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

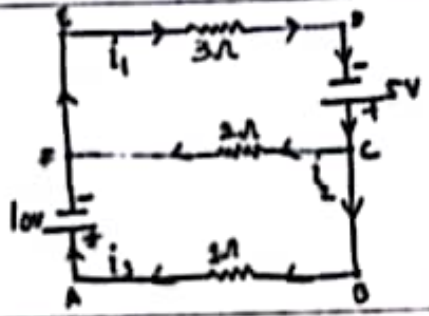
FINAL SEMESTER REGULAR EXAMINATION OF FIRST SEMESTER – FIRST YEAR, 2021 OF 22 BATCH, B.E (CS)

SUBJECT: LINEAR ALGEBRA & ANALYTICAL GEOMETRY

Dated: 11.05.2023 Maximum Marks: 60 Time Allowed: 3 Hours.

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

Subject Teacher: Sir Ravi Kumar

Q.No	Questions	CLO	Taxonomy Level	PLOs	Marks
01(a)	Determine the currents I_1, I_2 and I_3 for the electrical network shown in figure: 	3	C3	2	08
01(b)	Find the inverse of the matrix by elementary row operations $A=\begin{bmatrix}1 & 0 & 3\\ 2 & 4 & 1\\ 1 & 3 & 0\end{bmatrix}$	2	C2	2	04
02(a)	Formulate the system of linear equations from chemical equation. $C_3H_8+O_2\rightarrow CO_2+H_2O$	2	C2	2	06
02(b)	Without expanding prove that $A=\begin{vmatrix}x & a & a & a\\ a & x & a & a\\ a & a & x & a\\ a & a & a & x\end{vmatrix}=(x-a)^3(x+3a)$	2	C2	2	06
03	Differentiate between homogenous and non-homogenous system of linear equations, hence give algebraically and geometrically examples when the system has unique, infinite and no solutions	2	C2	2	12
04(a)	Convert the equation of plane $2x-3y-z+7=0$ (i) intercept form (ii) normal form.	2	C2	2	04
04(b)	Let $P(x_1,y_1,z_1)$ and $Q(x_2,y_2,z_2)$ are the opposite vertices of a parallelepiped, find the coordinates of the other vertices and sketch the parallelepiped.	2	C2	2	04
04(c)	Find the cylindrical coordinate of the point whose rectangular coordinates are $\left(\frac{16}{5},\frac{12}{5},1\right)$	2	C2	2	04
05(a)	Find the ratio in which the yz-plane divides the segment joining the points A(-2,4,7) and B(3,-5,8).	2	C2	2	04
05(b)	Find the point of intersection of pair of lines L and M given by: L: through A (2, -1, 0) and parallel to b= [4, 3, -2] M: through B (-1, 3, 5) and parallel to c= [1,7,3]	2	C2	2	04
05(c)	Find the direction cosines of a line passing through the points $\left(-1,1,\sqrt{2}\right)$ and $\left(1,2,\sqrt{2}\right)$.	2	C2	2	04

The End

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

FINAL SEMESTER REGULAR EXAMINATION OF FIRST SEMESTER – FIRST YEAR 2023 OF 22-BATCH, B.E(CS

SUBJECT: COMPUTER PROGRAMMING

Dated: 05.05.2023 Maximum Marks: 60 Time Allowed: 3 Hou

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

Q. No.		Question	CLO	Taxonomy Level	PLO	M
Q. 01	(a)	What are multidimensional arrays? How they are different from 1-dimensional arrays? Provide an example for declaring a 2-dimensional array.	1	C2	1	
	(b)	Write a C++ program to: i) declare and initialize two (2) 2-dimensional arrays with datatype int, having dimensions 3x3, and names arr1 and arr2 respectively ii) declare a third 2-dimensional array with datatype int, dimension 3x3 and name arr3 iii) Perform multiplication operation between arr1 and arr2 (corresponding elements are multiplied only) iv) Store the result of multiplication in arr3	3	C5	3	
Q. 02	(a)	What are user-defined functions? Also provide syntax of writing a user-defined function.	1	C2	1	
	(b)	What are the advantages of user-defined functions?	1	C2	1	
	(c)	Write a C user-defined function 'isprime'. The function takes only 1 integer type argument and returns 1 if the argument is a prime number or 0 otherwise.	3	C5	3	
Q. 03	(a)	Write a C program to demonstrate the use of & (address of) and * (value at address) operators.	2	C3	2	
	(b)	What is the relationship between Array and Pointer ?	2	C3	2	
	(c)	Differentiate 'Call by Reference' and 'Call by Value' using examples.	2	C3	2	

