Roll No .....

AU/IP/ME - 302

B.E. III Semester

Examination, December 2013

Production Process

Time : Three Hours

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 large 7
   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 $V = V_C . r$
   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

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