

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

**ELECTRONIC DEVICES AND CIRCUITS**

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. Write the merits of emitter follower.
2. Define resonant frequency of tank circuit.
3. Draw the symbol of N-Channel FET.
4. State the Barkhausen criteria for oscillation.
5. Write the name of high frequency oscillators.

(5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. What is the need for biasing circuits ? Explain.
2. With circuit diagram, explain the operation of an emitter follower.
3. What are the importance of heat sink in power amplifier ?
4. Explain series resonance and derive the expression for frequency.
5. Draw the characteristic of JFET.
6. Derive the expression of gain of negative feedback amplifier.
7. State the conditions for RC circuits to be an Integrator.

(5×6 = 30)

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