

DAY - 14			SEAT NUMBER			
2021	X	05	1030	R - 324	(E)	
MECHANICAL MAINTENANCE PAPER - I (A-2)						
Time : 2½ Hours		2 Pages		Max. Marks : 40		

- Instructions :**
- (1) All questions are compulsory.
 - (2) Figures to the right indicate full marks.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Use of drawing instruments, mathematical tables etc. are permitted.
 - (5) Assume suitable data, if necessary.

1. Answer the following (Any Four)

Fill in the blanks:

(a) _____ is the operation performed to give bevel shape the end of a work piece.

- (i) Facing
- (ii) Chamfering

(b) _____ is used to hold the drill smaller than spindle

- (1) Sleeve
- (ii) Socket

Match the pairs:

- | | |
|------------------------|--------------------------|
| (a) T-bolts and Clamps | (i) Tool holding devices |
|------------------------|--------------------------|

- (d) Drill chuck
- (ii) Work holding devices
- (iii) For holding taper shank drills

State 'true' or 'false' and correct it if false:

- (c) Honing is the process of finishing cylindrical holes.
- (d) in-slotter tool reciprocates in horizontal direction.

2. Answer the following in about 8 to 10 lines each (any two)

- (a) Explain four jaw chuck with a neat sketch
- (b) Enlist different tool holding devices used on drilling machine explain in one of them with a neat sketch
- (b) Explain working principle of milling machine with a neat sketch

neat sketch

3. Answer the following in about 8 to 10 lines each (any two)

- (a) What are the various operations performed on drilling machine any one with a neat sketch. <https://www.maharashtrastudy.com>
- (b) Explain the working of centerless grinder with a neat sketch
- (c) Write a short note on care and maintenance of machine tools.

4. Answer the following in about 5 to 6 lines each (Any Three)

- (a) What are the functions of Preventive Maintenance
- (b) Explain Ball Center with a neat sketch
- (c) Compare between Live Centre and Dead Centre
- (d) Draw a neat labelled sketch of tool head of the shape

(e) Classify the Drilling Machine.

5. Answer the following in about 5 to 6 lines each: (Any Three)

(a) Draw any four shapes of grinding wheel.

(b) How planing machine is specified ?

(c) Write a short note on dial indicator.

(d) Name the personal safety devices used in industries.

(e) Why starter is necessary in electrical circuit of machine tool?

6. Attempt any two:

(a) Explain working of horizontal milling machine with a neat sketch. Also explain any two parts of it.

(b) Explain tailstock of lathe machine with a neat sketch. State its functions.

(c) What is meant by quick return mechanism? Explain crank and slotted link mechanism with a neat sketch.