

UNIVERSITY COLLEGE
TATI

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: BME 1043
COURSE	: MANUFACTURING PROCESS
SEMESTER/SESSION	: SEMESTER 2 – 2024/2025
TIME	: 3 HOURS

Instructions:

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

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

QUESTION 1

Manufacturing is an important role of any industries nation.

- a) Explain your understanding about manufacturing processes. (2 marks)
- b) Classify five (5) types of manufacturing processing methods used for materials and identify an example for each method. (3 marks)
- c) As a Production Manager in your company, describe the factors that you will consider to improve to make a market the quality product and make a good profit. (4 marks)

QUESTION 2

Joining process is a one of the method used for assembly parts.

- a) Explain the important of the joining processes. (4 marks)
- b) Identify the factors should be considered the parts to be joined. (4 marks)
- c) Illustrate and discover three (3) zones occur for weld joint. (4 marks)
- d) Electrodes are coated with claylike materials such as silicate binder and metal alloys. Interpret the functions of these coating. (4 marks)

QUESTION 3

One of the common types of the joining process widely used in industries is mechanical fastener.

- a) Predict why the industries used mechanical fastening to join parts. (6 marks)
- b) Compare advantages and disadvantages of mechanical fastener. (8 marks)
- c) Illustrate and differentiate between bolts, nuts and screws. (8 marks)
- d) Identify the parts name (A to E) for a bolt as shown in Figure 1. (5 marks)

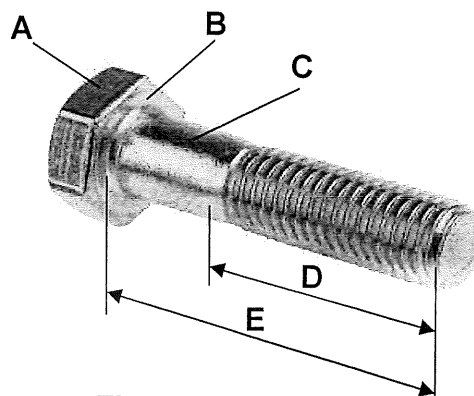


Figure 1: Bolt

QUESTION 4

Forming, forging, rolling, extrusion, injection moulding etc. are the methods used in manufacturing process to produce various types of shape of metals and plastics.

- a) Illustrate how deformation of materials. (4 marks)
- b) Differentiate between recrystallization and recrystallization temperature. (4 marks)
- c) Compare between the hot rolling and cold rolling process. (4 marks)
- d) Explain two (2) groups of plastics used in injection mould. (4 marks)

QUESTION 5

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

- a) Classify and explain three (3) types of casting mould. (8 marks)
- b) Explain the basic operation of investment casting. (8 marks)
- c) Predict defects and causes occur in casting process. (8 marks)
- d) Differentiate between sand casting process and die casting process. (8 marks)

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

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