



RE-3684-85

M. Sc. (Sem. - II) Examination

April / May - 2010

Environmental Chemistry : Paper - I

(Chemistry in Industry)

Time : 3 Hours]

[Total Marks : 70

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Instructions :

(1)

नीचे दशांशके निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="M. SC. - 2"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="ENVIRONMENTAL CHEMISTRY - 1"/>	<input type="text"/>
Subject Code No. : <input type="text" value="3"/> <input type="text" value="6"/> <input type="text" value="8"/> <input type="text" value="4"/>	Section No. (1, 2,.....) : <input type="text" value="1"/>
Student's Signature	

- (2) Attempt all questions.
- (3) Figures to the right indicate full marks.
- (4) Draw sketches wherever necessary.
- (5) The question paper contains two sections.

1 Define - Unit process and Unit operation. Explain Halogenations process using suitable examples with their industrial applications. 11

OR

1 What is nitration? Explain the mechanism and process of Nitration using various nitrating agents. 11

2 Explain the following : 12

- (a) Principles of Extraction and Leaching
- (b) Environmental Safety
- (c) Risk Assessment.

OR

2 (a) Give short notes : 6

- (i) Hazards and their classification
- (ii) Laboratory Safety

(b) Explain in detail - Waste Management and disposal methods. 6

3 (a) Give short notes on green solvent and their applications. 6

(b) Enlist various principles of green chemistry. 6

OR

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1

[Contd....

- 3 Explain green approach in the synthesis of 12
- (a) Paracetamol
- (b) Catechol
- (c) Adipic acid.

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(1)

<p>नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination :</p> <p>☛ M. SC. - 2</p> <p>Name of the Subject :</p> <p>☛ ENVIRONMENTAL CHEMISTRY - 1</p> <p>☛ Subject Code No. : 3 6 8 5 ☛ Section No. (1, 2,.....) : 2</p>	<p>Seat No. :</p> <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> </table> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: 100%; height: 80px; margin-top: 10px;"> <p style="text-align: center;">Student's Signature</p> </div>						

- (2) Attempt all questions.
- (3) Figures to the right indicate full marks.
- (4) Draw sketches wherever necessary.
- (5) The question paper contains two sections.
- 4 Write informative note on following : (any three) 12
- (a) Green house effects.
- (b) Ozone layer depletion.
- (c) Biological effects of radiation.
- (d) BOD and COD tests
- (e) Photochemical smog.
- 5 (a) Explain the major components of effective environmental management. 6
- (b) Describe the function of GPCB. 6
- OR**
- 5 (a) Explain - Water prevention and control of pollution Act 1974. 6
- (b) Define - EIA and give Environmental Impact statement. 6
- 6 (a) State the various methods of collecting data. Explain any one of them. 6
- (b) Explain the difference between Accuracy and precision by giving an example. 5
- OR**
- 6 Write informative note on following :
- (a) Systematic and random errors. 4
- (b) Relative and absolute errors. 4
- (c) Programming in Chemistry. 3