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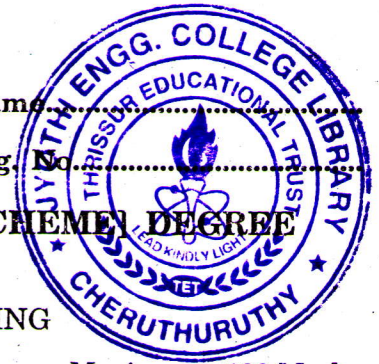
FIFTH SEMESTER B.TECH. (ENGINEERING) [14 SCHEME] DEGREE EXAMINATION, NOVEMBER 2016

ME 14 502—METAL CUTTING AND FORMING

Time : Three Hours   Maximum : 100 Marks

Part A

Answer **eight** *questions out of ten.*

1. What are the differences between orthogonal and oblique cutting ?

2. Explain what is meant by the term machinability and what it involves ?

3. List major functions of cutting fluids.

4. Describe the five types of machining operations that can be performed on a lathe.

5. Distinguish between up milling and down milling with a sketch.

6. What are the advantages of ECM ?

7. When should clearances be subtracted from punch dimensions ?

8. What are the various dies used in press working ?

9. Explain the difference between extrusion and drawing with a line diagram.

10. What is meant by economic of machining ?

                                                    (8 × 5 = 40 marks)

Part B

Answer **all** *the questions.*

11. (a) Explain in detail about the variables that will affect the machining operation with suitable diagrams.

                              Or

    (b) Explicate in detail about type of chip produced in metal cutting.

12. (a) Explain the different type of milling cutter with neat sketch.

                              Or

    (b) Figurate a drill tool and explain its nomenclature in detail.

                                                    Turn over

13. (a) (i) With a neat sketch explain about abrasive jet machining. Also explain its importance when compared with Non-Traditional machining.

(8 marks)

    (ii) Explain the process characteristics of Plasma Arc Machining.   (7 marks)

Or

(b) Explain EDM process and its important characteristics.

14. (a) Explain the construction and operations of combination and progressive dies with a neat sketch.

Or

(b) Figuratively explain in detail about explosive forming.

[4 × 15 = 60 marks]