

24169

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 ?

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. 20
- (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

(3)

24169

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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