T.E. (Mechanical Engineering) (Automobile Engg.) (Insem) MACHINING SCIENCE AND TECHNOLOGY (2019 Pattern) (Semester - I) (Elective - I) (302045 B) Time: 1 Hour] 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. C) Derive an expression for a shear angle in terms of chip thickness ratio. [6] Q2) a) Define Machinability and Machinability index. Explain the factors affecting machinability. (C) Calculate the tool life for the tool at speed of 24m/min, if the tool life found 3 hours at speed of 18m/min, take n = 0.125. (Q3) a) Explain in brief indexing method in milling for gear cutting with an example b) Explain thread milling in brief. (C) Write the factors essentials in selection of gear material. (Q4) a) Explain with neat sketch the process of Gear shaping. (5) Explain with neat sketch the thread tapping: [5] Explain with neat sketch the thread tapping: [6] Explain with neat sketch the thread tapping: [6] Explain with neat sketch the thread tapping: [7] Thread Machinability and Machinability index. Explain the factors affecting machinability index. Explain the	Total No	o. of Questions : 4] SEAT No. :		
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