S.E. (computer) (Sem-III) (CBSGS)   Date-14/5/19

(3 Hours)   [Total Marks : 80]

N.B. : 1. Question **ONE** is **Compulsory.**
  2. Solve any **THREE** out of remaining.
  3. **Draw** neat and **clean** Diagrams.
  4. Assume suitable **data** if required

Q.1. Attempt the following
  a) Explain the concept of virtual ground in op-amp   5
  b) Explain block diagram of PCM   5
  c) Compare FET and BJT   5
  d) What is ZCD?   5

Q.2. A. Explain the construction and working of n-channel JFET with help of   10
    characteristic curves.
  B. Explain op-amp as integrator   10

Q.3. A. List down various parameters of op-amp with their practical values and ideal values   10
    for IC741.
  B. Explain working of PLL as frequency as frequency multiplier with diagram.   10

Q.4. A. Explain Superheterodyne Receiver along with waveforms at each stage .   10
  B. What are power amplifiers .what are the types of power amplifiers .Explain
    class C power amplifiers.   10

Q.5. A. Derive the equations for Zi, Zo, Av for common source configuration using   10
    voltage divider network
  B. Discuss Delta Modulation and Adaptive Delta Modulation

Q.6. Write short note: 20
  a) TDM-PCM System
  b) Generation of FM
  c) Comparators.
  d) op-amp as summing amplifier

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