22446

**21819**

**3 Hours / 70 Marks** Seat No. | | | | | | | | |

***Instructions :*** (1) All Questions are *compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

**Marks**

**1. Answer any FIVE of the following :** **10**

(a) List types of chips produced in machining processes.

(b) List any four accessories used on Lathe.

(c) Define feed and speed in a shaping machine.

(d) List any four materials used for pattern making.

(e) List any four casting defects.

(f) State the applications of rolling.

(g) State the applications of TIG welding.

**2. Answer any THREE of the following :** **12**

(a) Write specifications of slotting machine.

(b) Explain any four properties of Moulding sand.

(c) Compare between Hot rolling and Cold rolling.

(d) Explain with neat sketch the working principle of MIG.

**3. Answer any THREE of the following :** **12**

(a) Explain single point cutting tool signature.

(b) Explain with neat sketch the quick return mechanism.

(c) List safety practices to be followed in foundry.

(d) Compare between soldering and brazing.

**4. Answer any THREE of the following :** **12**

(a) Draw a neat sketch of radial drilling machine and label the parts.

(b) Classify the slotting machine and explain the working principle of slotting machine.

(c) Explain with neat sketch the injection moulding.

(d) List the types of rolling mills and its applications.

(e) List any four welding defects and their causes.

**5. Answer any TWO of the following :** **12**

(a) Explain with neat sketch following drilling operations :

(i) Reaming

(ii) Boring

(iii) Counter sinking

(b) Enlist the types of pattern and state the procedure for pattern construction.

(c) Explain with neat sketch any three press forging operations.

**6. Answer any TWO of the following :** **12**

(a) List the types of taper turning methods and explain any one with neat sketch.

(b) Explain with neat sketch the calendaring process of plastic manufacturing.

(c) Explain with neat sketch the direct extrusion and state its advantages and disadvantages.