

Total No. of Questions : 8]

SEAT No. :

PD4355

[6403]-154

[Total No. of Pages : 2

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

MACHINING SCIENCE & TECHNOLOGY

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

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve 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 indicate full marks.*
- 4) *Assume suitable data wherever necessary.*

Q1) a) Describe with neat sketch any one special application of cylindrical grinder. Mention the application. **[9]**

b) Write any four constant factors and any four variable factors for selection of grinding wheel in machining process. **[8]**

OR

Q2) a) Explain Glazing , Dressing and Truing of Grinding wheels with neat sketches. **[9]**

b) Draw sketch of any lapping process. What are its control parameters? Write its two industrial applications. **[8]**

Q3) a) Write any six advantages of use of jig and fixture. **[6]**

b) Explain with neat sketch principle of setting elements in milling operation. **[6]**

c) Draw a sketch of Turnover Jig. **[6]**

OR

Q4) a) Write any six principles of clamping. **[6]**

b) Give any six location guidelines for fixture. **[6]**

c) Explain with neat sketch 3-2-1 principle of location. **[6]**

P.T.O.

- Q5) a)** Explain material evaluation in process planning. **[9]**
- b)** Explain with flow chart steps in process selection. **[8]**

OR

- Q6) a)** List and explain the set of documents required for Process Planning. **[9]**
- b)** Explain the process parameters that need to be calculated for each operation during process planning. Why this is important? **[8]**

- Q7) a)** “Milling Cutter requires Radius Compensation”, support the statement. **[6]**
- b)** Explain Canned cycle of programming? Write the advantage of writing part program with canned cycle. **[6]**
- c)** Write and explain any six preparatory functions codes. (G Codes) **[6]**

OR

- Q8) a)** Explain with neat diagram clockwise and anticlockwise Circular interpolation in CNC part program. **[6]**
- b)** Explain Steps in developing CNC part program. **[6]**
- c)** Write and explain any six miscellaneous functions codes.(M Codes) **[6]**

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