

Roll No

AU/IP/ME - 302

B.E. III Semester

Examination, December 2013

Production Process

Time : Three Hours

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Maximum Marks : 70

Note: Attempt any five questions. All questions carry equal marks.
Draw neat sketch, if required.

1. a) What is sin bar? Explain the method of measurement of an angle when:-
 - i) Component is small
 - ii) Component is large7
- b) How the rolling load and power is determined? 7
2. a) Describe briefly the different pattern making materials. 7
- b) Describe with neat diagram the different zones of cupola furnace. 7
3. a) What are the advantages and disadvantages of casting processes? 7
- b) What do you understand by the term "tool signature"? Support with suitable examples. 7

4. a) Prove that $V = V_C \cdot r$
Where V is cutting velocity
 V_C is chip velocity
 r is chip thickness ratio 7
- b) Determine percentage change in cutting speed required to give 20% reduction in tool life. Take $n = 0.2$. 7

5. a) Determine the blank diameter in drawing operation, if a cup of 8cm height and 4 cm diameter is to be made from sheet metal sheet. 7
- b) Explain Blanking, Punching and Notching operations related to press-working. 7

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6. a) Classify the closed die forging. Describe the flash-die forging and flash-less die forging. 7
- b) Differentiate between the press forging and the drop forging. 7
7. a) What are the different welding defects? How are they caused? Suggest remedies for their removal. 7
- b) Explain briefly submerged arc welding. Draw neat sketch. 7

8. Write short notes on any two of the following: 14
 - a) Tool wear
 - b) Spinning process
 - c) Press-dies