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Examination May-2014

PULSE WAVE SHAPING AND SWITCHING

B. Tech

Subject Code:BTEC405

Paper ID:A1193

Time : 03 Hrs. **Max. Marks:60**

SECTION – A

Compulsory (2x10=20)

1. a) What is delay time of a transistor? What factors does contribute to it?
   b) What do you mean by biased clamping?
   c) Define operational amplifier Comparator?
   d) How a High R C circuit is used in Linear Waveshaping?
   e) What are Passive and Active Circuit elements?
   f) Why is the Capacitor in an R C high pass circuit called a blocking Capacitor?
   g) Define upper tripping point and cover tripping point?
   h) What is Camparator? How it is used?
   i) Define the turmo ac Coupling and dc Coupling in Multiviberator
   j) What is slicer?

SECTION – B

Attempt any Four questions (4x5=20)

2. Explain Fixed bias and self-bias bistable Multivibrator?
3. Derive Resonant frequency and Impedence of a parallel tuned Circuits with its Phasor Diagram?
4. What is blocked Condition in an alstable multivibrator? How to overcome it? Show how as table multivibrator can be used as a Voltage to frequency converter?
5. Explain Charge storage phenomena?
6. Why a charge Compensating Capacitor is used in diode switch?

SECTION – C

Attempt any Two questions (10x2=20)

7. a) With the help of neat circuit diagram and waveforms, explain the working of Schmitt trigger.
   b) How can hystensis be eliminated in Schmitt trigger?
8. a) Derive the expression for gate width of a Monostable Multiviberator considering the effect of Revenues saturation current?
   b) Explain breakdown mechanism in diode?
9. a) Draw the Circuit Diagram of double diode clipper which limits at two independent levels and explain it with its transfer characteristic.
   b) What are different schemes for temperature compensation of a clipper? Explain them briefly?

.....End.....