

SECTION B : 60 MARKS
 BAHAGIAN B : 60 MARKAH

INSTRUCTION:

This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi EMPAT (4) soalan berstruktur. Jawab semua soalan.

QUESTION 1

SOALAN 1

CLO1
C1

- a) List down **THREE (3)** types of material that are classified in semiconductor's family.

Senaraikan TIGA (3) jenis bahan yang tergolong dalam keluarga semikonduktor.

[3 marks]
[3 markah]

CLO1
C2

- b) Differentiate **TWO (2)** between N-Type material and P-Type material.

Bezakan DUA (2) di antara bahan jenis N dan bahan jenis P.

[5 marks]
[5 markah]

CLO2
C3

- c) Discuss the operation of forward biased and the effect of depletion layer.

Bincangkan operasi bagi pincang hadapan dan kesannya ke atas lapisan susutan.

[7 marks]
[7 markah]

QUESTION 2

SOALAN 2

CLO1
C1

- a) State TWO (2) types of Field Effect Transistor (FET)

Nyatakan DUA (2) jenis Transistor Kesan Medan[3 marks]
[3 markah]CLO2
C2

- b) Describe briefly the construction of a MOSFET in enhancement mode.

Huraikan dengan jelas binaan MOSFET bagi mod-enhancement.[5 marks]
[5 markah]CLO2
C3

- c) Relate ONE (1) similarities and TWO (2) differences between JFET and MOSFET.

Huraikan SATU (1) persamaan dan DUA (2) perbezaan diantara JFET dan MOSFET.[7 marks]
[7 markah]

QUESTION 3

SOALAN 3

CLO1
C2

- a) Describe multistage amplifier.

Terangkan penguat pelbagai peringkat.[3 marks]
[3 markah]CLO2
C3

- b) Using a suitable diagram, illustrate the operation of Darlington Pair.

Dengan menggunakan gambarajah yang sesuai, ilustrasikan operasi litar Darlington Pair.[6 marks]
[6 markah]