

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2064)

14637

B. Tech 4th Semester Examination

Manufacturing Process (N.S.)

AU-222

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Section A, B, C & D have two questions each. Attempt one question from Section A, B, C & D. Section E is compulsory.

SECTION - A

1. (a) Explain different types of cores with neat sketch. (7)
(b) Explain different aspects of galing design. (8)
2. (a) Explain the principle of Cupola melting and describe the sequential steps followed in using cupola. (7)
(b) What are various defects in casting and what precautions are to be taken to avoid them? (8)

SECTION - B

3. (a) Explain precision investment casting process. (7)
(b) What are advantages and limitations of centrifugal casting? (8)
4. (a) What are design considerations of forging? (7)
(b) Explain forging defects, their causes and remedies. (8)

14637/50

[P.T.O.]

SECTION - C

5. (a) Compare hot extrusion and cold extrusion. (7)
(b) Explain in brief wire drawing, swaging, tube making operations. (8)
6. (a) Explain spinning, embossing, punching and coining. (7)
(b) What are welding defects? (8)

SECTION - D

7. (a) Explain thermet welding, electro slag welding process. (8)
(b) Compare brazing and soldering. (7)
8. (a) What is meant by indexing? Explain the process in detail for lathe. (7)
(b) Explain principal parts of milling machine. (8)

SECTION - E

9. (i) What is sweep pattern and when it is used?
(ii) What is color coding in casting process?
(iii) Explain methods used for testing of casting.
(iv) Explain continuous casting.
(v) Explain and test forging defects.
(vi) What is shell molding?
(vii) What is TIG and SAW?
(viii) Explain friction welding.
(ix) Compare capstan and Turret lathe.
(x) Explain diffusion welding. (4×10=40)