

M. SC. (ENVIRONMENT SCIENCE AND TECHNOLOGY)
SEM - I (CBCS) (2013 COURSE) : WINTER - 2017
SUBJECT: ENVIRONMENTAL CHEMISTRY

Day: **Monday**
Date: **20/11/2017**

W-2017-0982

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.
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- Q.1** a) Outline with the help of neat diagram the principle, construction and working of Redwood viscometer. (06)
b) Explain SN² mechanism with suitable examples. (06)
- Q.2** a) "Benzene is colorless while p- nitrophenol is yellow in colour". Explain. (06)
b) Explain the working of standard hydrogen electrode. How it is useful for measuring the cell emf? (06)
- Q.3** a) Define a drug. Describe the properties an ideal drug should possess. (06)
b) What are proteins? How are they classified based upon structure? Write any two important functions of proteins. (06)
- Q.4** a) Explain any two of the following: (06)
i) Sedatives and Hypnotics
ii) Common ion effect
iii) Gay- Lussac's Law
b) Write short notes on any two of the following: (06)
i) Softening of Water
ii) Nuclear winter
iii) Iron and manganese removal form water
- Q.5** a) Explain the coagulation –Flocculation Jar test for effluents. (06)
b) Write short notes on any **TWO** of the following: (06)
i) Salinity and Sodocity
ii) Photochemical smog
iii) Ion selective electrodes
- Q.6** a) State Ohm's law and explain the construction and working of conductometer. (06)
b) What are Green House gases? Write their anthropogenic sources. (06)

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