

314340

12526

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following :** **10**
- a) Define CNC.
 - b) List the abrasives used for grinding wheel. (Any four)
 - c) List the gear finishing methods.
 - d) Define fixture.
 - e) List components of CIM.
 - f) Draw a neat sketch of open loop control system.
 - g) List the applications of rapid prototyping.
- 2. Attempt any THREE of the following :** **12**
- a) Explain gear shaping with its advantages and disadvantages.
 - b) Describe absolute coordinate system and incremental coordinate system with suitable example.
 - c) Explain the working of cylindrical grinding machine with neat sketch.
 - d) Classify the press machines in detail.

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- 3. Attempt any THREE of the following : 12**
- a) Classify the CNC machines.
 - b) Distinguish between grinding and super finishing processes.
 - c) Explain 3-2-1 principle of location.
 - d) Explain the principle of jig design.
- 4. Attempt any THREE of the following : 12**
- a) Explain Gear Hobbing process with neat sketch. List four applications of it.
 - b) Classify the gear manufacturing methods.
 - c) Illustrate the linear and rotary pallet changer used in CNC.
 - d) Classify the Non-traditional machining processes.
 - e) Illustrate the gear manufacturing by using suitable milling operation.
- 5. Attempt any TWO of the following : 12**
- a) Explain dressing and truing of grinding wheel.
 - b) Illustrate the press tool with its components.
 - c) Explain gear broaching process with its applications and limitations.
- 6. Attempt any TWO of the following : 12**
- a) Compare gear lapping and gear honing.
 - b) Illustrate working of the EDM machine. State its advantages and applications.
 - c) Distinguish between jig and fixture.
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