[6360]-6

T.E. (Mechanical Engineering)/(Automobile Engg.) (Insem)
MACHINING SCIENCE AND TECHNOLOGY
(2019 Pattern) (Semester - I) (Elective - I) (302045 B)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:
1) *Solve Q.1 or Q.2, Q.3 or Q.4.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Assume suitable data, if necessary.*
4) *Figures to the right indicate full marks.*
5) *Use of non-programmable electronic calculator is allowed.*

Q1) a) Discuss the various types of chips produced during Machining. **[5]**

b) Explain the tool designation in ASA system with an example. **[4]**

c) Derive an expression for a shear angle in terms of chip thickness ratio. **[6]**

OR

Q2) a) Define Machinability and Machinability index. Explain the factors affecting machinability. **[6]**

b) Explain the Mechanics of chip formation with the neat sketch. **[5]**

c) Calculate the tool life for the tool at speed of 24m/min, if the tool life is found 3 hours at speed of 18m/min. take n = 0.125. **[4]**

Q3) a) Explain in brief indexing method in milling for gear cutting with an example. **[6]**

b) Explain thread milling in brief. **[5]**

c) Write the factors essentials in selection of gear material. **[4]**

OR

Q4) a) Explain with neat sketch the process of Gear shaping. **[6]**

b) Explain with neat sketch the thread tapping. **[5]**

c) Explain any one method of gear inspection. **[4]**

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