

Total No. of Questions : 8]

SEAT No. :

PB-3891

[Total No. of Pages : 2

[6262]-156

T.E. (Mechanical) (Automobile Engg.)

MACHINING SCIENCE & TECHNOLOGY

(2019 Pattern) (Semester - I) (302045 B) (Elective - I)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) Explain and classify grinding wheels selection factors. [10]

b) Explain any one lapping process with neat sketch and state its applications. [7]

OR

Q2) a) Explain Ball burnishing process with neat sketch. State its advantage and applications. [10]

b) Explain grinding wheel designation: 35-A-46-M-3-S-33. [7]

Q3) a) Compare of jigs and fixtures with minimum five points. Write industry significance for jig and Fixture. (Minimum Five points). [10]

b) With neat sketch describe the concept of degree of freedom. Explain the six point location principle with neat sketch. [8]

OR

Q4) a) Write any six principles of clamping and draw labeled sketch of strap clamp. [10]

b) Explain with neat sketch inspection fixture. [8]

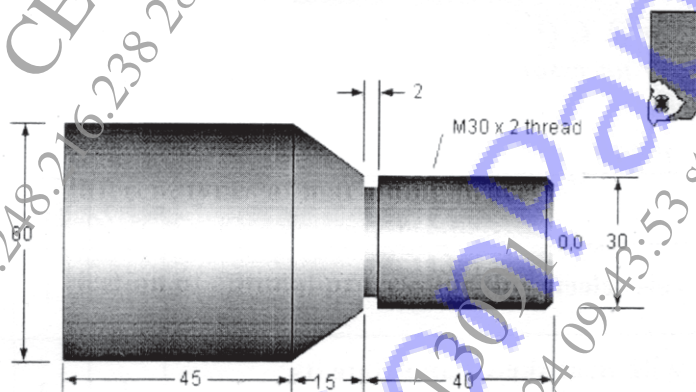
P.T.O.

- Q5) a)** Evaluate the phase of drawing interpretation in process planning activity. [9]
b) Explain production equipment & tooling selection in process planning. [8]

OR

- Q6) a)** Two different types of machining processes process-1 and process-2 can be used for the same job. Evaluate economics of process planning and selection of optimal process for this case. [9]
b) Explain with flowchart process selection. [8]

- Q7) a)** Generate CNC part programming for the below part which requires only threading operation as shown. [10]



- b)** Explain the steps involved in CNC part programming. [8]

OR

- Q8) a)** Explain with neat diagram Linear interpolation and Circular interpolation methods used for CNC part program. [10]
b) "Tool length Compensation in CNC part programming is necessary". Explain the statement with neat diagram. [8]

