

M.E. Second Semester (Mechanical Engineering) (CAD / CAM) (F.T.) (CGS)

13496 : Industrial Product Design : 2 MCC 4

P. Pages : 1

Time : Three Hours



AU - 3298

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Illustrate your answer necessary with the help of neat sketches.

SECTION – A

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|----|----|---|---|
| 1. | a) | What is product design? Explain "material requirement" in product design. | 7 |
| | b) | Discuss the design principle "Balance and proportion". | 7 |
| 2. | a) | Define the terms ferrous, nonferrous, hardwood, softwood, thermoset, thermoplast, whiteware, and glass. | 7 |
| | b) | List some of the strengths and weaknesses of aluminum as a material for pressure cooker. | 6 |
| 3. | a) | Explain the difference between cutting by separation and cutting by removal? | 7 |
| | b) | Discuss various finishing processes. | 6 |
| 4. | a) | Explain the difference between sound and noise. | 7 |
| | b) | Describe some of the human factors associated with computer work station. | 6 |
| 5. | a) | What is anatomy? How anatomy factors are considered in product design. | 7 |
| | b) | Explain what is quantity, contrast & glare as pertaining to lighting. | 6 |

SECTION – B

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|-----|----|---|---|
| 6. | a) | What is meant by Design for serviceability? Enlist the guidelines of design of serviceability. | 7 |
| | b) | What is design for security? Explain. | 7 |
| 7. | a) | Define design for assembly and describe its importance in design for manufacturing. | 7 |
| | b) | Describe how process design factors can influence the efficiency and quality of part production. | 6 |
| 8. | a) | Explain screen printing. | 7 |
| | b) | What makers one Calendar more effective and visually pleasing than other from graphic design point of view. | 6 |
| 9. | a) | Define product liability negligence, warranty and strict liability. | 7 |
| | b) | Explain what is copyright. What is the term of duration of copyright? | 6 |
| 10. | a) | How are trade secrets protected? | 7 |
| | b) | Discuss design rules for plastic parts. | 6 |
