QP Code: 3304QP

Total No. of Pages: 2

Seat No.	

January - February (Winter) Examination - 2023

Subject Name: B.Tech. CBCS_71818_Fundamentals of Electronics and Computer_23.03.2023_10.30 AM To 01.00 PM

Subject Code: 71818

Total Marks: 70

Day and Date: Thursday, 23-03-2023
Time: 10:30 am to 01:00 pm

Instructions.:
1) Figures to the right indicate full marks
2) Assume suitable data wherever necessary and mention it boldly

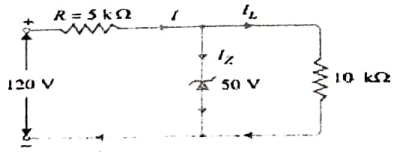
Special Instruction.:
Attempt any THREE questions from Que no 1, 2, 3 and 4. and Attempt any THREE questions from Que no 5,6,7, and 8.

Q.1. Solve the following: **[12]**
1. Explain FW rectifier using center tap transformer with necessary waveform.
2. Explain full adder circuit with truth table.

Q.2. Solve the following: **[11]**
1. What is De- Multiplexer? Explain 1:8 De-mux with truth table
2. Write a short note on a) Weighing machine b) Digital Thermometer

Q.3. Solve the following: **[11]**
1. Explain transistor as a common emitter amplifier with suitable circuit diagram and waveforms.
2. Realize the logic equation Y=(A+B)(C+D) using i) OR and AND gate ii) only NOR gate

Q.4. Solve the following: **[12]**
1. Explain different types of strain gauges.
2. For the zener circuit shown in below figure find i) the output voltage ii) the voltage drop across series resistance iii) current through zener diode



Q.5. Solve the following: **[12]**
1. Convert following number system
   i) 111101.0110 Binary to Decimal
   ii) 4B27 Hexadecimal to Decimal
   iii) 185 Decimal to Binary
2. Discuss the different generations of computers.

Q.6. Solve the following: **[11]**
1. Explain Programming Control Structures for computer programming.
2. Explain different types of networks.

Q.7. **Solve the following:** [11]

1. What is a flow chart? Draw a flowchart for find the largest among three different numbers entered by the user.

2. Enlist and elaborate various output devices of computer system.

Q.8. **Solve the following:** [12]

1. Enlist and elaborate any five applications of computers.

2. Explain different types of operating system.

QP Code: 6575QP

Total No. of Pages: 2

Seat No.	

Summer Examination March - 2023

Subject Name: B.Tech. CBCS_71818 - Fundamentals of Electronics and Computer_02.08.2023_10.30 AM To 01.00 PM

Subject Code: 71818

Total Marks: 70

Day and Date: - Wednesday, 02-08-2023
Time: - 10:30 am to 01:00 pm

Instructions.:
1) Figures to the right indicate full marks
2) Assume suitable data wherever necessary and mention it boldly

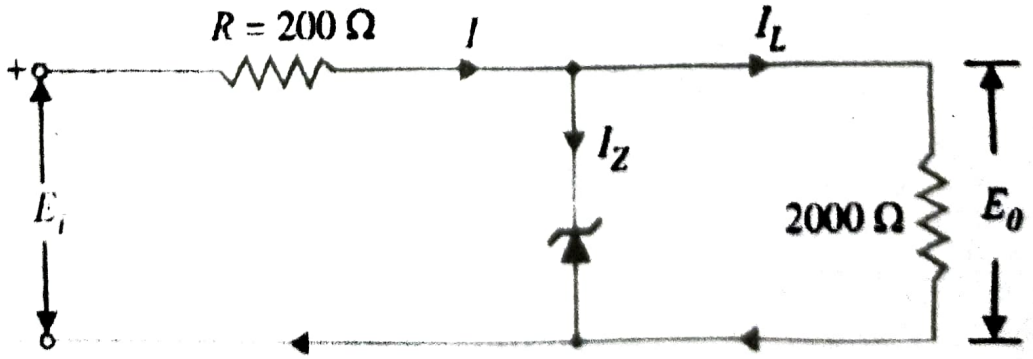
Special Instruction.:
Attempt any THREE questions from Que no 1, 2, 3 and 4. and Attempt any THREE questions from Que no 5,6,7, and 8.

