

Time: One Hour

Max. Marks: 25

Instructions

- Solve any 25 questions from Q.1 to Q.30

- The differential amp.....
(A) is a part of Op-amp (B) has one input & one output (C) has two outputs (D) either A input nor B input
- When differential amplifier is operated single ended...
(A) the output is grounded (B) one input is grounded and signal is applied to other end (C) both inputs are connected to single (D) the output is not inverted
- In differential mode....
(A) opposite polarity signals are applied to the inputs (B) the gain is one (C) the output are of different amplifier (D) only one supply voltage gain is use
- The common mode gain is.....
(A) very high (B) very low (C) always unity (D) unpredictable
- With zero volts on both inputs, an Op-amp ideally should have an output.....
(A) equal to positive supply voltage (B) equal to negative supply voltage (C) equal to zero (D) equal to CMRR
- The Op-amp can amplify.....
(A) AC signal only (B) DC signal only (C) Both AC & DC signal (D) Neither DC nor AC
- A common mode is applied to.....
(A) non inverting input (B) Inverting input (C) both inputs (D) top of the trail transistor
- The common mode voltage gain is.....
(A) smaller than differential voltage gain (B) equal to differential voltage gain (C) greater than differential voltage gain (D) None of the above
- The input stage of Op-amp is usually as...
(A) differential amplifier (B) Class B push pull amp (C) CE amp (D) emitter follower
- Current cannot flow to ground through
(A) a mechanical ground (B) a mechanical ground (C) a virtual ground (D) an ordinary ground
- Find the output voltage obtained for an ideal Op-amp if V_1 and V_2 are the two input voltage.....
(A) $V_0 = V_1 - V_2$ (B) $V_0 = V_1 + V_2$ (C) $V_0 = A(V_1 - V_2)$ (D) $V_0 = A(V_1 + V_2)$
- Unity gain amplifier is a.....
(A) difference Amp (B) comparator (C) single ended (D) voltage follower
- For Op-amp the unity gain frequency the open loop voltage gain
(A) 1 (B) A_v (C) zero (D) very large
- In Op-amp the use of negative feedback.....
(A) reduce the voltage gain of an Op-amp (B) makes the Op-amp oscillate (C) make linear operation possible (D) both A & B
- In a voltage follower circuit the voltage gain is.....
(A) 0 (B) 1 (C) 1 (D) 100
- An ideal Op-amp has.....
(A) infinite output impedance (B) zero output impedance (C) low voltage gain (D) zero input impedance
- In which amplifier the output voltage is equal to the negative sum of all the inputs.....
(A) average amp (B) summing amp (C) scaling amp (D) all of the mentioned
- Differential amplifier has number of inputs
(A) One (B) Two (C) Tree (D) Zero
- Open loop voltage gain of Op-amp is.....
(A) Very high (B) Zero (C) Low (D) None of the above
20. Due to negative feedback, gain.....
(A) increases (B) decreases (C) Remains constant (D) Becomes zero
- In a low voltage DC voltmeter, the Op-amp is used as.....
(A) Voltage amplifier (B) Current amplifier (C) Buffer (D) Integrator
- The requirement for oscillations is.....
(A) $AB=1$ (B) $AB=0$ (C) $AB<1$ (D) $AB>1$
- In a phase shift Oscillator, the voltage gain must be at least equal
(A) 25 (B) 11 (C) 29 (D) 151
- In timer IC 555, the circuit is triggered when the voltage at pin. No
(A) Becomes zero (B) Equal to V_{cc} (C) Falls to $2/3 V_{cc}$ (D) Falls to $1/3 V_{cc}$
- In a free running multi-vibrator using 555, pin 2 is connected to.....
(A) Pin 5 (B) Pin 3 (C) Pin 6 (D) Pin 1

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26 The gain of non-inverting amplifier using Op-amp is.....

(A) $\frac{RF}{RI} + 1$

(B) $\frac{RF}{RI} + \frac{RI}{RF}$

(C) $\frac{RF}{RI}$

(D) $\frac{-RF}{RI}$

27 The phase shift oscillator has usually has

(A) a. 2-section tank circuit.

(B) 3-section tank circuit

(C) c. 4-section tank circuit

(D) 1-section tank circuit

28 Slew rate is defined as

(A) (max

(B) (max

(C) (max

(D) (min.

29 Mono-stable multi-vibrator has Stable states

(A) 0

(B) 1

(C) 2

(D) 3

30 In Phase shift oscillator tank circuit is known as

(A) Lead lag network

(B) Series network

(C) Parallel network

(D) Ladder network