Total No. of Questions : 8]

SEAT No. :

PC2794

[Total No. of Pages : 2

[6352]-18

S.E. (Electrical Engineering)

ANALOG AND DIGITAL ELECTRONICS

(2019 Pattern) (Semester-III) (203143)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Assume suitable additional data, if necessary.***
5) ***Use of non-pro programmable calculator is allowed.***

Q1) a) Explain CPLD. **[6]**

b) Compare Between SRAM & DRAM. **[6]**

c) What is semiconductor memory? Enlist advantages of it. **[6]**

OR

Q2) a) Compare ROM & PROM. **[6]**

b) Write a short note on EPROM. **[6]**

c) Explain PAL. **[6]**

Q3) a) With neat pin diagram explain function of each pin of IC 741 **[5]**

b) Explain with Neat diagram of peak detector. **[6]**

c) Explain generation of Triangular waveform using Op-Amp. Draw input & output waveforms. **[7]**

OR

Q4) a) Explain with neat diagram and output waveforms, Op-Amp as a Comparator. **[5]**

b) Explain Instrumentation amplifier with Circuit Diagram. **[6]**

c) Explain generation of Square waveform using Op-Amp. Draw input & output wavefroms **[7]**

P.T.O.

Q5) a) With neat diagram explain working of IC 555 as a Mono stable Multivibrator. **[5]**

b) Explain Sequence generator. **[5]**

c) Explain High pass filter using op-amp with its frequency response. **[7]**

OR

Q6) a) Explain the function of IC 78xx as adjustable voltage regulator. **[5]**

b) What is voltage regulator? Write any two applications of voltage regulator. **[5]**

c) With neat diagram explain working of IC 555 as a Astable Multivibrator. **[7]**

Q7) a) Explain working of single phase half wave rectifier with R load. **[5]**

b) Compare single phase& three phase rectifier. **[5]**

c) With the help of circuit diagram and relevant waveforms, explain the operation of a 3-phase bridge rectifier with resistive load. **[7]**

OR

Q8) a) Define **[4]**

i) Form factor

ii) TUF

b) Explain working of single phase half wave rectifier with RL load. **[6]**

c) Explain the working o single-phase full wave centre tapped rectifier with pure resistive load. **[7]**