

314340

25226

3 Hours / 70 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.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define CNC machine and state two advantages.
- (b) Enlist different abrasive materials used in grinding wheel.
- (c) List different gear finishing methods.
- (d) Classify press machine on the basis of power.
- (e) State the application of LBM.
- (f) State the importance of gear finishing.
- (g) Give the application of jig and fixture.

2. Attempt any THREE of the following :

12

- (a) Explain with neat sketch absolute and incremental co-ordinate system.
- (b) Explain the term grinding wheel dressing.
- (c) Differentiate between gear hobbing and gear shaping.
- (d) Explain gear shaving process with neat sketch.



- 3. Attempt any THREE of the following : 12**
- (a) Explain any two types of dies with neat sketch.
 - (b) List any four advantages and disadvantages of EDM process.
 - (c) Explain automatic tool changer.
 - (d) Explain working principle of broaching process.
- 4. Attempt any THREE of the following : 12**
- (a) Explain the working principle of USM with neat sketch.
 - (b) List the constructional elements of CNC machine.
 - (c) Designate the grinding wheel A50 P8 X30.
 - (d) List the locating methods of jigs and fixture.
 - (e) Explain RP cycle.
- 5. Attempt any TWO of the following : 12**
- (a) List different gear finishing methods and explain any one.
 - (b) Explain hydraulic press with neat sketch.
 - (c) Draw basic schematic diagram of CNC machine and label it.
- 6. Attempt any TWO of the following : 12**
- (a) Explain any two types of gear manufacturing methods with sketch.
 - (b) Explain the honing process in detail with neat sketch. Also give its advantages.
 - (c) Differentiate between Jigs and fixture.
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