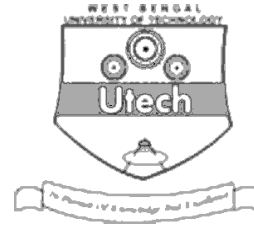


CS / M.TECH (MCP) / SEM-2 / MCP-202 / 09 TEXTILE ECOLOGY AND WASTE MANAGEMENT (SEMESTER - 2)



1.
Signature of Invigilator

2.
Signature of the Officer-in-Charge

Reg. No.

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Roll No. of the Candidate

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CS / M.TECH (MCP) / SEM-2 / MCP-202 / 09
ENGINEERING & MANAGEMENT EXAMINATIONS, JULY - 2009
TEXTILE ECOLOGY AND WASTE MANAGEMENT (SEMESTER - 2)

Time : 3 Hours]

[Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

- This Booklet is a Question-cum-Answer Booklet.** The Booklet consists of **32 pages. First page** of the Booklet shows Instructions to the Candidates. The **questions** of this concerned subject commence from **Page No. 3.**
- You have to answer the questions in the space provided marked 'Answer Sheet'. Write on both sides of the paper.
- Fill in your Roll No. in the box provided as in your Admit Card before answering the questions.
- Read the instructions given inside carefully before answering.
- You should not forget to write the corresponding question numbers while answering.
- Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
- Use of Mobile Phone, Calculator or Log table is totally prohibited in the examination hall.
- You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, which will lead to disqualification.
- Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

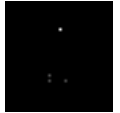
| Question Number | | | | | | | | | | | | Total Marks | Examiner's Signature |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|-------------|----------------------|
| Marks Obtained | | | | | | | | | | | | | |

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Head-Examiner / Co-Ordinator / Scrutineer

45009 (06/07)



DO NOT WRITE ON THIS PAGE



CS/M.TECH (MCP)/SEM-2/MCP-202/09
TEXTILE ECOLOGY AND WASTE MANAGEMENT
SEMESTER – 2



[Full Marks : 70

Time : 3 Hours]

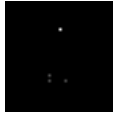
The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

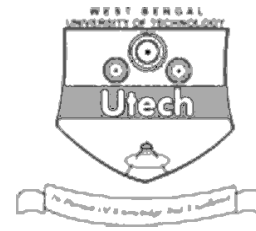
Answer any *five* questions.

5 × 14 = 70

- | | | | |
|----|-----|--|----|
| 1. | a) | Explain the principles of EU environmental policy. | 4 |
| | b) | Describe salient feature of integrated pollution prevention and control (IPPC) act to prevent or reduce pollution. | 10 |
| 2. | a) | Give a brief note on EU legislation on chemical substances. | 10 |
| | b) | What is eco-labelling ? | 4 |
| 3. | a) | Describe chronic toxicity of textile dyes based on | |
| | i) | carcinogens based on nitrogen electrophiles | 5 |
| | ii) | carcinogens based on carbon electrophiles. | 5 |
| | b) | Give a brief note on acute toxicity of textile dyes. | 4 |
| 4. | a) | Explain dyeing of cellulose, wool, nylon, polyester or blend materials in the light of environmental factor. | 10 |
| | b) | What steps are taken in plant organisation and dyeing processes to be used for getting better result. | 4 |
| 5. | | Explain the role of the following factors in pollution control during wet processing of textiles : | 14 |
| | i) | Textile raw fibres | |
| | ii) | Dyes contain pollutants and hazardous materials | |



- iii) Auxiliary chemicals used during dyeing
- iv) Dyeing operations — effluent problem
- v) Recycling, reuse of the dye stuffs
- vi) Best management practice.



6. Describe chemical treatment methods for removal of colour from textile waste effluent by
- i) Physico-chemical
 - ii) Co-agulation
 - iii) Electro-coagulation
 - iv) Electro chemical
 - v) Oxidation
 - vi) Ion exchange process. 14
7. Explain dye effluent treatments by
- a) Microbial processes 7
 - b) Enzymic processes. 7
8. Write short notes on any *two* of the following : 2 × 7
- a) Measurement of COD, BOD and TOC
 - b) Effect of physical properties on genotoxicity
 - c) Textile printing — in the light of environmental factors.

END