

UNIVERSITY COLLEGE
TATI

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET

COURSE CODE	: BME 1043
COURSE	: MANUFACTURING PROCESS
SEMESTER/SESSION	: 1 - 2023/2024
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 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**

QUESTION 1

Manufacturing is a backbone and play an important role of any industries.

- a) **Interpret** the definition of manufacturing processes. (2 marks)
- b) **Identify** four (4) factors that can be improve to make and market a quality product and make a good profit. (4 marks)
- c) **Classify** three (3) methods used in industries to produce parts. (3 marks)

QUESTION 2

In Industries, joining process is a method used for assembly parts.

- a) **Identify** three (3) advantages of the joining process. (3 marks)
- b) **Differentiate** between welding and soldering process. (3 marks)
- c) An electrode coated with claylike materials such as silicate binder and metal alloys. **Interpret** the functions of these coating. (4 marks)
- d) **Illustrate** and **differentiate** between bolts and nuts. (6 marks)

QUESTION 3

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

- a) **Categorise** and **differentiate** two (2) deformation of materials. (6 marks)
- b) **Differentiate** the recrystallization and recrystallization temperature that occur during hot rolling process. (6 marks)
- c) **Differentiate** two (2) types of die forging process / method to make a forged part. (6 marks)
- d) **Interpret** the basic process of extrusion. (4 marks)
- e) **Identify** three (3) common defects during extrusion process. (5 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) **Differentiate** the process of Sand Casting and Die Casting. (4 marks)
- b) **Classify** three (3) types of casting mould. (3 marks)
- c) **Identify** the defects and causes occur in casting process. (3 marks)
- d) **Identify** the basic operation of investment casting. (6 marks)

QUESTION 5

Plastics usually shipped to manufacturing plants as pellets, granules, or powders before the shaping process. Moulding is a commonly process to manufacture plastic parts.

- a) **Categorise** and **differentiate** two (2) groups of plastics used in moulding process. (6 marks)
- b) **Identify** three (3) basic types of molds used in injection moulding. (9 marks)
- c) **Identify** three (3) advantages of the injection moulding. (6 marks)
- d) **Illustrate** your understanding about Blow Moulding process. (8 marks)
- e) **Classify** three (3) types of Blow Moulding. (3 marks)

END OF QUESTIONS
