Synoptic

Q.P. Code: 23885

Paper Details : T1123 - S.E.(COMPUTER)(SEM III)(REV-2012) (CBSGS) / T1496

Subject: ELECTRONIC CIRCUITS AND COMMUNICATION FUNDAMENTALS.

Date :29-11-2017

Time :03:00 pm - 06:00 pm

Q. 1. A. Proper justification (5 Marks)

B. Proper ideal characteristics of op-amp (5 Marks)

C. Circuit diagram (2 Marks) Explanation (3 Marks)

D. Explanation of pulse code modulation (5 Marks)

Q. 2 A. Self bias (3 Marks), Fixed bias (3 Marks) Voltage divider bias (4 Marks)

If diagram is not neatly drawn then one mark for each can be deducted.

B. Diagram (3 Marks) Proper equations (2 Marks) Explanation (5 Marks)

Q. 3 A. Explanation of virtual ground in operational amplifier. (5 Marks)

B. Statement (2 Marks) and explanation (3 Marks)

C. Explanation of any one pulse modulation (5 Marks)

D. $g_m = \frac{2I_{DSS}}{|V_P|}\left[1 - \frac{V_{GS}}{V_P}\right]$ (1 Mark)

$g_m = 2.33\ mS\ for\ V_{GS} = -0.5$ (2 Marks)

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Q. 4 A. Explanation with proper diagram. (10 Marks)

B. Diagram (2 Marks), Waveforms (3 Marks) and explanation (5 Marks)

Q. 5 A. Diagram (2 Marks), and explanation of each block (8 Marks)

B. Explanation of phase modulation (10 Marks)

Q. 6 A. Nyquist Criteria (2 Marks) Significance (3 Marks)

B. Class C power amplifier (5 Marks)

C. Generation of FM by Armstrong method (5 Marks)

D. Specifications of ADC (3 Marks) and DAC (2 Marks)