

17622

11920

3 Hours / 100 Marks

Seat No.

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- 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. Attempt any FIVE :

20

- (a) List the various stages involved in basic shearing machine.
- (b) State the essential features of rotary shearing machine.
- (c) State the working of punch type nibbler.
- (d) List any two advantages & two disadvantages of reciprocating power hacksaw.
- (e) State the factors influencing quality of cut.
- (f) Distinguish between bending & folding.
- (g) Give the dimensional specifications of a press brake.
- (h) What is preforming in rolling operation & state its need.

2. Attempt any TWO :

16

- (a) State the methods used for tensioning HSFG bolts, explain any one.
- (b) Explain the working of power guillotine machine.
- (c) Describe with neat sketch cropping and notching operation in shearing machine.

- 3. Attempt any TWO :** **16**
- (a) Explain angle ring bending roller with neat sketch.
 - (b) Explain the following with neat sketch :
 - (i) pop rivet
 - (ii) bifurcated rivet
 - (c) Describe the process of removal of defective weld by gouging.
- 4. Attempt any TWO :** **16**
- (a) Explain bending operation on press brake.
 - (b) Describe edge bending method with neat sketch.
 - (c) Explain with neat sketch the use of attachment in hand flame cutting to ensure steady rate of cut along a straight line.
- 5. Attempt any TWO :** **16**
- (a) Explain spring back in metal related to bending operation with a neat sketch.
 - (b)
 - (i) List the various safety precautions to be taken during shearing.
 - (ii) Compare flame cutting and shearing.
 - (c)
 - (i) State the advantages & disadvantages of power press. (any two)
 - (ii) Compare hand rivetting & power rivetting.
- 6. Attempt any FOUR :** **16**
- (a) State the advantages of rotary shearing machine.
 - (b) Describe the working of shear type nibbler.
 - (c) Describe the process of hand sawing.
 - (d) Define bending. List basic bending methods.
 - (e) What are high strength friction grip bolts ?
 - (f) Describe circular metal sawing.
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