

Roll No. ....

Total No. of Questions : 091

[Total No. of Pages : 02

**B.Tech. (Sem. - 4<sup>th</sup>)**  
**MANUFACTURING PROCESSES - II**  
**SUBJECT CODE : ME - 210**  
**Paper ID : [A0812]**

[Note : Please fill subject code and paper ID on OMR]

**Time : 03 Hours**

**Maximum Marks : 60**

**Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

**Section - A**

**Q1)**

**(10 x 2 = 20)**

- a) Briefly explain the following terms used in rolling.
  - (i) Neutral plane.
  - (ii) Angle of bite.
- b) What is tool signature? Explain with the help of a suitable example?
- c) List the common rolling defects.
- d) Discuss various angles of a drill.
- e) What are the various types of cutting fluids?
- f) Explain the mechanism of chip formation.
- g) List the main variables in drawing operations.
- h) Differentiate between open and closed die forging.
- i) Mention various methods of producing powders.
- j) How is milling machine specified? Classify milling machines.

**Section - B**

**(4 x 5 = 20)**

- Q2)** Explain high velocity forming. Name and describe some operations based on this technique.

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- Q3)** Explain the mechanism of chip formation. Also explain the various methods of classifying machine tools.
- Q4)** What is powder metallurgy? Explain sintering, to what type of components it is applied.
- Q5)** Show the various methods of tube drawing with the help of sketches. Also give the variables in the drawing process?
- Q6)** (a) Differentiate between hot working and cold working of metals.  
(b) Differentiate between pull type and push type broaching.

**Section - C**

**(2 x 10 = 20)**

- Q7)** (a) Discuss effect of coolant on speed and feed. Also discuss various properties of lubricants.  
(b) Describe a progressive combination and compound die.
- Q8)** (a) Explain various press working operations with help of suitable sketches and press working tools.  
(b) What is metal forming? Classify metal forming processes.
- Q9)** (a) What are the various forging defects? Discuss their causes and also state remedial measures.  
(b) Write short notes on any two :  
(i) Radial drilling machine.  
(ii) Differential Indexing.  
(iii) Specifications of shaper.

