

17622

21718

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.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. (A) Attempt any THREE : 12

- (a) Compare Flame cutting and Shearing.
- (b) Distinguish between folding and bending.
- (c) Define : (i) Blanking, (ii) Piercing operations.
- (d) Write advantages & disadvantages of reciprocating power hacksaw.

(B) Attempt any ONE : 6

- (a) Explain the procedure for lightening the cutting torch. Enlist the factors influencing quality of cut.
- (b) Distinguish between bolting and riveting. (any six points)

2. Attempt any TWO :**16**

- (a) Explain operation of guillotine. What are the safety precautions to be taken during operation ?
- (b) Write the importance of neutral line. State the applications of bending allowances.
- (c) Explain the technique of cutting a round bar. Write the advantages of Flame cutting.

3. Attempt any TWO :**16**

- (a) Explain construction and working of Reciprocating power hacksaw. State the safety precautions during sawing operation.
- (b) Draw a basic arrangement of rolls. Explain cone rolling attachment.
- (c) What are the methods of riveting ? Explain power riveting method. Also state the allowances used for riveting.

4. (A) Attempt any THREE :**12**

- (a) Compare parallel shaft machine and inclined shaft machine.
- (b) With neat sketch explain pyramid type rolling machine.
- (c) State the applications of flame cutting by hand.
- (d) Enlist the advantages & disadvantages of Hand Sawing.

- (B) Attempt any ONE :** **6**
- (a) List the methods of compensating for spring back and explain any one.
 - (b) Define die ratio. Also state advantages and disadvantages of power press.
- 5. Attempt any TWO :** **16**
- (a) Enlist the methods of tensioning HSFGB bolts. Explain how torque is controlled by power driven wrench.
 - (b) Explain construction and working of shear type nibbler machine. Also state the advantages of nibblers.
 - (c) Define : (i) Shear angle, (ii) Rake angle. Explain clearance between cutting edges. Also state basic principles of shearing.
- 6. Attempt any FOUR :** **16**
- (a) Explain procedure of defective rivet removal by gouging.
 - (b) Compare mechanical and hydraulic press brakes.
 - (c) Define spring back and explain mechanics of bending.
 - (d) Compare cropping and notching operation.
 - (e) State the essential features of shearing (Rotary shearing).
 - (f) Explain blanking pressure.
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