

**UNIVERSITY COLLEGE TATI (UC TATI)****FINAL EXAMINATION QUESTION BOOKLET**

COURSE CODE	: BET 4054
COURSE	: DRIVE TECHNOLOGY
SEMESTER/SESSION	: 2-2023/2024
DURATION	: 3 HOURS

Instructions:

1. This booklet contains 4 questions. Answer **ALL** questions.
2. This Final Exam is an **OPEN BOOK**.
3. All answers should be written in answer booklet.
4. Write legibly and draw sketches wherever required.
5. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 2 PRINTED PAGES INCLUDING COVER PAGE



QUESTION 1

- a) Describe Electrical Drives (2 marks)
- b) Explain each part of electrical drives (5 marks)

QUESTION 2

- a) Describe the four-quadrant operation of a DC motor (4 marks)
- b) Explain the principle of regenerative braking, dynamic braking and plugging. (7 marks)

QUESTION 3

- a) Describe the V/F control of induction motor. (3 marks)
- b) Categorize the method for starting the induction motor. (8 marks)

QUESTION 4

- a) Classify the operation of the following motors:
- i. Brushless DC Motor (2 marks)
 - ii. Permanent Magnet Synchronous Motor (2 marks)
- b) Explain the difference for each motor in (a) (7 marks)

-----End of question-----

