Unit – II

Transistor

2.1 Which of the following is true for a bipolar transistor?
(a) Both base and emitter are heavily doped.
(b) Collector is moderately doped and the emitter is heavily doped.
(c) The collector is heavily doped and emitter is lightly doped.
(d) Both the collector and emitter are heavily doped.

2.2 The emitter of a transistor is generally doped the heaviest because it
(a) Has to dissipate maximum power.
(b) Has to supply the change carriers.
(c) Is the first region of the transistor
(d) Must possess low resistance.

2.3 For a transistor in an amplifying circuit
(a) Emitter-base junction is forwarded biased and collector-base junction is reverse biased.
(b) Emitter-base junction is reverse biased and collector-base junction is forward biased
(c) Both the emitter-base junction and the collector-base junction are forward biased.
(d) Both the emitter-base junction and the collector-base junction are reverse-biased.

2.4 A small increase in collector reverse bias will cause
(a) A large increase in emitter current.
(b) A large increase in collector current.
(c) A large decrease in collector current
(d) Very small change in collector reverse saturation current.

2.5 The transistor configuration producing highest output resistance in an amplifying circuit is
(a) CB
(b) CE
(c) CC
(d) Depends on the magnitude of reverse bias voltage of base-collector junction.

2.6 The transistor configuration producing lowest output resistance in an amplifying circuit is
(a) CB
(b) CE
(c) CC
(d) Depends on the magnitude of reverse bias voltage of base-collector junction.

2.7 Early effect in BJT refers to
(a) Avalanche breakdown
(b) Thermal runway
(c) Base narrowing
(d) Zenor breakdown

Answers:

2.1 (b) 2.2 (b) 2.3 (a) 2.4 (d) 2.5 (a) 2.6 (c)

2.7 (c)