

UNIVERSITY COLLEGE
TATI

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FINAL EXAM QUESTION BOOKLET

COURSE CODE : BME 1043 571
COURSE TITLE : MANUFACTURING PROCESS
SEMESTER/SESSION : SEMESTER 1 – 2024/2025
TIME : 3 HOURS

Instructions to candidates:

1. This booklet consists of **5** questions. Answer **ALL** questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, ask the invigilator / Instructor

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO**THIS BOOKLET CONTAINS 3 PRINTED PAGES INCLUDING COVER PAGE**

BME 1043 MANUFACTURING PROCESS

QUESTION 1

Manufacturing is an important role of any industries nation.

- a) Describe your understanding about manufacturing processes. (3 marks)
- b) Identify three (3) methods of manufacturing process and give an example for each method. (3 marks)
- c) Explain the advantages of a system planning. (3 marks)

QUESTION 2

Joining processes are fundamental in manufacturing for assembling parts to create a functional product.

- a) Explain the important of joining processes. (2 marks)
- b) Classify three (3) types of joining processes. (3 marks)
- c) Identify the factors should be considered the parts to be joined. (3 marks)
- d) Sketch and name four (4) basic joints for welding. (4 marks)
- e) Differentiate between bolts and nuts. (4 marks)

QUESTION 3

Forming and Shaping are the methods used in manufacturing process to produce various types of shape of metals.

- a) Differentiate between plastic and elastic deformation. (6 marks)
- b) Differentiate between hot working and cold working process. (5 marks)
- c) Interpret the recrystallization and recrystallization temperature that occur during hot rolling process. (6 marks)
- d) Illustrate and differentiate between open and closed die forging. (6 marks)
- e) Identify four (4) common defects in metal forming and shaping. (4 marks)

QUESTION 4

Casting is a solidification process in which molten metal is poured into a mould and allowed to cool or to solidify then the part removed from the mould.

- a) Classify three (3) types of casting mould. (3 marks)
- b) Differentiate the process of Sand Casting and Die Casting. (4 marks)
- c) Identify the defects and causes occur during casting process. (3 marks)
- d) Interpret the basic operation of investment casting. (6 marks)

QUESTION 5

Injection moulding, blow moulding and thermoforming are commonly process to manufacture plastic parts.

- a) Interpret two (2) groups of plastics used in moulding process. (5 marks)
- b) Identify three (3) basic types of molds used in injection moulding. (6 marks)
- c) Identify three (3) advantages of the injection moulding. (6 marks)
- d) Illustrate how the basic process of Blow Moulding process. (7 marks)
- e) Interpret the Thermoforming process. (5 marks)
- f) Identify three (3) products produce by Thermoforming process. (3 marks)

-----END OF QUESTION-----

