

Total No. of Questions :6]

SEAT No. :

P17

TE/Insem./APR-20

[Total No. of Pages : 2

T.E. (Mechanical)

302051: MANUFACTURING PROCESS - II

(2015 Pattern) (Semester - II)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of electronic pocket calculator is allowed.
- 4) Assume Suitable data, if necessary.

- Q1)** a) A 300 mm diameter bar is turned as 45 rev/min with depth of cut of 2mm and feed of 0.3 mm/rev The forces measured at the cutting tool point are -cutting force 1850 N and feed force = 450 N Calculate
- i). Power consumption and
 - ii) Specific cutting energy [6]
- b) List types of chips and Explain the cutting conditions for chip type formation. [4]

OR

- Q2)** a) The tool life of high speed steel (HSS) tool and carbide tool have the same tool life of 60 minutes at a cutting speed of 75 m/min. the exponent of tool life in Taylor's equation "n" is 0.15 for HSS, while it is 0.2 for carbide tool. Compare tool life for the two tools at a speed of 90 m/min. [6]
- b) With help of neat sketch, explain single point cutting tool geometry. [4]
- Q3)** a) Explain construction & working of radial drilling machine with block diagram. Show the different motion of drill head. [6]
- b) A slot is to be milled by a side and face milling cutter with 10 teeth and of diameter 150 mm the cutting speed is 50m/min and feed is 0.25 mm/tooth. Determine the table fed in mm/min. [4]

OR

P.T.O.

