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

Subject:- Electronic Devices and Circuits / Analog Eltx - II

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 In multistage amplifier, capacitor is used
- a) to match impedance
- b) to couple 2 stages
- c) to limit the bandwidth
- d) to limit the current

Q.2 Which of the following is expensive
- a) Direct Coupling
- b) R-C Coupling
- c) Transformer coupling
- d) All of the above

Q.3 Which of the following is common collector amplifier
- a) Push Pull amplifier
- b) Emitter follower
- c) Differential amplifier
- d) None of these

Q.4 Heat sink is mostly used in
- a) Audio amplifier
- b) Small signal amplifier
- c) Large signal amplifier
- d) All of the above

Q.5 When negative voltage feedback is applied to an amplifier its bandwidth
- a) increased b) decreased
- c) remain same d) None of the above

Q.6 RC network in phase shift oscillator produces a phase shift of
- a) 180º b) 360º
- c) 90º d) 0º

Q.7 When resonance occur in series or parallel resonant circuit the circuit behaves as
- a) inductive b) capacitive
- c) Resistive d) None

Q.8 As astable multivibrator has_____stable.
- a) one b) two
- c) three d) No

Q.9 An ideal op-amp has
- a) infinite voltage gain
- b) infinite input resistance
- c) zero output resistance
- d) All of the above

Q.10 The output voltage of IC 7909 is
- a) +9 v b) -9 v
- c) +12 v d) -5 v

SECTION-B

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

Q.11 Transformer is not used in regulated power supply.

Q.12 The gain and input resistance of an ideal op-amp are _____.

Q.13 Full form of PSRR is_____.

Q.14 As oscillator employs _____feedback.

Q.15 What is piezoelectric effect?

Q.16 Feedback network consists of resistance, capacitance and inductances. (True/False)

Q.17 Negative feedback is employed in oscillators.

Q.18 Define gain in amplifier.

Q.19 What is the significance of coupling capacitor?

Q.20 Give working principle of crystal oscillator?

SECTION-C

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

Q.21 Explain Direct coupled amplifier.

Q.22 Explain Class AB amplifier.

Q.23 Describe frequency response and Bandwidth.

Q.24 Describe single ended power amplifier.

Q.25 What do you understand by heat dissipation curve explain.

Q.26 Derive expression for gain of an amplifier employing negative feedback.

Q.27 Explain the working of emitter follower circuit.

Q.28 Explain Wein Bridge Oscillator with circuit diagram.

Q.29 Define CMRR and PSRR.

Q.30 Explain op-amp as an adder.

Q.31 Describe block diagram of regulated DC power supply.

Q.32 Explain Bistable multivibrator with circuit diagram.

Q.33 Explain IC 555 working with Pin diagram.

Q.34 Differentiate between voltage and Power amplifier.

Q.35 How feedback affects the distortion in amplifier.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the working of IC 723 variable voltage regulator with diagram.

Q.37 Describe push pull amplifier with circuit diagram in detail.

Q.38 Define Barkhausen criterion and explain the working of phase shift oscillator.