Q.1. Solve the following: **[12]**
1. Explain full wave bridge rectifier with necessary waveforms.
2. Explain basic gates and NAND as universal gate with its truth table.

Q.2. Solve the following: **[11]**
1. What is multiplexer? Explain 4:1 mux with truth table.
2. Write a short note on a) Microwave oven b) Tachometer

Q.3. Solve the following: **[11]**
1. Explain the following terms with respect to diode i) Break down voltage ii) Knee voltage iii) Peak inverse voltage iv) Maximum power rating
2. What is Binary adder? Explain Half adder with suitable truth table and logic diagram.

Q.4. Solve the following: **[12]**
1. Explain principle of operation and working of LVDT with neat diagram and transfer characteristics.
2. Over what range of input voltage will the zener circuit shown in below figure maintain 30 V across 2000 Ω load, assume that series resistance R= 200 Ω and zener current rating is 25 mA.



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Q.5. Solve the following: [12]

1. Convert the following number system
   i) (1101001.011)2 to Decimal
   ii) (657.40625)10 to Binary
   iii) (74B7.C1)16 to Decimal
2. Explain different Network Topologies use in a computer network.

Q.6. Solve the following: [11]

1. Explain following Linux commands. i) Ls ii) mkdir iii) Cd
2. What are different hardware components of computer system. Explain any four of them.

Q.7. Solve the following: [11]

1. Define the algorithm? Write an algorithm to find the largest among three different numbers.
2. Give the classification of computers based on their speed.

Q.8. Solve the following: [12]

1. Enlist and elaborate on various input devices of the computer system.
2. Explain different types of operating system.

Seat No.	1440

SP - 05
Total No. of Pages : 2

F.Y.B.Tech. (All Branches) (Semester - I/II) (CBCS)(Revised)
Examination, January - 2024
Fundamentals of Electroinics & Computer
Sub. Code : 71818

Day and Date : Friday, 05 - 01 - 2024 **Total Marks : 70**
Time : 10.30 a.m. to 1.00 p.m.

Instructions : 1) **Solve any Three questions from section I and section II**
2) **Figures to right indicate full marks.**

SECTION-I

Q1) Solve the following: **[12]**

a) Explain semiconductor diode with its characteristics and any one application.

b) Explain basic gates and NOR as universal gate with its truth table.

Q2) Solve the following: **[11]**

a) What is multiplexer? Explain 8:1 mux with truth table

b) Explain temperature transducer. What is RTD transducer?

Q3) Solve the following: **[11]**

a) Explain load line and operating point with suitable diagram

b) Prove the following distributive law with the help of truth table.
A(B+C)=AB+AC

Q4) Solve the following: **[12]**

a) State Principal of operation of microwave oven and explain it's working with neat block diagram

P.T.O.

b) A crystal diode having internal resistance rf= 20 Ω is used for half wave rectification. If the applied voltage v=50sinωt and load resistance R_L=800 Ω,

Find.

i) d.c. output voltage

ii) a.c. power input and d.c. power output

iii) efficiency of rectification

SECTION - II

Q5) Solve the following: [12]

a) Convert following number system

i) (111111.1111) binary to decimal

ii) (EFFA1.12) Hexadecimal to Octal

iii) (674325) decimal to hexadecimal

b) Explain different Network Topologies use in computer network.

Q6) Solve the following: [11]

a) Explain different functions of operating system.

b) What are different hardware components of computer system. Explain any four of them.

Q7) Solve the following: [11]

a) Write use of algorithm and flowchart? Write an algorithm for Addition of two numbers entered by the user.

b) Enlist and elaborate any five applications of computers.

Q8) Write short note on (any two) [12]

a) Complier.

b) Program development life cycle.

c) Generations of computers.