores ? 6
- (b) Describe zeolite process to remove water hardness. 4
- (c) Give four important uses of Sulphuric Acid. 4
4. (a) What do you understand by sludge and scale formation in boilers ? List advantages of sludge formation. 7
- (b) Mention any four units used for representing hardness of water. 4
- (c) State the composition and few uses of Bronze. 3
5. (a) Give the merits and demerits of solid and liquid fuels. 10
- (b) Explain coagulation and flocculation for treatment of raw water. 4
6. (a) Write short notes on : 8
 (i) Co-polymers.
 (ii) Stereochemistry of polymers.
- (b) Differentiate between fire point and flash point. 6

7. (a) pH of a solution is 5. What is its pOH ? Is the solution acidic or basic ? 5
- (b) Define Aniline point of a lubricant and its significance. 4
- (c) Give the method of preparation of coal gas and its uses. 5
8. (a) Why is glazing of ceramics required ? List different methods of glazing. 6
- (b) Write the formula, structure and uses of bleaching powder. 6
- (c) What do you understand by moulding of plastics ? 2
-