



II B.Tech II Sem Regular End Examination, July 2021
BASIC MECHANICAL ENGINEERING FOR CIVIL ENGINEERS
(CIVIL)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Answer any FIVE questions.

2. Each question carries 14 marks and may have a, b as sub questions.

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| 1 | a) | Explain different types of cams with neat sketch. | 7M | C01 | BL2 |
| | b) | Differentiate between fibre and particle reinforced composite. | 7M | C01 | BL2 |
| 2 | a) | What are Glass ceramics? Mention its desirable characteristics. | 7M | C01 | BL2 |
| | b) | What is an eccentric riveted joint? Explain the method adopted for designing such a joint. | 7M | C01 | BL3 |
| 3 | a) | What is power transmission? What are its primary elements? | 7M | C02 | BL1 |
| | b) | State the advantages of V-belt drive over flat-belt drive. | 7M | C02 | BL2 |
| 4 | a) | Differentiate between vapour compression refrigeration and vapour absorption refrigeration. | 7M | C03 | BL2 |
| | b) | What is IC Engine? What are the applications of IC Engine? | 7M | C03 | BL1 |
| 5 | a) | Define Refrigeration and determine the COP of Air Refrigeration system. | 7M | C03 | BL2 |
| | b) | Explain the modes of heat transfer with corresponding governing laws. | 7M | C03 | BL4 |
| 6 | a) | Explain about manufacturing process. List out the different tools which are used in sheet metal work. | 7M | C04 | BL2 |
| | b) | Enumerate the defects of welding and how can they be avoided. | 7M | C04 | BL4 |
| 7 | a) | How is an arc obtained in arc welding? What are the different power sources used in the welding? | 7M | C04 | BL3 |
| | b) | Define the following: (a) Blanking and Punching (b) Brazing and Soldering. | 7M | C04 | BL1 |
| 8 | a) | Describe the basic working principle and important parts of Lathe machine. | 7M | C05 | BL2 |
| | b) | Explain in detail about grinding process. | 7M | C05 | BL2 |