



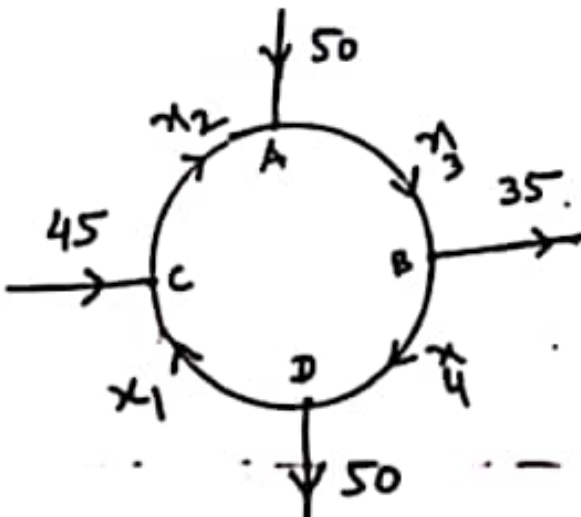
SUBJECT: LINEAR ALGEBRA

Dated: 23.11.2022

Maximum Marks: 20

Time Allowed: 01 Hour

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

Q. No		CLO	Taxonomy Level	PLOs	Marks
01(a)	A matrix has 15 elements. How many matrices of different order can be formed from these elements also write them	2	C1	3	04
01(b)	Why we use identity matrix? also find the rank of the matrix by using determinate method. $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 7 \\ 3 & 6 & 10 \end{bmatrix}$	3	C2	3	06
02(a)	Formulate the system of linear equations from chemical equation. $C_2H_6 + O_2 \rightarrow CO_2 + H_2O$	2	C1	3	08
02(b)	Is it possible to find the multiplication of any two matrices?	3	C2	3	02
03	The traffic flow at chakra market Nawab shah is shown below:  (i) Solve the system by Gauss's Jordan method (ii) Find the traffic flow when $x_4 = 400$	2	C1	3	10

---Good Luck---



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

**MID-SEMESTER EXAMINATION OF SECOND SEMESTER - FIRST YEAR (2<sup>ND</sup> SEMESTER) 2022-21 BATCH B.S (AI)**

**SUBJECT: COMMUNICATION & PRESENTATION SKILLS**

**Dated: 22.11.2022**

**Maximum Marks: 20**

**Time Allowed: 01 Hour**

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

Q. No.	QUESTIONS	PLO	CLO	Taxonomy Level	Marks
01	Discuss communication barriers and its factors in detail.	PLO-2	CLO-1	C2	10
02	Define communication and six components of communication.	PLO-2	CLO-1	C1	10
03	(a) Describe the need and scope of communication in organization.	PLO-2	CLO-1	C2	10
	(b) Discuss origin and development of communication.			C2	

**The End**



**QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH**  
**MID-SEMESTER EXAMINATION OF SECOND SEMESTER - FIRST YEAR (2<sup>nd</sup> SEMESTER) 2022-21 BATCH, B.S (AI)**

**SUBJECT DIGITAL LOGIC DESIGN**

**Dated: 25.11.2022**

**Maximum Marks: 20**

**Time Allowed: 01 Hour**

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

Q No.	Question	CLOs	Taxonomy Level	PLDs	Marks
01. a)	Explain why binary number system is suited for digital circuits and systems.	CLO 1	C2	2	(03)
b)	Identify first 20 numbers in base-4 number system.	CLO 1	C2		(03)
c)	Solve by considering the number system in Q 01. b), perform the following arithmetic operations.	CLO 1	C3		(04)
	i) $33+12 = ?$ ii) $23-11 = ?$				
02. a)	Solve by converting the following numbers from decimal to binary.	CLO 1	C3	2	(05)
	i) 455    ii) 220    iii) 65.75    iv) 101    v) 1050				
b)	Solve by converting the following binary numbers to decimal.	CLO 1	C3		(05)
	i) 10111000    ii) 10110    iii) 11101.111				
	iv) 101010111    v) 100100100				
03. a)	Describe how negative numbers can be stored in a digital computer? Explain 2's complement of a number.	CLO 1	C2	2	(06)
b)	Solve the following subtraction operations using 2's complement method on the following unsigned binary numbers.	CLO 1	C3		(04)
	i) $1101 - 0101$ ii) $10110 - 01111$				
	iii) $10101011 - 00111011$ iv) $1010110 - 1110001$				

**Good Luck &**



**QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH****MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2<sup>ND</sup> SEMESTER) 2022-21 BATCH B.S (AI)****SUBJECT OBJECT ORIENTED PROGRAMMING****Dated: 21.11.2022****Maximum Marks: 20****Time Allowed: 01 Hour****NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.**

