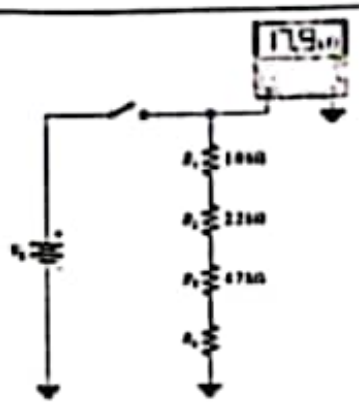
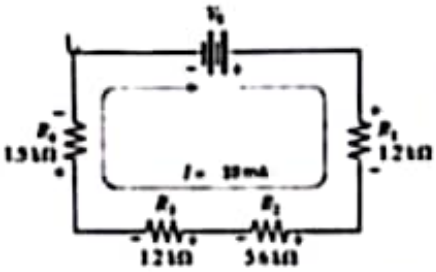
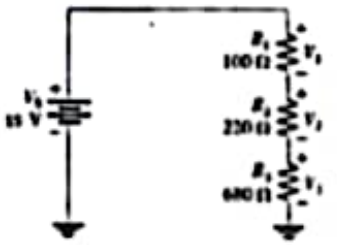
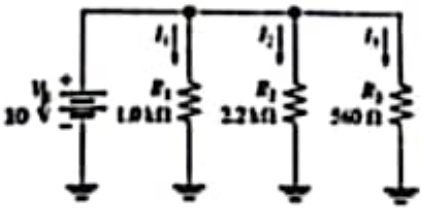
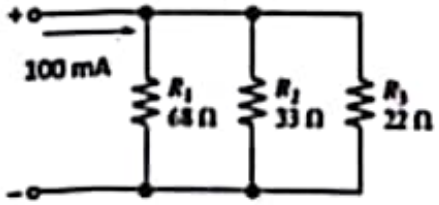
QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND SEMESTER) 20-BATCH B.E (ES)

SUBJECT: CIRCUIT ANALYSIS

Dated: 15.10.2021 Maximum Total Marks: 20 Time Allowed: 1 Hour.

NOTE: ATTEMPT ANY TWO QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		QUESTION	CLO	Level	PLO	Marks
Q. 01	(a)	Discuss and draw schematic symbol of resistor. In addition, determine the value of R_4 in the circuit of in following Figure? 	1	2	1	5
	(b)	Describe the potentiometer. In addition, calculate the voltage source V_s value for the given circuit. Given that the current in the circuit of the Figure is 10 mA. 	1	2	1	5
Q. 02	(a)	Explain the KVL. Furthermore, also find, if two equal-value 100 ohm resistors are connected in series across a 10 V battery. Given that voltage drop in one resistor is 5V what will be the drop value in other resistor.	1	2	1	5
	(b)	Discuss voltage divider formula? Calculate the voltage drop across each resistor in the voltage divider of the Figure. 	1	2	1	5
Q. 03	(a)	Describe the KCL. Determine the current through each resistor in the parallel circuit of the figure. 	1	2	1	5
	(b)	Explain the term power. Determine the total amount of power in the parallel circuit in the Figure. 	1	2	1	5

The End

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND SEMESTER), 20-BATCH

B.E (SE / ES / TC)

SUBJECT: LINEAR ALGEBRA & ANALYTICAL GEOMETRY

Dated: 13.10.2021 Maximum Marks: 20 Time Allowed: 1 Hour

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	QUESTIONS	PLO	CLO	Taxonomy Level	Marks
01	(a) Define the following Matrices (i) Nilpotent Matrix (ii) Idempotent Matrix (iii) Involuntary Matrix	PLO-2	CLO-1	C2	05
	(iv) Upper Triangular Matrix	PLO-2	CLO-2	C3	05
	(b) Show that this is nilpotent Matrix $\begin{bmatrix} 1 & -3 & -4 \\ -1 & 3 & 4 \\ 1 & -3 & -4 \end{bmatrix}$				
02	(a) Define Homogeneous and Non-Homogeneous System of Linear Equation	PLO-2	CLO-1	C2	05
	(b) Solve the system by Gauss Elimination Method $x_1+5x_2+2x_3=9$ $x_1+x_2+7x_3=6$ $-3x_2+4x_3=-2$	PLO-2	CLO-2	C2	05
03	(a) Define the consistency criteria of Homogeneous and Non-Homogeneous System of Linear Equations	PLO-2	CLO-1	C2	05
	(b) Find the rank of the given Matrix $\begin{bmatrix} 2 & 1 & 3 & 5 \\ 15 & 8 & 1 & 12 \\ 11 & 5 & 8 & 6 \\ 12 & 8 & 7 & 10 \end{bmatrix}$	PLO-2	CLO-1	C3	05

