(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 4304 Roll No. | | | | | | | | | | |

B.Tech.

(SEMESTER-II) THEORY EXAMINATION, 2011-12

MANUFACTURING PROCESSES

Time : 2 Hours] *[Total Marks : 50*

Section – A

1. Attempt **all** questions. **All** questions carry equal marks. **5 × 2 = 10**

   (a) Explain the terms :

   (i) Fatigue

   (ii) Creep

   (b) Define Pattern. What are different types of patterns ? List the various types of allowances which are usually provided in a pattern.

   (c) What is the difference between straight polarity and reverse polarity in Electric arc welding ?

   (d) Define plant layout. What are the different types of plant layout ?

   (e) What are different parts of Lathe machine ? Name the operations, which can be performed on Lathe machine.

Section – B

2. Attempt any **three** questions. **All** questions carry equal marks. **3 × 5 = 15**

   (a) What are plain carbon steels ? Discuss in brief the classification of plain carbon steels and also state few applications.

   (b) Discuss briefly the causes and remedies of any five casting defects.

   (c) What are the advantages and disadvantages of hot working and cold working processes ?

(d) List the advantages, disadvantages and applications of Powder metallurgy process.

(e) Explain with neat sketch, principal parts of Shaper.

Section – C

3. Attempt **all** questions. **All** questions carry equal marks. **5 × 5 = 25**

(a) Write short note on any **two** of the following :

(i) Annealing.

(ii) Normalizing.

(iii) Tempering.

(b) Explain Die casting with neat sketch. State its advantages and disadvantages.

OR

What is Extrusion ? How extrusion processes are classified ? List the applications of Extrusion process.

(c) Differentiate between up milling and down milling.

OR

Define welding. What is Electric arc welding ? Explain with the help of neat sketch, the principle used in Electric arc welding.

(d) Compare process layout and product layout.

OR

What is composite material ? How are composite materials classified ? Write the applications of composite materials.

(e) Differentiate between soldering and brazing process.

OR

Write the properties and applications of

(i) Stainless steel

(ii) Duralumin

(iii) Wrought Iron