Government College of Engineering, Amravati

Department of Information Technology

Class Test-1

Course Code: ETU311

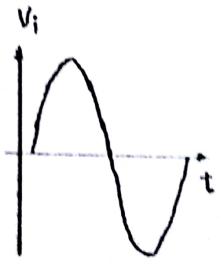
Course: Electronic Devices and Circuits

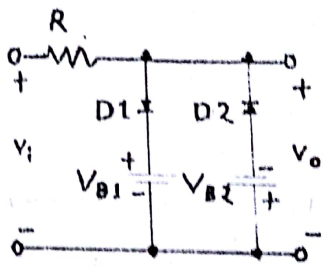
Time: 3:00-4:00

Max. Marks: 15

Note: Q.1 is compulsory & attempts any three from Q.2 to Q.5

Q.1 Find output wave form. When $V_i = 6\sin\alpha$, $V_{B1} = 3V$ and $V_{B2} = 4V$. 3





Q.2 Explain the working of center tapped FWR and derive regulation factor, Transformer utilization factor and ripple frequency for Center tapped FWR. 4

Q.3 Explain the input output characteristics for common base configuration and analyze input resistance and output resistance from respective curves. 4

Q.4 What is a filter? Explain working of C Filter & L input filter. 4

Q.5 Explain the working of NPN Transistor and also Determine base current if emitter current is 1.2mA and leakage current is 45 μA for CB configuration when current amplification factor is 0.988. 4

Government College of Engineering

F F Saturation
F R Active
R F Inverted
R R Cut off

Government College of Engineering, Amravati
Department of Information Technology
Class Test-I (W-17)

Sub: ETU 311 EDC **Marks: 15** **Time: 1 hour**

Solve Any Three

Q.1 Explain working of Full wave Bridge rectifier with its waveform and circuit diagram.

Q.2 Explain the operation of π (CLC) filter..

Q.3Draw the circuit for Biased negative clipper and explain its operation.

Q.4Draw the circuits of Common base configuration for NPN transistor for Active mode, saturation mode and cut-off mode.

First Semester - B. Tech. (All Branches)

Government College of Engineering, Amravati
Department of Information Technology
Class Test-I

Course Code: ETU311
Course: Electronic Devices and Circuits
Note: Attempts any three from Q.1 to Q.4

Date: 30/09/2016
Time: 9:00-10:00AM
Max. Marks: 15

Q.1 Explain working of full wave bridge rectifier with suitable waveform. Calculate value of peak current and average current. (Given $V_{rms} = 141.4$ V, $R_F = 25\ \Omega$ and $R_L = 200\Omega$) 5

Q.2 What is need of filter? Describe Π Filter for half wave and full wave rectifiers. 5

Q.3 Describe in brief working of NPN transistor and hence draw the input output characteristics curves for common base configuration. 5

Q.4
a. Explain opto coupler. 2
b. Draw output waveform for circuit as shown in fig. 1. When $V_i = 6\sin\alpha$, $V_{B1} =$ 3V and $V_{B2} = 4$V 3

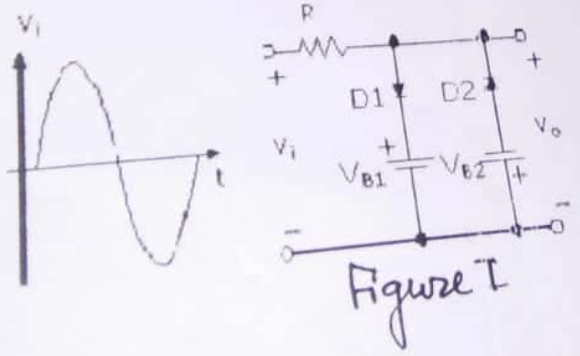


Figure 1