



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

ELECTRICAL ENGINEERING DEPARTMENT

UNIVERSITY EXAMINATIONS FOR:

BACHELOR OF TECHNOLOGY IN ELECTRICAL AND ELECTRONIC ENGINEERING

TEE 4101: ELECTRICAL ENGINEERING DRAWING

END-OF-SEMESTER EXAMINATION

SERIES: APRIL 2025

TIME: 2 HOURS

DATE: April 2025

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID, appropriate professional computer drawing software (AutoCAD and any one other) and a memory stick

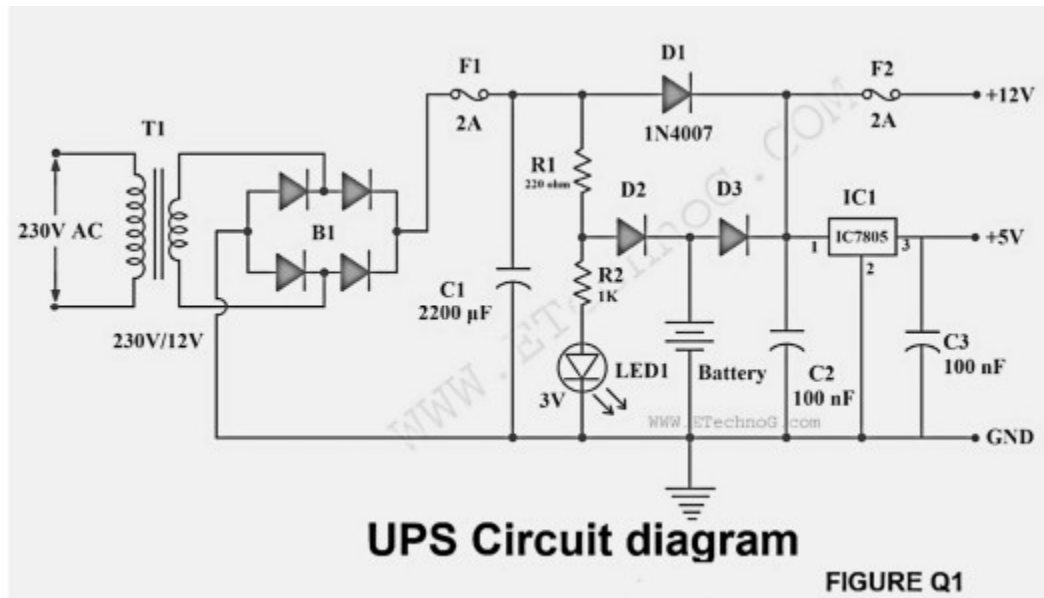
This paper consists of **FOUR** Questions. Answer Question ONE and any other TWO. Question ONE carries 40 marks while each of the remaining THREE questions carries 30 marks each.

Drawings to be handed in in soft copy form. Your folder should be named with your registration number and SURNAME.

Do not write on the question paper.

Question ONE (40 marks) (COMPULSORY)

- a) State any THREE importance of drawing using auto CAD (3 marks)
- b) State any FOUR system requirements for drawing auto CAD (4 marks)
- c) Describe the procedure of drawing using the following commands (9 marks)
 - i. Offset
 - ii. Scale
 - iii. Polygon
- d) Briefly describe the following auto CAD functions (8 marks)
 - i. Rotating
 - ii. Zooming
 - iii. Mirroring
- e) Figure Q1 shows the circuit diagram of a UPS.

