

(3 Hours)

[Total Marks : 80

N.B.:- (1) Question No. 1 is compulsory.

(2) Attempt any three questions out of remaining five questions.

(3) Figures to the right indicate full marks.

(4) Illustrate answers with proper justification and neat sketches wherever required.

(5) Answers to questions should be grouped and written together.

1. Explain in brief with the help of neat sketch: (Any Four) (5 X4)
- (A) Capstan Vs turret lathe.
 - (B) Types of milling cutters.
 - (C) Performance measure of machine tools.
 - (D) Classification and Nomenclature of single point cutting tool.
 - (E) Calculation of machining time related to shaper.
2. (A) Why chucks are used? List various types of chucks in lathes. Describe any one in brief. (10)
- (B) Name different types of drilling machines. Explain Sensitive drilling M/C. (10)
3. (A) List different types of shapers. Describe quick return mechanism used in shapers. (10)
- (B) State indexing methods. Explain any one in details with neat sketch. (10)
4. Explain in brief with the help of neat sketch: (Any Four) (5 X4)
- (A) Types and materials of drills.
 - (B) Types of planning machines.
 - (C) Injection moulding with plastics.
 - (D) Broaching process.
 - (E) Universal dividing head related with milling machine.
5. (A) List types of broaching M/C. What are the advantages and limitations of broaching? (10)
- (B) Explain basic concepts related to compression molding. (10)
6. Write short notes on: (Any Four) (5 X4)
- (A) Circular saw cutting off machines.
 - (B) Thermoforming and extrusion related to plastics.
 - (C) Extrusion of glass.
 - (D) Types of slotting machine.
 - (E) Deep hole boring machine.