PP-I : III SEM : OLD - MECH.

11/06/2015

Q.P. Code : 4545

(OLD COURSE)

(3 Hours) [Total Marks : 100

N.B.: (1) Question No.1 is compulsory
(2) Attempt any four questions out ofremaining six questions
(3) Figures to right indicate full marks
(4) Assume suitable data if necessary

1. (a) Write short note on any **five** of following:- 20
   - (a) Constructional features of CNC machines.
   - (b) Thermit welding
   - (c) Centreless Grinder.
   - (d) Up milling and down milling.
   - (e) Properties of Moulding sand.
   - (f) Pattern allowances.
   - (g) Dressing and truing of grinding wheel.

2. (a) Describe the method of taper turning operation on lathe m/c with neat sketches. 10

   (b) Draw and explain constructional features of radial milling machine. 10

3. (a) Sketch and write on various edge preparation used for welded joints. 10

   (b) Sketch the following milling machine operations. 10
   - (I) Face milling
   - (2) Form milling
   - (3) T-slot milling
   - (4) Spur gear cutting.

4. (a) Explain in tabular form, casting defects, their causes and remedies in the casting process. 8

   (b) Define cutting speed, feed and depth of cut in context of lathe machine. 6

   (c) How will you divide the periphery of a cylindrical job in to 35equal divisions using simple indexing method. 6

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5 (a) Compare electrical Discharge Machining (EDM) and electrochemical machining with reference to 10

(I) Power supply (2) Material removal rate.
(3) Surface finish. (4) Power consumption.

(b) Explain with a neat sketch the working principle of fricrion welding process. 6

(c) Explain why risers are used in casting process? 4

6 (a) Explain the following terms w.r.t. grinding wheel. 10

(a) Grit
(b) Grade
(c) Structure
(d) Bond

(b) Differentiate between core and core print. Write in brief the steps in involved in making of cores. 10

7. (a) Explain the importance of sintering process in powder metallurgy. 6

(b) Compare the constructional features of Shaper and Planer. 8

(c) With a neat sketch explain the construction of double Column planner. 6