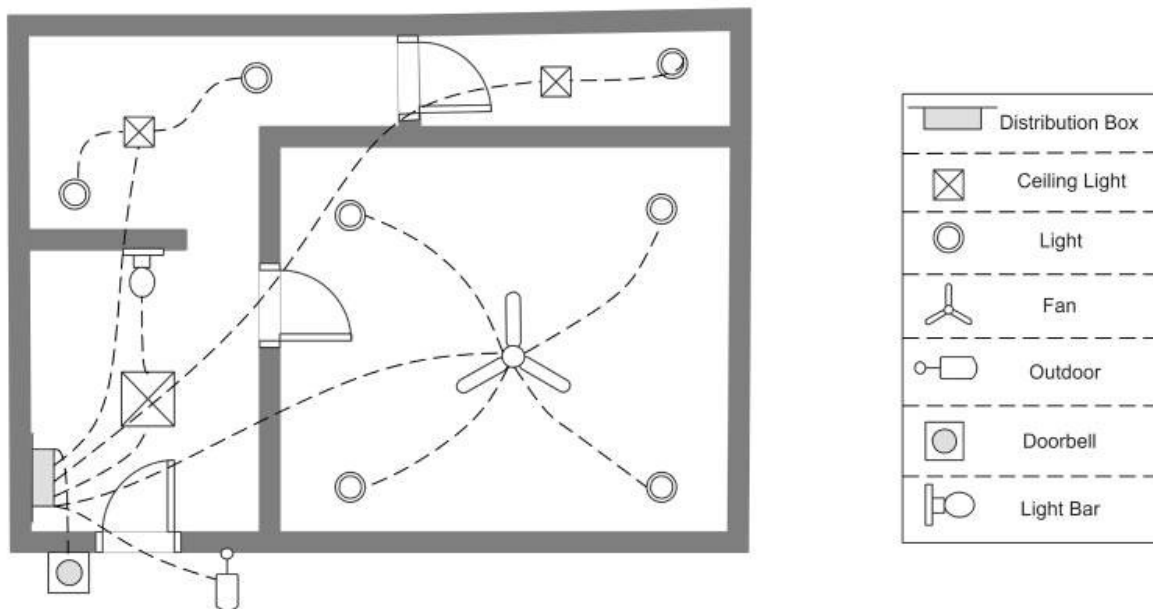


- Develop the parts list of the circuit
- Explain its operation
- State the procedure for replacing a component in the circuit.

(16 Marks)

QUESTION TWO (30 Marks)

Figure Q2 is a drawing of an architectural floor plan of a 4 x 4 m square bed section Bedsitter. The toilet is 1m wide, while the entry section is 2m wide, stretching to 3m just above the room door, as shown.



House Wiring Plan Diagram

Figure Q2

INSTRUCTIONS:

- i. Read and interpret the plan.
- ii. Redraw the plan using auto CAD software
- iii. Insert electrical drafting symbols according to BS3939/IEC60617 Standard
- iv. Open a main folder named using your registration number and SURNAME in the form:
BSEE09560J2020SURNAME.
- v. Open another EXAM folder inside the main folder and save all your work under it.
- vi. Inside the EXAM folder, save the FILE in the working format as **QUESTION2**
- vii. Save the same file in PDF format as **QUESTION2PDF**
- viii. Copy the folder and present it to the examination assessment.

QUESTION THREE (30 Marks)

Figure Q3 shows the orthographic view of a metallic 2-gang socket assembly.

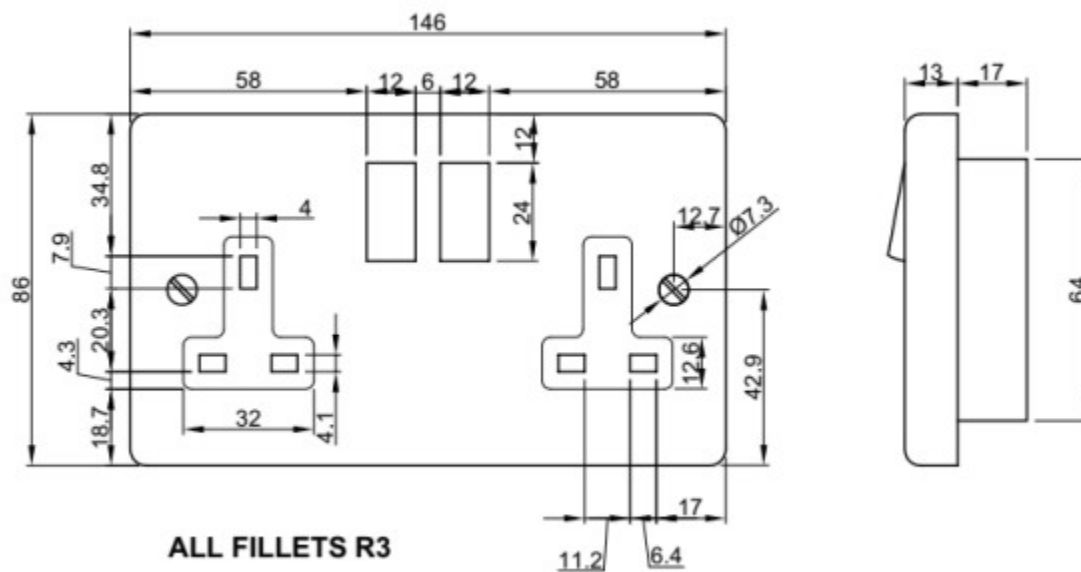


Figure Q3

INSTRUCTIONS:

