

Total No. of Questions : 8]

SEAT No. :

**PE2626**

[Total No. of Pages : 2

[6583]-158

**T.E. (Mechanical)/(Automobile)**

**MACHINING SCIENCE & TECHNOLOGY**

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

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

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

b) Explain honing 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) How is a grinding wheel mounted on the spindle? What precautions should be taken when mounting a grinding wheel? [7]

**Q3) a)** Define jig and fixture. Differentiate between them with suitable examples. 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)** What is indexing in jig and fixture? Explain with neat sketch indexing jig. [10]

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

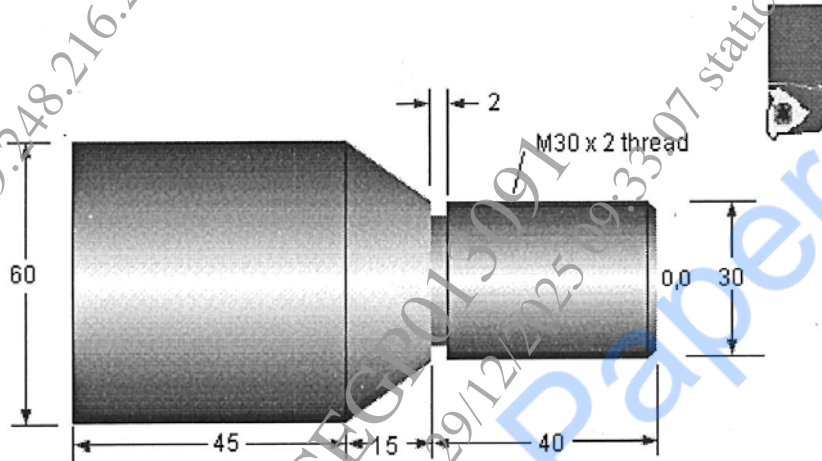
*P.T.O.*

- 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)** Explain with neat sketch and the steps followed for material selection process and methods. [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)** What is tool length and cutter radius compensation used in CNC part program? Explain with neat sketches. [10]  
**b)** Explain with figure circular and linear interpolation functions used in CNC programming. [8]

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