Q. 04	(a)	Write a C program to store 3 elements in an array and print the elements using a pointer.
		Output :
		`Input 3 number of elements in the array :`
		`element - 0 : 5`
		`element - 1 : 7`
		`element - 2 : 2`
		`The elements you entered are :`
		`element - 0 : 5`
		`element - 1 : 7`
		`element - 2 : 2`
			2	C3	2	

	(b)	Write a C program to i) input 5 strings using any loop and store them in an array of pointers ii) print those 5 strings using for loop.	3	C5	3	
	(c)	Describe the following string function with examples. i) strlen() ii) strcpy() iii) strcmp()	1	C2	1	

Q. 05	(a)	What are the different file opening modes supported by fopen() function call ?	2	C3	2
	(b)	Describe the following file-related functions with a single-line example. 1. getc() and putc() 2. fprintf() and fscanf() 3. getw() and putw()	2	C3	2
	(c)	Write a C program to i) open a text file "data.txt" in write mode ii) write your roll id in the file (i) using fprintf() function iii) close the file (i)	3	C5	3

Good Luck

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

FINAL SEMESTER REGULAR EXAMINATION OF FIRST SEMESTER – FIRST YEAR 2023 OF 22-BATCH B.E (CS

SUBJECT: APPLIED PHYSICS

Dated: 08.05.2023 Maximum Marks: 60 Time Allowed: 3 H

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

Subject teacher: Sir Imdad Hussain

Kalhoro

Q. No.		QUESTION	CLO	Taxonomy Level	PLO	
Q. 01	(a)	What do you know about first law of thermodynamics and its applications?	3	C3	1	
	(b)	A system absorbs 1500J of heat and performs 400J of work, while losing 200J of heat by conduction to the atmosphere. Calculate the change in internal energy of the system.	3	C3	1	
Q. 02	(a)	State and explain torque on a current carrying rectangular loop coil placed in uniform magnetic field and derive the expression of torque?	3	C3	1	
	(b)	A coil 50 turns wound on a rectangular frame of 2cm x 4cm is pivoted to rotate in a magnetic field of 0.02web/m^2 the face of the coil is parallel to the field how much torque acts over the coil when a current of 0.5A passes through it? What will be the torque when the coil is rotated by 30° from its initial position	3	C3	1	
Q. 03	(a)	State and explain Coulomb's law?	6	C6	1	0
	(b)	Two-point charges of $+2x10^{-4}C$ and $-2x10^{-4}C$ are placed at a distance of 40cm from each other a charge $+2x10^{-5}C$ is placed midway between them. What is the magnitude and direction of force on it?	6	C6	1	0
Q. 04	(a)	What are electric charges and electric lines of forces? How charges attract and repel each other draw their graphs and show attraction and repulsion?	6	C6	1	0
	(b)	What do you know about Faraday's laws of electromagnetic induction?	6	C6	1	0
Q. 05		State and explain Gauss's law with its applications?	6	C6	1	12

Good Luck

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

FINAL SEMESTER REGULAR EXAMINATION OF FIRST SEMESTER – FIRST YEAR, 2023 OF 22 BATCH, B.E (CS)

