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Sub Code: NME 201

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B TECH**(SEM II) THEORY EXAMINATION 2017-18****BASIC MANUFACTURING PROCESSES****Time: 3 Hours****Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**Section A****1. Attempt all questions in brief. (2 x10 = 20)**

- a. Classify the manufacturing system.
- b. Differentiate between toughness and resilience.
- c. Write down the composition and application of gun metal.
- d. Define the term weldability.
- e. Differentiate between drilling and counter sinking.
- f. Write down the function of runner and sprue in casting.
- g. Differentiate between perforating and nibbling.
- h. Write down the objective of heat treatment.
- i. Write down the function of core in casting.
- j. Define extrusion.

SECTION B**2. Attempt any three of the following: (10 x 3 = 30)**

- a. Classify cast iron. Explain each with their composition and applications.
- b. What do you mean by hot forming? What are the advantages of hot forming? How it differ from cold forming.
- c. Explain the working principle drilling machine tool. Also explain different drilling operations.
- d. Define welding. Classify the welding processes. Also explain spot welding process..
- e. With the help of neat sketch explain die casting method. Also write down their limitations

SECTION C**3. Attempt any ONE of the following (10X1=10)**

- a. Define the following
 - (i) elasticity
 - (ii) proof resilience
 - (iii) malleability
 - (iv) Fatigue.
- b. What do you mean by non ferrous metal? Explain properties and application of Aluminum alloys.

4. Attempt any ONE of the following. (10X1=10)

- a. With the help of neat sketch explain wire drawing. Also explain different types of forming defects.
- b. Explain the working principle of press with the help of neat sketch. Also write down the different press operation.

5. Attempt any ONE of the following. (10X1=10)

- a. With the help of neat sketch explain the working principle of lathe machine. Also explain different lathe operations.
- b. Explain mechanism arc welding. Also explain manual metal arc welding.

6. Attempt any ONE of the following. (10X1=10)

- a. What do you mean by heat treatment? Also explain case carburizing.
- b. Define the term production. Also explain job and batch production.

7. Write down the short notes on any two of the following: (5X2=10)

- a. Casting defects.
- b. Pattern allowances
- c. Plastics and its application
- d. Different flames used in gas welding.