

B.TECH SEM - III (2007 COURSE) (MECHANICAL ENGG.) :
SUMMER - 2018

SUBJECT : MANUFACTURING PROCESSES

Day : **Thursday**
Date : **24/05/2018**

S-2018-2587

Time : **02.30 PM TO 05.30 PM**
Max. Marks : 80

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** questions from Section – I and Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SEPARATE** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data if necessary.

SECTION - I

- Q. 1**
- a) Write the steps involving in manufacturing of casting. **(05)**
 - b) Classify the rolling mills; state its merits and demerits. **(05)**
 - c) Comment on surface and edge preparation in welding. **(04)**
- Q. 2**
- a) What is difference between patterns, mould and casting? Explain the allowances in pattern molding. **(07)**
 - b) What are various methods of centrifugal casting process? Explain in brief. **(06)**
- Q. 3**
- a) Describe following processes and their specific applications: **(07)**
 - i) Hot spinning
 - ii) Die forging process
 - b) Explain manufacturing process for molding electrical wire. **(06)**
- Q. 4**
- a) Explain electro slag welding process, with its merits and demerits. **(07)**
 - b) Comment on 'Importance of ASME Codes' and 'ISO Standards' on joining process. **(06)**

SECTION - II

- Q. 5**
- a) Explain steady rest, follower rest and compound rest. **(05)**
 - b) Briefly describe three common forms of parallel shank drills. **(05)**
 - c) What are the common wheel shapes used in grinding work. **(04)**
- Q. 6**
- a) Write the procedure for cutting multiple start threads on lathe machine. **(07)**
 - b) Explain with neat sketch the construction and working of an all geared head stock of lathe. **(06)**
- Q. 7**
- a) Describe with the sketches different operations preferred on milling machine. **(07)**
 - b) Calculate compound indexing for 87 divisions. The hole circles available are: **(06)**
Plate I: 15, 16, 17, 18, 19, 20
Plate II: 21, 23, 27, 29, 31, 33
Plate III: 37, 34, 41, 43, 47, 49
- Q. 8**
- a) Explain in details the operating faults of a grinding wheel and give remedies to these faults. **(07)**
 - b) Explain with a neat sketch 'mounting of grinding wheels'. **(06)**

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