SUBJECT: COMPUTING FUNDAMENTALS

Dated: 15.05.2023 Maximum Marks: 60 Time Allowed: 3 Hour

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

Subject teacher: Dr Fizza Abbas

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	Ma
Q. 01	(a)	**Describe** the different types of computer networks and how do they differ?	2	2	1	
	(b)	**Discuss** the concepts of following network topologies. How do you choose the best topology for a particular network, for example computer lab? (a) Bus (b) Ring (C) Star	2	2	1	
	(c)	**Describe** network media and what are some common types of network media used in wired networks?	2	2	1	
Q. 02	(a)	**Discuss** the main objectives of Operating Systems (OS). Also explain the following common components of OS. 1. Process Management 2. File System Management 3. Main Memory Management	2	2	1	
	(b)	**Define** the term "Database management system". Also highlights the advantages of database system as compare to file system	2	1	1	
Q. 03	(a)	What is computer program? **Discuss** the following files to store program 1. Executable files 2. Dynamic link libraries 3. Batch files	3	2	3	
	(b)	**Compare** the following terms 1. Internal and External DOS commands 2. Interpreter and Compiler 3. Object oriented programming and structured programming	3	4	3	
Q. 04	(a)	**Discuss** the objective of computer security. Also, **explain** the interconnection among confidentiality, integrity, and availability in computer security.	3	2	1	
	(b)	**Differentiate** between worms and viruses. How do they spread? How do you prevent viruses and worms from infecting your computer?	3	4	1	
	(c)	**Discuss** the advantages and disadvantages of symmetric and asymmetric encryption? Why is it important in computer security?	3	2	1	
Q. 05	(a)	**Identify** the key feature of python programming. Write a Python program. a. To check if the input number is even or odd. b. To check if the input year is a leap year or not. c. To find the factorial of a number provided by the user	3	1	3	
	(b)	**Explain** the any three of the following terms. a. Internet b. Artificial Intelligence and its impact c. Working of Hard disk d. Cloud Computing	3	2	3	

The End

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

FINAL SEMESTER REGULAR EXAMINATION OF FIRST SEMESTER – FIRST YEAR, 2023 OF 22-BATCH, B.E (C

SUBJECT: FUNCTIONAL ENGLISH

Dated: 18.05.2023 Maximum Marks: 30 Time Allowed: 02 Hou

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

Subject teacher: Sir Shujja Hyder

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	M
Q. 01	(a)	How Reading enhances our writing skills?	2	C1	2	
	(b)	Differentiate between Intensive and Extensive reading with examples.	2	C2	2	
Q. 02	(a)	Define precis writing. What is the purpose of Precis Writing?	2	C1	2	
	(b)	Describe the characteristics for writing a good precis.	2	C2	2	
Q. 03		"Punctuation marks are used to structure and organize writing to help emphasize a certain tone of voice or meaning". By keeping this statement describe the Importance of Punctuation in writing skill with suitable examples.	3	C2	2	

Good Luck

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

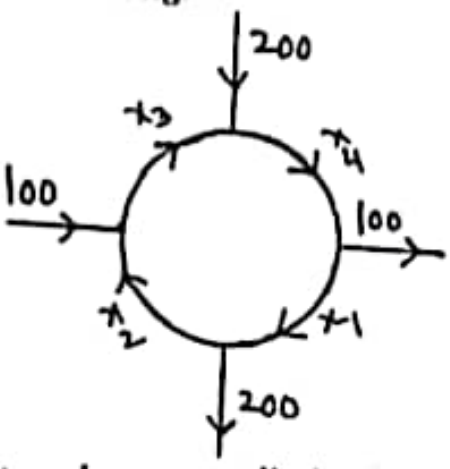
MID-SEMESTER EXAMINATION OF FIRST SEMESTER – FIRST YEAR (1ST) 2023, 22-BATCH, B.E (CS)

SUBJECT: LINEAR ALGEBRA & ANALYTICAL GEOMETRY

Dated: 15.02.2023 Maximum Marks: 20 Time Allowed: 01 Hou

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

Subject teacher: Sir Ravi Kumar

Q. No		CLO	Taxonomy Level	PLOs	Ma
01(a)	A matrix has 10 elements. How many matrices of different order can be formed from these elements also write them	1	C2	2	
01(b)	Is it possible to find the multiplication of any two matrices? also find the rank of the matrix by using elementary row operations. $A=\begin{bmatrix}1 & 2 & 3\\ 2 & 4 & 7\\ 3 & 6 & 10\end{bmatrix}$	1	C1	2	
02	The amount of traffic flow at the main entrance of our university as shown in fig:  Solve the system by gauss-elimination method when $x_4 = 30$	1	C3	2	1

