M. Sc. (Environment Science and Technology) Sem - I (CBCS) (2013 Course) : WINTER - 2018

SUBJECT: ENVIRONMENTAL CHEMISTRY

Day: Monday
Date: 19/11/2018

W-2018-1226

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

N.B.:

1) Answer any **FIVE** questions.
2) Figures to the right indicate **FULL** marks.

Q.1 **a)** What are the enzymes? Write the mechanism of enzyme catalyzed reactions. **(06)**
b) Explain the formation of PAN during smog. **(06)**

Q.2 **a)** Explain the acid-base and ion exchange reactions in soil. **(06)**
b) What are alcohols? How are monohydric alcohols classified? Write any two methods of synthesis of ethyl alcohol. **(06)**

Q.3 **a)** Define corrosion. Describe the types of corrosion **(06)**
b) Define any two of the following: **(06)**
i) Le- Chattelier's principle
ii) Activity coefficient
iii) Coagulation

Q.4 **a)** What is EL- Nino? How does it affect the global climate? **(06)**
b) Give a brief account on variations in equilibrium relationships. **(06)**

Q.5 **a)** Describe construction and working of HPLC. **(06)**
b) Write short notes on any two of the following: **(06)**
i) Buffer index
ii) Semiconductors
iii) Fluoridation

Q.6 **a)** Comment on anomalous behavior of water. **(06)**
b) Discuss the reactions of free radicals in the atmosphere. **(06)**

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