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3rd Sem / Branch : Electrical Engg.
Subject:- Electronics-II

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 In power amplifier, load resistance should be.
- a) As small as possible.
 - b) As large as possible.
 - c) Equal to output impedance.
 - d) Any of the above.
- Q.2 The transformer is used in the output of a power amplifier mainly to.
- a) Safeguard the transistor against overheating.
 - b) Increase the voltage gain.
 - c) Step up the voltage.
 - d) Match the load impedance with dynamic output resistance of the transistor.
- Q.3 One of the effect of negative feedback in amplifier is the.
- a) Increase the noise.
 - b) Increase in harmonic distortion.
 - c) Decrease in bandwidth.
 - d) Decrease in harmonic distortion.

- Q.4 In a transistor Hartley oscillator.
- a) Inductive feedback is used.
 - b) Untapped coil is used.
 - c) Entire coil is in the output circuit.
 - d) None of the above.
- Q.5 In RC phase shift oscillator, the minimum number of RC network to be connected in cascade will be.
- a) One
 - b) Two
 - c) Three
 - d) Four
- Q.6 An operational amplifier is a.
- a) Direct coupled high gain amplifier
 - b) Device to perform linear operations.
 - c) Device to perform non-linear operations.
 - d) All of the above.
- Q.7 The term IC, as used in electronics.
- a) Internal combustion.
 - b) Industrial control.
 - c) Integrated circuit.
 - d) Internal circuit.
- Q.8 To generate 1 MHz signal, the most suitable oscillator is.
- a) Colpitt's oscillator
 - b) Phase-shift oscillator
 - c) Wien bridge oscillator
 - d) None of the above
- Q.9 Astable multivibrator has.
- a) A stable state
 - b) Two quasi stable states
 - c) An oscillator
 - d) Collector resistors

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180933/170933

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180933/170933

- Q.10 An emitter follower is mainly used as.
a) an impedance matching device.
b) A power amplifier
c) A follower of base signal
d) A voltage amplifier

SECTION-B

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

- Q.11 Push pull amplifier uses two transistors. (True/False)
Q.12 _____ Feedback is essential for the operation of an oscillator.
Q.13 The series 7900 ICs are negative voltage regulator. (True/false)
Q.14 Write the primary function of clamper circuit
Q.15 Clipping of input AC signal _____ is used.
Q.16 Write one application of tuned voltage amplifiers.
Q.17 Define clamper.
Q.18 Write one use of multivibrator.
Q.19 Define collector efficiency.
Q.20 Expand CVT.

SECTION-C

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

- Q.21 Give the advantage of power amplifier over voltage amplifier.
Q.22 Explain the working principle of class B power amplifier.
Q.23 Describe the concept of impedance matching in power amplifier using transformer.
Q.24 Explain the working of Push pull amplifier with help of circuit diagram.

- Q.25 Describe the working of single tuned voltage amplifier.
Q.26 Enlist at least five applications of tuned voltage amplifier.
Q.27 Write need of positive and negative feedback in amplifier.
Q.28 Explain the effect of negative feedback on voltage gain and stability of an amplifiers.
Q.29 Explain the working of emitter follower.
Q.30 Give the essential of an sinusoidal oscillators.
Q.31 Draw the circuit diagram colpitt's oscillators and explain it.
Q.32 Explain the positive and negative clipper circuit.
Q.33 Differentiate between astable and bistable multivibrator.
Q.34 Describe the working of differentiator using Op-amp.
Q.35 Draw and explain the pin diagram of IC 741.

SECTION-D

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

- Q.36 Explain the working and collector efficiency of class-A single ended power amplifier with the help of circuit diagram.
Q.37 Explain the construction and working of wien bridge oscillator with the help of circuit diagram. Also give its advantages and disadvantages.
Q.38 Draw the block diagram and explain the operation of 5551C timer.