Que.1 [a]   Why open – loop configuration of op-amp is not used in linear application?   [7]

Explain inverting close-loop configuration and obtain an equation for voltage gain.

[b]   State different types of feedback circuits for Op-Amp. Draw block diagram of feedback circuits..   [7]

OR

Que.1 [a]   What is inverting amplifier? Derive formula for voltage gain for close loop configuration.   [7]

[b]   Explain voltage to current converter   [7]

Que.2 [a]   State characterstics of ideal op-amp?   [7]

[b]   Design a circuit to obtain $V_0 = V_a + V_b + V_c$ in non inverting configuration   [7]

OR

Que.2 [a]   Explain summing amplifier in inverting mode configuration.   [7]

[b]   Design a circuit for inverting mode configuration so that out will be 2.5V (peak to Peak)for the input of 25mV(peak to peak).   Draw   circuit and also draw input and out put waveform. Input frequency is 100Hz.   [7]

Que.3 [a]   What is called op – Amp? Draw ideal voltage transfer curve. What is the slope of the curve?   [7]

[b]   Explain differentiator   [7]

OR

Que.3 [a]   Explain the term (i)   Common Mode rejection ratio   [14]

(ii)   Input offset voltage.

(iii)   slew rate

Que.4 [a]   Write a note on ROM   [7]

[b]   Write a flow chart to find the smallest number form a set of numbers   [7]

                                    OR

Que.4   [a]   Write a program to print the following pattern using nested loops :

        1
        1 1
        1 1 1
        1   1   1 1   [7]

[b]   Write a program in C to convert Joule to erg and vice-versa.   [7]

Que.5   [a]   What is loop in 'C' language? State different types of loops. Explain one of the loop with
        example.   [7]

[b]   Write a program in 'c' to find surface area of a open ended cylinder of radius R   [7]

                                    OR

Que.5   [a]   What is the final value of ' b ' in the following sequence of statements?   [7]

        int i   ;
        float b ;
        b = 5.76
        b= (b + 0.05) * 10;
        i = b ;
        b = i ;
        b = b/10.0 ;
        If b = 5.76 is replaced by b = 5.74, What is the final value of b?

[b]   Draw a flow chart to find largest number from a set of N numbers.   [7]

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