

DAY - 16

SEAT NUMBER

2022

III

23

1030

V - 104

(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)

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- (a) _____ is clamped to the saddle and moves along with the tool.
 - (i) Steady Rest
 - (ii) Follower Rest
- (b) In _____ machine number of drill heads are mounted side by side on common work table
 - (i) Multiple Spindle Drilling
 - (ii) Gang Drilling

Match the pairs :

- | | |
|-------------|------------------------------------|
| (c) Dieing | (i) Internal threading operation |
| (d) Tapping | (ii) Operation of enlarging hole |
| | (iii) External threading operation |

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

- (e) Preventive maintenance reduces chances of breakdown.
- (f) Dial gauge is used for checking clearance between mating surface.

2. Answer the following in about 8 to 10 lines each : (Any Two) 6
- (a) Explain working principle of Lathe Machine with neat sketch.
 - (b) What are the different types of Drills ? Draw a neat labelled diagram of Twist Drill.
 - (c) Define the terms : Grit, Grade, Structure related to grinding wheel.
3. Answer the following in about 8 to 10 lines each : (Any Two) 6
- (a) What are the operations performed on Shaper ? Explain any one of them with neat sketch.
 - (b) What are the advantages and disadvantages of all geared type Headstock of Lathe ?
 - (c) Draw a neat labelled diagram of Vertical Milling Machine.
4. Answer the following in about 5 to 6 lines each : (Any Three) 6
- (a) What are the advantages of Preventive Maintenance ?
 - (b) Why fuse is used in Electric Circuit ?
 - (c) What safety precautions should be taken while working in machine shop ?
 - (d) Write a short note on 'Lapping'.
 - (e) Explain Belt Grinder with neat sketch.
5. Answer the following in about 5 to 6 lines each : (Any Three) 6
- (a) Explain Socket used on Drilling Machine with neat sketch.
 - (b) Write note on Puncher Slotter.
 - (c) List out the different measuring equipments used for testing.
 - (d) Classify Precision Grinding Machine.
 - (e) Explain parting off operation with neat sketch.
6. Attempt any two : 12
- (a) Differentiate between Shaper and Planer.
 - (b) What are the operations performed on Lathe Machine ? Explain any two of them with neat sketches.
 - (c) Explain the Radial Drilling Machine with neat labelled sketch.