The End

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER - FIRST YEAR (2ND SEMESTER), 20-BATCH, B.E (ES)

SUBJECT: COMMUNICATION SKILLS

Dated: 12.10.2021 Maximum Marks: 10 Time Allowed: 45 Minutes.

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No		CLO	Taxonomy Level	Marks
01	Discuss the importance of feedback in the process of communication.	1	C1	05
02	Describe the role of facial expressions, gestures and pause in communication?	2	C3	05
03	What is meant by communication? Describe the importance of communication in academic life.	1	C3	05

The End

ID. No/Seat No.

QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY, NAWABSHAH

MID SEMESTER EXAMINATION 2021 OF SECOND SEMESTER FIRST YEAR (20-BATCH) OF B.E. (ELECTRONIC ENGINEERING)

Subject: Basic Electronic Engineering

Dated: 11-10-2021 Time Allowed: 1 Hour (3 C.H.) Max: Marks: 20

NOTE: ATTEMPT ANY TWO QUESTIONS.

Q. No		CLO	Taxonomy Level	Marks
01(a)	**Discuss** the Zener diode in detail.	1	C2	05
01(b)	**Examine** the behavior of half wave rectifier and **investigate** the efficiency of half wave rectifier.	2	C4	05
02(a)	**Discuss** the BJT structure and the importance of doping in the construction of BJT	1	C2	05
02(b)	**Analyze and explore** the complete behavior of Centre tapped full-wave rectifier.	2	C4	05
03(a)	**Analyze** the three operating regions of bipolar junction transistor.	1	C2	05
03(b)	**Figure out** the relationship between α and β of bipolar junction transistor.	2	C4	05

Name of Subject Teacher: Dr. Ahsin Murtaza Bughio

---The End---

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND SEMESTER), 20 BATCH, B.E (ES)

SUBJECT: COMPUTER PROGRAMMING

Dated: 14.10.2021 Maximum Marks: 10 Time Allowed: 45 Minut

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Sr. No.	Questions	CLO	Mar
01	Differentiate between Program & Programming. Explain what phase's program passes to complete its execution procedure. Also Draw its flow chart.	CLO-1	5
02 (a)	Differentiate between cin and cout with the help of example program.	CLO-1	2
02 (b)	Enlist Data types along with their sizes and their usage in C++ Programming. a = 5 b = 6 c = a + b	CLO-1	3
03 (a)	Write a C++ program that takes input of 3 numbers from user and performs addition, subtraction and multiplication.	CLO-1	2
03 (b)	What is the relationship between High level language and Machine Language? What are the usage of C++ Language and enlist the features of C++ also?	CLO-1	3

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR, 2021 OF 20-BATCH, B.E (ES)

SUBJECT: COMMUNICATION SKILLS

ed: 03.12.2021 Maximum Marks: 30 Time Allowed: 02 Ho

E: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

No.		CLO	Taxonomy Level	Marks
01	What is communication? Explain the barriers to communication with suitable examples.	3	C1	10
2	State in detail the significance of Presentation Skills in your academic as well as professional life. Give a detailed account of the components of Presentation with suitable examples.	3	C3	10
3	Explain the 7C's of effective communication in detail.	2	C3	10

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR, 2021 OF 20 BATCH B.E (CS)