- i. Read and interpret the figure
- ii. Redraw the circuit in auto CAD software according to BS3939/IEC60617 Standard for the structure.
- iii. Label all components and show all dimensions.
- ix. Open a main folder named using your registration number and SURNAME in the form:
BSEE09560J2020SURNAME.
- x. Open another folder named EXAM inside the main folder and save all your work under it.
- xi. Inside the EXAM folder, save the FILE in working format as **QUESTION3**
- xii. Save the same file in PDF format as **QUESTION3PDF**
- xiii. Copy the folder and present it for examination assessment.

QUESTION FOUR (30 Marks)

Figure Q4 below shows a Hand Sketch of an electronic circuit. Reproduce the circuit using professional software

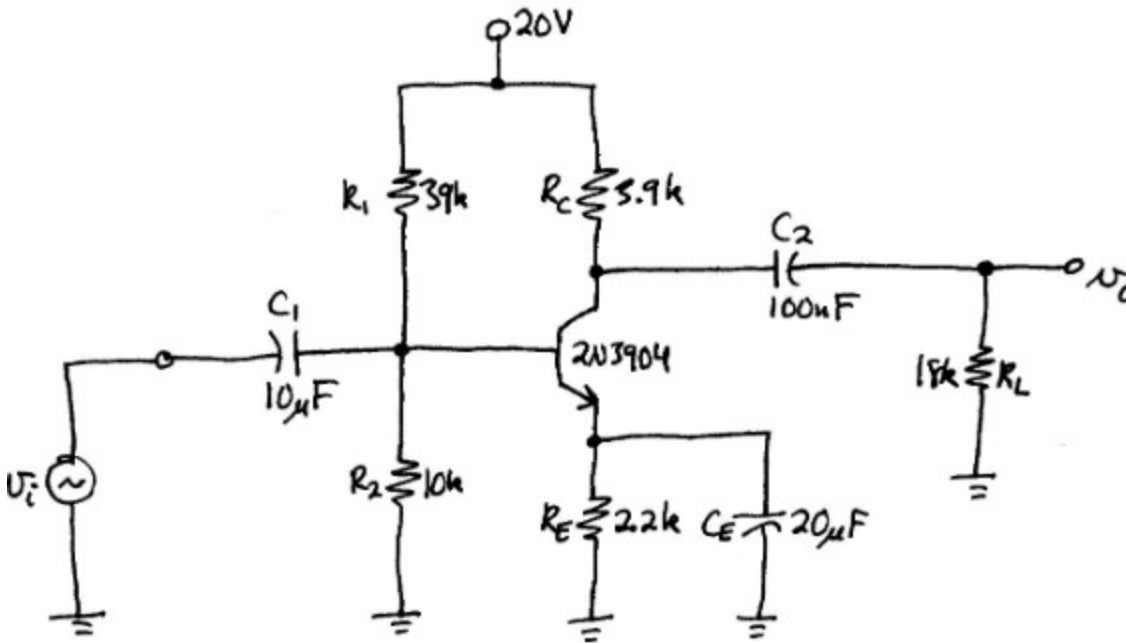


Figure Q4

INSTRUCTIONS:

- i. Read and interpret the electronic sketch
- ii. Draw the electronic circuit according to BS3939/IEC60617 Standard using auto CAD software.
- iii. Label all devices and components, including possible ratings
- xiv. Open a main folder named using your registration number and SURNAME in the form:
BSEE09560J2020SURNAME
- xv. Open another folder named EXAM inside the main folder and save all your work under it.
- xvi. Inside the EXAM folder, save the FILE in working format as ***QUESTION4***
- xvii. Save the same file in PDF format as ***QUESTION4PDF***
- xviii. Copy the folder and present it for examination assessment.