---Good Luck---

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

MID-SEMESTER EXAMINATION OF FIRST SEMESTER – FIRST YEAR (1ST SEMESTER) 2023, 22-BATCH, B.E (CS

SUBJECT: FUNCTIONAL ENGLISH

Dated: 17.02.2023 Maximum Marks: 10 Time Allowed: 45 Mi

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

Subject teacher: Sir Shujja Hyder

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs
Q. 01	A preposition is a word used to show direction, time, place location or spatial relationship. Briefly describe the usage of preposition of time and place with suitable examples.	1	C2	2
Q. 02	a) Define the sentence and its structure. b) Define the different kinds of sentence with suitable examples.	1	C1	2

Good Luck

AID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHA

MID-SEMESTER EXAMINATION OF FIRST SEMESTER – FIRST YEAR (1ST) 2023, 22-BATCH, B.E (CS)

SUBJECT: COMPUTING FUNDAMENTALS

16.02.2023 Maximum Marks: 20 Time Allowed: 01 Hour.

ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Subject teacher: Dr Fizza Abbas

		QUESTION	CLOs	Taxonomy Level	PL
	(a)	Discuss the working of following 1. Cathode ray tube (CRT) monitor 2. Impact printer 3. Mouse	01	C2	0
	(b)	Solve the following conversion I. $(011110010)_2=(?)_{10}$ II. $(74)_{10}=(?)_2$ III. $(11110111111)_2=(?)_8$ IV. $(1AFD)_{16}=(?)_2$ V. $(142)_8=(?)_{16}$	01	C3	
2	(a)	Compare and contrast the following 1. Data and address bus 2. SRAM and DRAM 3. Parallel and Serial port 4. North bridge and South bridge	01	C4	
	(b)	List the following 1. Factors that affect a processor's speed. 2. Features of 1st, 2nd, 3rd and 4th generation 3. Categories of computers according to their size, working principle and purpose 4. Machine cycle	01	C1	

Good Luck

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

MID-SEMESTER EXAMINATION OF FIRST SEMESTER – FIRST YEAR (1ST) 2023, 22-BATCH, B.E (CS)

SUBJECT: COMPUTER PROGRAMMING

Dated: 14.02.2023 Maximum Marks: 20 Time Allowed: 01 Hour

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

Subject teacher: Professor Abdul Wahi

Memon

Q. No.		Question	CLO	Taxonomy Level	PLO
Q. 01	(a)	Write down all relational operators in C.	1	C2	1
	(b)	Write a program that inputs your age in years and then calculate the total number of months, weeks and days.	2	C3	2
	(c)	Write a C program that inputs an integer and check if it is even or odd.	2	C3	2
Q. 02	(a)	Write a C program to input a number and prints the table of that number using for loop.	2	C3	2
	(b)	Write a C program to generate the following output using while loop. 50 45 40 35 30 25 20 15 10 5	2	C3	2
	(c)	Write a C program to initialize an array of 10 integers and find the smallest of these 10 numbers using any loop.	2	C3	2

The End

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

MID-SEMESTER EXAMINATION OF FIRST SEMESTER – FIRST YEAR (1ST) 2023, 22-BATCH, B.E (CS)

SUBJECT: APPLIED PHYSICS

Dated: 13.02.2023 Maximum Marks: 20 Time Allowed: 01 Ho

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

Subject teacher: Sir Imdad Hussain Kalhoro

Q. No.		Question	CLO	Taxonomy Level	PLO
Q. 01	(a)	State and explain Ohm's law with its limitations.	1	C3	1
	(b)	The resistor of a copper wire is 25m long is found to be 50Ω of its diameter is 1mm. Calculate the resistivity of copper wire.	1	C3	1
	(c)	A color coded resistor having the colors Red, Green, Voilet, Silver, then what will be the total resistance of the color coded resistor.	1	C3	1
Q. 02	(a)	Explain with neat and clean diagram of parallel arrangement of resistors. Also define effects of electric current.	1	C3	1
	(b)	A home consists of different home appliances having the different power rating of shown in table:	1	C6	1

Sr. No.	Appliances	Rating	Duration Per Day
1	AC	1000W	12 Hours
2	Fan	80W	14 Hours
3	LED Bulb	25W	08 Hours
4	Electric Iron	1000W	04 Hours
5	Pump Motor	1000W	06 Hours
6	Refrigerator	250W	14 Hours
7	TV	120W	10 Hours
8	Mobile Charger	05W	12 Hours

Calculate the electrical bill of one month. The rate of per unit is Rs. 10/-.

The End