SUBJECT: LINEAR ALGEBRA & ANALYTICAL GEOMETRY

Dated: 09.12.2021 Maximum Marks: 60 Time Allowed: 3 Hours

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	QUESTIONS	PLO	CLO	Taxonomy Level	Marks
01	(a) Solve this determinant by using the basket-weave method $\begin{vmatrix} 1 & 2 & 3 \\ 2 & 1 & 4 \\ 3 & 2 & 5 \end{vmatrix}$	PLO-2	CLO-2	C3	06
	(b) A soap manufacturer decided to spend 600000 rupees on Radio, Magazine and T.V advertising. If he spend as much on T.V advertising as on Magazine and Radio together and the amount spent on magazine and T.V combined equals five times that spent on radio. Identify the amount to be spent on each type of advertising?	PLO-2	CLO-2	C2	06
02	Examine for what value of λ and μ the following equations have (i) No Solution (ii) Unique Solution (iii) Infinite Solution $x+y+z=6,\ x+2y+3z=10,\ x+2y+\lambda z=\mu$	PLO-3	CLO-3	C4	12
03	(a) Investigate the Consistency of the following system of equations and if found consistent, then solve the equations $\frac{-1}{x}+\frac{3}{y}+\frac{4}{z}=30,\ \frac{3}{x}+\frac{2}{y}-\frac{1}{z}=9,\ \frac{2}{x}-\frac{1}{y}+\frac{2}{z}=10$	PLO-2	CLO-2	C6	06
	(b) Construct an equation of the plain passing through the line of intersection of the planes $2x-y+3z=0$ and $x+2y-2z-3=0$ and perpendicular to the yz-plane	PLO-2	CLO-2	C6	06
04	(a) Examine the parametric equations, direction ratios, direction cosines and measure of the direction angles of the straight line through P(1 , -2, 0) and Q(5 , -10, 1)	PLO-3	CLO-3	C4	06
	(b) Test under what Conditions on X , Y and Z is the point P(x , y, z) equidistance from the points (3, -1 , 4) and (-1, 5, 0)	PLO-3	CLO-3	C4	06
05	(a) Solve $\iiint_D 15xyz\,dV$, *where* $D=[1,2]\times[3,4]\times[5,6]$	PLO-2	CLO-2	C3	06
	(b) Sami has a garden of dimensions 30m by 20m. He wants to design a flower bed in between such that the distance the of the flower bed from one corner is exactly one half of the distance from the apposite corner. Examine the coordinates of the flower bed and verify using the distance formula?	PLO-3	CLO-3	C4	06

*** GOOD LUCK ***

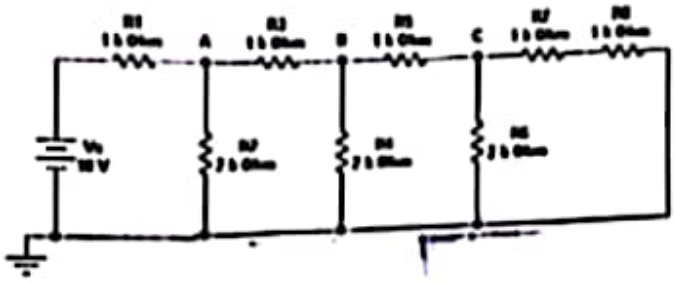
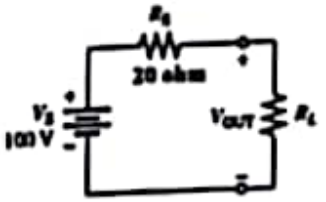
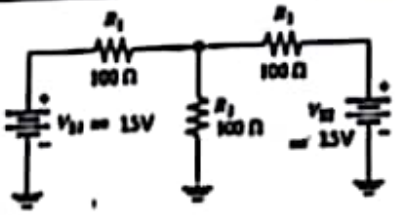
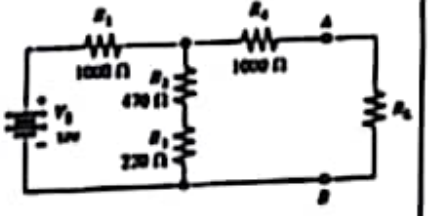
QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

SECOND SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20 BATCH B.E (ES)

SUBJECT: CIRCUIT ANALYSIS

Dated: 16.12.2021 | Maximum Total Marks: 60 | Time Allowed: 3 Hours.

