2811N865

Candidate's Seat No :_____

B.Sc Sem.-5 Examination

CC 303

Electronics

Time : 2-30 Hours] **November-2024** **[Max. Marks : 70**

Instructions: **(1) All questions carry equal marks.**
(2) Symbols used here have their usual meanings.
(3) Figures to the right indicate marks.

1 (A) Draw the block diagram of Chopper Type DC amplifier voltmeter and explain the function of each block. 07

(B) With figure explain in detail basic differential voltmeter. 07

OR

(A) With figure explain in detail solid state voltmeter using OpAmp. Draw block diagram of dc differential voltmeter. 07

(B) With the help of block diagram explain True RMS voltmeter in detail. 07

2 (A) Draw block diagram of ramp type DVM. Explain Ramp technique in detail with voltage to time conversion diagram. 07

(B) Draw the block diagram of staircase type DVM using Analog to Digital converter and explain its working in detail. 07

OR

(A) Explain in detail basic principle and block diagram of dual slope integrating type DVM. 07

(B) Draw the block diagram of a successive approximation type DVM and explain its working in short. 07

3 (A) Draw block diagram of a general-purpose oscilloscope and explain its working by showing role of each block. 07

(B) Write short note on screens of CRTs. 07

OR

(A) With figure explain the diagram of meshless scan expansion postdeflection acceleration cathode ray tube. 07

(B) Discuss the function of delay line. Explain lumped parameter delay line. Write advantages and disadvantages of lumped parameter delay line. 07

4 (A) Write a short note on sine wave generator. 07

(B) How symmetrical or balanced operation for generation of square-wave is achieved in astable multivibrator? Explain in brief. 07

OR

(A) With the help of figure explain pulse characteristics and terminology. 07

(B) Draw the block diagram of laboratory square wave and pulse generator. Explain the function of electronic switch. 07

5 Attempt any **seven** out of twelve. 14

(A) The input impedance of a FET is greater than _____ ohm.

(B) The drift in an ordinary dc amplifier is of the order of _____ Volt.

(C) In solid state voltmeter R_2/R_1 determines the _____.

(D) In integrating type DVM, the frequency of output waveform is proportional to the input _____.

(E) Input impedance of the DAC is high when the _____ is reached.

(F) The number of digit positions used in a digital meter determines the _____.

(G) The intensity of the light emitted from the CRT screen, called _____, depends on several factors.

(H) The use of P11 purple-blue phosphor is used for _____ applications.

(I) There are basically two kinds of delay line: the _____ parameter delay line and the _____ parameter delay line.

(J) Square wave generators are used whenever the _____ frequency characteristics of a system are being investigated.

(K) When the maximum amplitude of the pulse is not constant but decreases slowly, the pulse is said to droop or _____.

(L) In simplified current source operation, the size of ramp capacitor is selected by the _____ switch.