

- ### SECTION-D
- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain with circuit diagram, the working principle of transformer coupled amplifier. Also explain its frequency response.
- Q.37 Draw the circuit diagram of 555 timer for monostable multivibrator. Explain its working.
- Q.38 Draw the circuit diagram to determine the characteristics of CE configuration. Explain input, output and transfer characteristics.

**3rd Sem / Eltx, Mecatronics, Med. Eltx, Power Eltx,
Elect. & Eltx. Engg.**

Subject:- Analog Electronic Devices

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The value of knee voltage for silicon diode is _____ volt.
- a) 0.7 b) 0.3
c) 1.1 d) None of the above
- Q.2 The maximum efficiency of half wave rectifier circuit is _____
- a) 33.33% b) 40.6%
c) 50% d) 81.2%
- Q.3 In a transistor action, the most heating occurs _____
- a) emitter junction b) collector junction
c) can't be said d) both junctions
- Q.4 The gain stability of an amplifier circuit can be improved by using _____
- a) Positive feedback
b) Negative feedback
c) Both positive & negative feedback
d) None of the above

- Q.5 If the emitter resistance R_E in a transistor amplifier is removed, then _____
- the gain of amplifier decreases
 - the gain of amplifier increases
 - base emitter junctions become less forward bias
 - Q-point will become unstable
- Q.6 For JFET, when V_{os} is increased beyond pinch off voltage, the drain current _____
- increases
 - decreases
 - remains constant
 - reduces to zero
- Q.7 The impedance matching is perfect in _____
- RC coupled amplifier
 - transformer coupled amplifier
 - direct coupled amplifier
 - None of the above
- Q.8 The multivibrator which does not require any trigger is _____
- Astable multivibrator
 - Monostable multivibrator
 - Bistable multivibrator
 - None of the above
- Q.9 Ideal operational amplifier has _____
- Infinite input and zero output resistance
 - infinite input and infinite output resistance
 - zero input and zero output resistance
 - zero input and infinite output resistance

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- Q.10 When negative feedback is used in operational amplifier _____
- input resistance increases
 - output resistance decreases
 - bandwidth increases
 - All of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What do you mean by rectification?
- Q.12 What is an ideal diode?
- Q.13 Give the full form of PIV.
- Q.14 What do you mean by form factor?
- Q.15 What is the biasing rule of transistor?
- Q.16 Define the term “stability factor”?
- Q.17 What is faithful amplification.?
- Q.18 What is JFET? Name its terminal.
- Q.19 In which region of characteristics, transistor operates as a switch?
- Q.20 What are the applications of op-amp?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Discuss the behavior of p-n junction under forward biasing condition.
- Q.22 Explain the working of centre tap full wave rectifier?

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