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		QUESTION	CLO	Level	PLO	Marks
Q. 01	(a)	Describe the detail of a Ladder Network. Find the voltage at A, B and C nodes for the following R/2R ladder network. 	1	2	1	6
	(b)	Explain the detail of a practical voltage source? Moreover, calculate the voltage output of the source in the shown figure for the following R_L values of i) 100 Ω ii) 1000 Ω iii) 4 kΩ. 	1	2	1	6
Q. 02	(a)	Discuss the application of the superposition theorem? Mention the steps of the theorem and find the current through resistor (R_2) of the shown Figure. 	1	2	1	6
	(b)	Discuss what the application of Thevenin equivalent is. In addition, find the Thevenin equivalent circuit between A and B of the circuit in the given Figure. 	1	2	1	6
Q. 03	(a)	Discuss what is Norton theorem. Find the Norton circuit for the circuit shown in Q. 02 (b).	1	2	1	6
	(b)	Differentiate the charging and discharging mechanism of a capacitor with suitable curve diagram.	2	4	1	6

P.T.O

ID. No/Seat No.

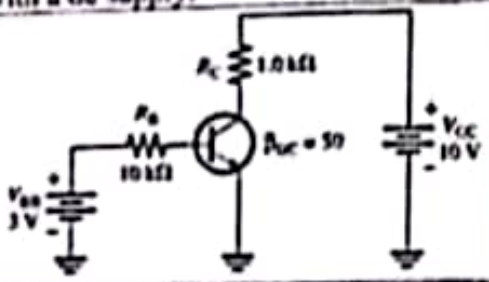
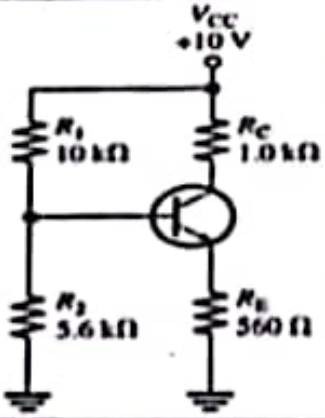
QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY, NAWABSHAH

FINAL REGULAR EXAMINATION 2021 OF SECOND SEMESTER FIRST YEAR (20 BATCH) OF B.E. (ELECTRONIC ENGINEERING)

Subject: BASIC ELECTRONIC ENGINEERING (ES-118)

Dated: 06-12-2021 Time Allowed: 3 Hour (3 C.H) Max: Marks: 60

NOTE: ATTEMPT ALL QUESTIONS.

Q. No		CLO	Taxonomy Level	Marks
01(a)	**Explain** basic features of tunnel diode, varactor diode and Silicon controlled rectifier. Also discuss the modes of operation of Silicon controlled rectifier.	2	C4	07
01(b)	**Explain** the application of diode in clipper circuits with the help of series clipper circuit with a dc supply.	2	C4	05
02(a)	**Examine** whether or not the transistor in figure below is in saturation. Assume VCE(sat)= 0.2V. 	2	C4	05
02(b)	**Explain** the operation of BJT in terms of biasing with the help of transistor voltages and currents.	1	C2	07
03(a)	What is the purpose of DC operating point? Also discuss any 2 types of biasing techniques of BJT.	1	C2	08
03(b)	Determine V_{CE} and I_C in voltage divider biased transistor circuit below if β_{DC}=100. 	2	C2	04
04(a)	Define FET. Also discuss the working principle of JFET.	1	C2	5
04(b)	**Differentiate** between D-MOSFET and E-MOSFET with the help of suitable diagrams and working principle.	1	C2	07
05	Write short notes.			
	(i) Configuration of JFET	1	C2	06
	(ii) Darlington Amplifier	2	C4	06

—The End—

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20-BATCH B.E (ES)

