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B.Tech. 4th Semester (ME) F. Scheme

Examination, May–2014

MANUFACTURING TECHNOLOGY-I

Paper–ME-202-F

Time allowed : 3 hours]   *[Maximum marks : 100*

*Note : **Question No. 1 is compulsory**. Attempt any five questions selecting at least **one** question from each section.*

1. (a) Define Shear plane angle.   20

     (b) What are the reasons of using chemical coolants ?

     (c) What are Jig bushes ?

     (d) What is function of sine bar ?

     (e) List the operation performed on lathe machine.

     (f) Define fettling in casting.

     (g) What is function of flux in welding ?

     (h) What is extrusion ?

Section–A

2. Draw a neat labelled sketch of right single point cutting tool showing various tool angles. What are the effects of various tool angles on machining ? Explain what is built up edge ?   20

3. (a) In Taylor's tool life exponent n=0.5 and constant C=400, What will be the percentage increase in tool life be when cutting speed is reduced to half.

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   (b) What is meant by machinability ? Explain the methods of representing the machinability.

Section–B

4. List the main component of Jig and Fixtures. How are Jigs and Fixtures classified ? Briefly explain the principals of Jig and Fixtures design. 20

5. Write short notes on : 20

   (a) Mechanical comparator

   (b) Surface finish and its measurement

   (c) Screw gauge.

Section–C

6. With the help of neat sketch explain the principal of turret lathe. 20

7. Explain the basic steps in casting process. Also explain the pattern allowances. 20

Section–D

8. Explain the working principal of resistance welding. Also explain the different types of welding defects.

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9. Explain the principal of hot working and cold working. Explain the Shearing, blanking, and piercing operation.

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