

DAY - 15

SEAT NUMBER

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2020 XII 09

1030

V - 304

(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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Fill in the blanks :

- (a) _____ is the operation of producing diamond shaped pattern on cylindrical surface.
- (i) Knurling
 (ii) Grooving
 (iii) Boring
- (b) In grinding wheel abrasive particles are held by _____.
- (i) Grain
 (ii) Grade
 (iii) Bond

Match the pairs :

- (c) Shaper (i) Tool Reciprocates Vertically
 (d) Planer (ii) Tool Reciprocates Horizontally
 (iii) Table Reciprocates Horizontally

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

- (e) In slotting machine the material is cut during horizontal movement of ram.
- (f) Diamond is an artificial abrasive material.

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2. Answer the following in about 8 to 10 lines each : (Any Two)

- (a) State the various types of Mandrels. Explain any one with a neat sketch.
- (b) Explain centreless grinder with a neat sketch.
- (c) Draw a block diagram of slotter and explain its working.

3. Answer the following in about 8 to 10 lines each : (Any Two)

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- (a) Explain Follower Rest with a neat sketch.
- (b) Explain Bench Grinder with a neat sketch.
- (c) Differentiate between Counterboring and Countersinking with sketches.

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

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- (a) What are the types of Drilling Machine ?
- (b) How Lathe machine is specified ?
- (c) What is meant by Indexing ?
- (d) Enlist different types of alignment tests conducted on a Drilling Machine.
- (e) Differentiate between Preventive Maintenance and Breakdown Maintenance.

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

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- (a) Write a short note on Double Housing Planer.
- (b) What are safety equipments used in the industries ?
- (c) Differentiate between Tap and Die.
- (d) State work holding devices used on milling machine.
- (e) Specify the Shaping Machine.

6. Attempt any two :

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- (a) Enlist the types of Milling Cutters. Explain any two of them with neat sketches.
- (b) What are the operations performed on Lathe Machine ? Explain any two with a neat sketch.
- (c) Explain Standard Shaper with a neat labelled sketch.