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Sahyadri College of Engineering & Management
CENTRAL LIBRARY
Adyar, Mangalore-7

10ME/AU35

Third Semester B.E. Degree Examination, Dec.2017/Jan.2018
Manufacturing Process – I

Time: 3 hrs. Max. Marks:100

Note: ***Answer FIVE full questions, selecting at least TWO questions from each part.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

PART – A

1 a. Explain briefly the different types of manufacturing process and mention their applications. **(08 Marks)**
b. With an illustration explain any two types of patterns. **(08 Marks)**
c. Write a note on binders and additives. **(04 Marks)**

2 a. Explain briefly the characteristics of foundry sand. **(06 Marks)**
b. What is riser? With an illustration, explain different types of risers. **(06 Marks)**
c. With an illustration, explain sand slinger in mould making process. **(08 Marks)**

3 a. With an illustration, explain flaskless moulding process. Mention its advantages. **(10 Marks)**
b. With an illustration, explain continuous casting process and mention its applications. **(10 Marks)**

4 a. With an illustration, explain electrical resistance furnace and mention its limitations. **(08 Marks)**
b. With an illustration, explain construction and operations of CUPOLA furnace. **(12 Marks)**

PART – B

5 a. Define welding. Give a broad classification of welding. **(05 Marks)**
b. With an illustration, explain submerged arc welding process. **(09 Marks)**
c. With an illustration, explain different types of gas flames in gas welding process. **(06 Marks)**

6 a. With an illustrations, explain the following:
(i) Butt welding process.
(ii) Spot welding process. **(12 Marks)**
b. With an illustration, explain the operations of electron beam welding. **(08 Marks)**

7 a. Explain the parameters which effects if on heat affected zone in welding. **(05 Marks)**
b. Write a note on the following:
(i) Welding rods.
(ii) Fluxes in welding. **(06 Marks)**
c. Explain defects, causes and remedies in welding. **(09 Marks)**

8 a. Differentiate between soldering and brazing. **(06 Marks)**
b. Write a note on fluorescent particle method used to detect the defects on component. **(06 Marks)**
c. With an illustration, explain Radiography test used in welding. **(08 Marks)**

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