SUBJECT: COMPUTER PROGRAMMING

Dated: 13.12.2021 Maximum Marks: 30 Time Allowed: 02 Hour

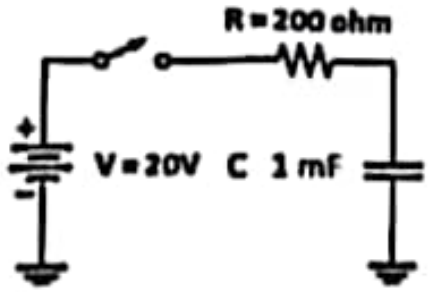
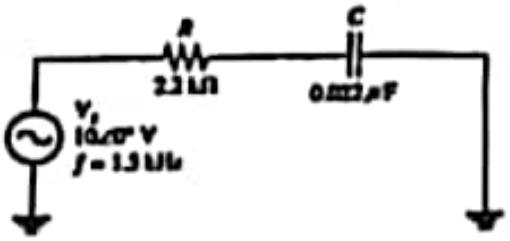
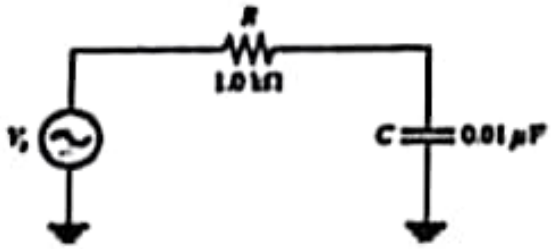
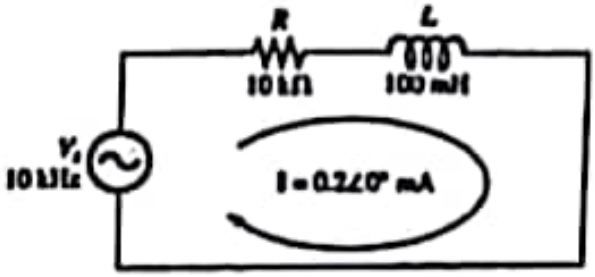
NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Sr. No.	Questions	CLO No.	Mark
1(a)	Differentiate between switch statement and if-else statement by giving their syntax, flow chart and example program.	CLO-2	(05)
1(b)	(i) Define Array. Explain how 1D and 2D array elements can be access randomly to generate output? (ii)Write C++ code to generate given matrix in output using nested for. 1 0 0 1 0 1 0 0 0 0 1 0 0 0 0 1	CLO-2	(05)
2(a)	What are iteration statements in C++ Programming? Explain its types by giving flowchart and example program.	CLO-3	(05)
2(b)	Write loop structures to generate given sequences in output? (i) 1 3 5 7 9 11 13 15 17 19 21 (ii) 2 4 6 8 10 12 14 16 18 20 (iii) 21 22 23 24 25 26 27 28 29 30 (iv) 2 4 8 16 32 64 128 256	CLO-3	(05)

3(a)	Write C++ script that takes three integer number from user and calculate result of following equations?
	a=b+c-60*d;
	e=a/b-7;
	result= a-e+10;
		CLO-2	(05)

3(b)	Discuss C-style character string and explain following string functions? (i) Strrev(Pakistan); (ii) Strncat(quest,nawabshah,4); (iii) strcpy (str1,str3); (iv) strlen(Pakistan); (v) Strcpy(str1,str3);	CLO-3	(05)

Good Luck

. 04	(a)	Calculate the capacitor voltage, 200 ms after the switch is closed if the capacitor is initially uncharged. Draw the charging curve and <u>analyze</u> the results weather the capacitor is fully charged or not, and how much time is required to completely charge the capacitor. 	2	4	1
	(b)	Determine the current in the circuit of the shown figure, and <u>outline</u> a phasor diagram showing the relation between source voltage and current. 	2	4	1
05	(a)	For the series *RC* circuit in the Figure determine the capacitive reactance for each of the following values of input frequency: (a) 10 kHz (b) 30 kHz. <u>Analyze</u> the impact of increase of frequency on the capacitive reactance. 	2	4	1
	(b)	Define the inductive reactance. The current in Figure 5 is expressed in polar form as mA. Determine the source voltage expressed in polar form, and <u>draw</u> a phasor diagram showing the <u>relationship</u> between the source voltage and the current. 	2	4	1