

2023 MOCK 2 APPLIED ELECTRICITY 2

PAPER 2

1 hour

[50 marks]

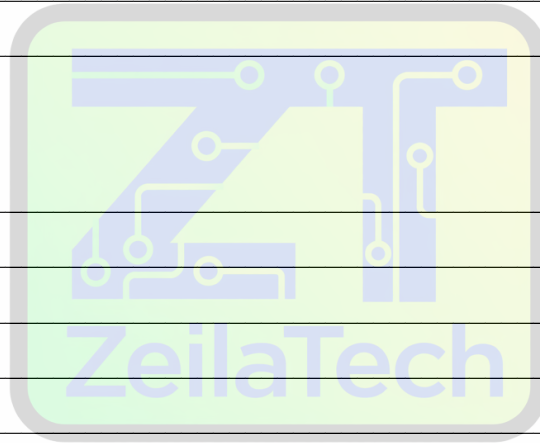
SECTION A

Answer **three questions only** from this section.
Write your answers in **ink** in the spaces provided.
All questions carry equal marks.

1. Resistor of $15\ \Omega$, an inductor of $0.318\ \text{H}$ and a capacitor of $150\ \mu\text{F}$ are connected in series across a $240\ \text{V}$, $50\ \text{Hz}$ a.c. supply. Calculate the:
- a. i. impedance of the circuit;

- ii. current;

[2marks]



Smart Learning Tools

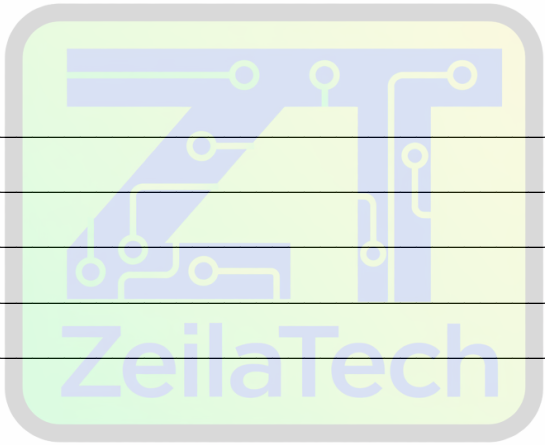
- iii. voltage across each component.

[2 marks]

SECTION B

Answer **two** questions **only** from this section

5. a. With the aid of a sketch, state how the range of an ammeter can be extended to read a higher value.



[5 marks]

b. List three devices of a moving-coil instrument.

[3 marks]

c. State two advantages of digital measuring instrument over moving-coil measuring instruments

[2marks]

7. a. Draw and label a three-phase star connected system.

[4 marks]

- b. Using the answer in 7(a), show how power is supplied to a:
- Single-phase consumer;
 - Three-phase consumer.



[6 marks]

END OF PAPER