M 7339

Reg. No. : .....

Name : .....

V Semester B.A./B.Sc./B.Com./B.B.A./B.B.A.T.T.M./B.B.M./B.C.A./B.S.W./ B.A. Afsal-Ul-Ulama Degree (CCSS-Reg./Supple./Imp.) Examination, November 2014

OPEN COURSE

5D01 PHY(B) : Applied Electronics

Time : 2 Hours Max. Weightage : 20

SECTION – A

Answer **all** questions :

1. With the same secondary voltage and filter which has the most ripple ?
   a) half wave rectifier b) bridge rectifier
   c) full wave rectifier d) clamper

2. What is the PIV across each diode of a bridge rectifier with a secondary voltage of 20 V rms ?
   a) 14.1 V b) 20 V c) 28.3 V d) 6.37 V

3. In a loaded zener regulator which is the largest current ?
   a) series current b) zener current
   c) load current d) none of these

4. The voltage divider bias has a stable Q point like
   a) base bias b) emitter bias
   c) collector feedback bias d) Emitter-feedback bias

5. The transconductance curve is
   a) Linear b) Non Linear
   c) Like the graph of a resistor d) Like a single drain curve

6. An SCR is turned on by
   a) Break over b) Gate trigger c) Break down d) Holding current

P.T.O.

7. The voltage gain of an Opamp is unity at the
   a) cutoff frequency b) unity gain frequency
   c) generator frequency d) power bandwidth
8. A combinational circuit can be designed using only
   a) AND gates b) OR gates
   c) NOR gates d) OR and X-NOR gates **(W= 2×1=2)**

SECTION – B

Answer **any six** questions :

9. What are the elements of Radio broadcasting ?
10. What are passive elements and active elements ?
11. Calculate the effective value when three resistances are connected in parallel.
12. What is self inductance ?
13. What is a bandpass filter ?
14. How does an LED emit light ?
15. What is an SCR ? Give its application.
16. What property of the transistor is made use of to work it as a switch ?
17. What is an op-amp ? Give its uses.
18. Draw an OR gate. Give its truth table. **(W=6×1=6)**

SECTION – C

Answer **any four** questions :

19. Calculate the effective capacitance when capacitors are connected in :
    a) Parallel
    b) Series.
20. What is mutual inductance ? Explain the working of a transformer.

21. What is a high pass filter ? How is it designed ?
22. Explain zener action. How is a voltage regulator constructed using a zener diode ?
23. Explain the principle of working of an oscillator.
24. What are inverting amplifiers ? Explain its working using an op-amp.
25. What are binary numbers ? How is decimal to conversion done ?
26. Explain the working of an analog multimeter. **(W=4×2=8)**

SETION – D

Answer **any one** question.

27. Using circuit describe the construction and working of a full wave rectifier. What is the effect of an RC filter on the output voltage.
28. Explain the working of a digital to analog converter. Determine the resolution of a 6 bit DAC. **(W=1×4=4)**