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BET-013

Diploma in Civil Engineering / Diploma in Electrical & Mechanical Engineering

05434

Term-End Examination

December, 2010

BET-013 : CHEMISTRY

Time : 2 hours *Maximum Marks : 70*

Note : 1. Question number 1 is compulsory.
2. Answer any other four questions from question numbers 2 to 8.
3. All questions carry equal marks.

1. (a) Explain about a "triad" in a periodic Table. 2
(b) Name any two regions of Atmosphere. 2
(c) Give two important Ores of Aluminium with their chemical formula. 2
(d) Define a lubricant. 2
(e) Enlist any four gaseous fuels. 2
(f) Name any two addition polymers. 2
(g) Why glass is called "Super cooled liquid"? 2

2. (a) Define the following terms with appropriate diagrams. 4
(i) Atomic Radius
(ii) Ionic Radius
(b) Why an Anion is always larger than its parent atom? 4
(c) Write a note on Modern periodic Table. 6

3. (a) Explain about Ammonia Synthesis through Haber process. 6

(b) Name any four chlorine containing compounds with their chemical formula and their respective uses. 8

4. (a) Describe steel making from pig iron using Open Hearth process. 8

(b) How is copper purified? Explain with a diagram. 6

5. (a) Write a detailed note on boiler corrosion and its prevention. 8

(b) Discuss about sludge formation and its prevention. 6

6. (a) What is the difference between primary and secondary fuels? 3

(b) Write any five characteristics of a good fuel. 5

(c) Describe about the fractional distillation of crude oil. 6

7. (a) Write a detailed note on solid and liquid lubricants. 8

(b) Differentiate between viscosity and viscosity index. 6

8. (a) Explain about Alternate, Random, Block and Graft copolymers, with examples. 8

(b) Write the chemical structure of Bleaching powder. 2

(c) Explain the iodometric method of estimation of available chlorine in commercial bleaching powder. 4