GLASS – II (SEMESTER - 6)

CS/B.TECH (CT)/SEM-6/CT-602/09

1. .....
Signature of Invigilator

2. .....
Signature of the Officer-in-Charge

Reg. No. | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | |

CS/B.TECH (CT)/SEM-6/CT-602/09
ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009
GLASS – II (SEMESTER - 6)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. 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.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. 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**.
9. 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

	Group – A										Group – B			Group – C				
Question Number																	***Total Marks***	***Examiner's Signature***
Marks Obtained																		

.....
Head-Examiner/Co-Ordinator/Scrutineer

6680 (05/06)

DO NOT WRITE ON THIS PAGE

ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009

GLASS – II

SEMESTER – 6

Time : 3 Hours] [Full Marks : 70

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : $10 \times 1 = 10$

i) Chemical durability test measures Na ions in solution.

a) Yes b) No. ☐

ii) Danner process is meant for making fibres.

a) Yes b) No. ☐

iii) Mechanical stress is not removed by annealing.

a) Yes b) No. ☐

iv) Length of annealing Lehr depends of temperature profile.

a) Yes b) No. ☐

v) Glass level is a bad indicator for charging batch materials.

a) Yes b) No. ☐

vi) Refining zone removes seeds, bubbles & other defects.

a) Yes b) No. ☐

vii) Furnace exit and IS machine entry viscosity of Gob is different.

a) Yes b) No. ☐

viii) For better blowing in IS machine, glass needs to be sweeter.

a) Yes b) No. ☐

ix) Rejection rates of bulbs is higher than that of glass tubes.

a) Yes b) No. ☐

x) Fourier waves exits in the float glass manufacturing process.

a) Yes b) No. ☐

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following questions. 3 × 5 = 15

2. Write about Danner process.

3. Write about Tin Bath data in the float process.

4. How to estimate the wavelength of Fourier waves in float glass ?

5. Draw viscosity-temperature curves for four glasses and explain the thickness in each case.

6. If viscosity has to be reduced, would you add borax and/or soda or both ? Give approximate percentage.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following questions. 3 × 15 = 45

7. Describe an end fired regenerative type tank furnace. How can you classify types of glass tank furnace ? 9 + 6

8. Explain the well-known "Adams-Williams" mechanism of annealing indicating the proposal of "Lillie". How can you apply Stoke"s Law in refining ? 8 + 7

9. Describe compositional engineering in details. Take at least two examples for each of the properties chose for four properties. 7 + (4 × 2)

10. Describe float glass process in details with composition engineering. Describe what is very crucial in this process in details. 8 + 7

11. Explain the viscosity-temperature relationship in each of the sub-processes in container glass making. Write about two different types of glass in terms of adjusting IS machine parametres. 15

END