Q. No.	Question	CLOs	Taxonomy Level	PLOs	Mark
Q.01 (a)	Briefly explain how Java language supports polymorphism.	1	C2	2	05
Q.01 (b)	Discuss how the code written in Java language is portable and secure.	1	C2	2	05
Q.02	Write a Java program to print the area of two rectangles having sides (6,8) and (5,9) respectively by creating a class named 'Rectangle' with a method named 'Area' which returns the area. The length and breadth are passed as parameters to its constructor.	2	C3	3	10
Q.03 (a)	Give an example to declare and display a multidimensional array with the help of a Java programme.	1	C2	2	05
Q.03 (b)	Write a Java code that creates an array to store marks of 10 students. The program should then display maximum, minimum and average marks of students.	1	C2	2	05

**Good Luck!**



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

**MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2<sup>ND</sup> SEMESTER) 2022, 21 BATCH**

**B.S (AI)**

**SUBJECT: PAKISTAN STUDIES**

**Dated: 24.11.2022**

**Maximum Marks: 20**

**Time Allowed: 01 Hour**

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

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	Discuss the causes of War of Independence 1857.	1	C2	8	05
Q. 02	Role of Sir Syed Ahmed Khan In Aligarh Movement.	1	C2	8	05
Q. 03	Write short note on any Two of the following: (i) Partition of Bengal (ii) Lucknow Pact 1916 (iii) Nehru Report	1	C1	8	05

**Good Luck**



QUAID-E-AZAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH  
FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER - FIRST YEAR, 2022 OF 21 BATCH, B.S (AI)

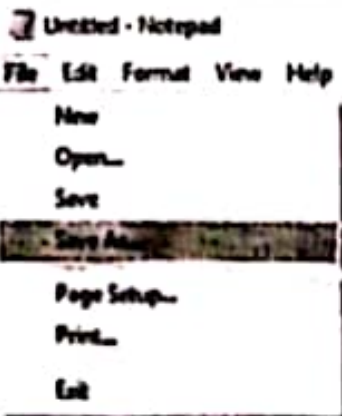
SUBJECT: OBJECT ORIENTED PROGRAMMING

Date: 10.01.2023

Maximum Marks: 60

Time Allowed: 3 Hours

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

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q.01	(a) Demonstrate the dynamic method dispatch in Java. Create a class named A as the super class. Create two sub classes of class A, named as B and C. All three classes should have a method named as callme(). Use a fourth class to instantiate all three classes and dynamically call the method callme().	2	C3	3	06
	(b) Write a Java program that takes two numbers from user each one by using different approach for taking input. The program should then display the sum of both numbers.	2	C3	3	06
Q.02	(a) Write a Java code that creates two different kinds of exceptions in a single try block and catch them with multiple catch clauses.	2	C3	3	06
	(b) Differentiate between method overloading and method overriding in Java.	2	C4	3	06
Q.03	(a) Write a Java program that creates a text file named "quest.txt", write or append the string "Welcome to AI Department" in that file and read the contents of the file and show on the console screen.	3	C3	4	06
	(b) Write a Java program that creates multiple threads.	3	C2	4	06
Q.04	(a) Explain why the abstract classes cannot be instantiated. Create an abstract class named as Shape with a method named size(). Then create another class to extend the class Shape. Use a third class to call the method size().	2	C2	3	06
	(b) Explain all three uses of the final keyword in Java.	2	C2	3	06
Q.05	(a) Write a Java application with functionality and user-interface of the notepad as shown in the figure. 	3	C3	4	06
	(b) Demonstrate with the help of a program that how an interface can use another interface.	3	C3	4	06

Good Luck





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

**FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER - FIRST YEAR 2022 OF 21 BATCH B.S (IT / CS / AI)**

**SUBJECT: COMMUNICATION & PRESENTATION SKILLS**

**Dated: 13.01.2023**

**Maximum Marks: 60**

**Time Allowed: 3 Hour**

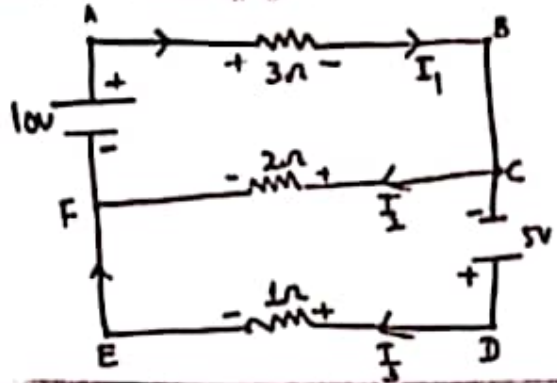
**NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.**

Q. No.	QUESTION	CLOs	Taxonomy Level	Mark
Q. 01	What are the barriers to communication? Discuss in detail with suitable examples.	1	C3	12
Q. 02	Write the essential features of effective presentation.	1	C1	12
Q. 03	What is the importance of communication in professional life? Explain.	2	C3	12
Q. 04	"We communicate more through non-verbal communication". Elaborate the statement.	2	C1	12
Q. 05	Write short on any two of the following: 1 Interpersonal communication 2 Person to group communication 3 Mass communication	1	C3	12

**Good Luck**



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

Q. No	Questions	Cr.	Proficiency Level	PLDs	Marks
01(a)	Apply Kirchhoff's laws to find the current in each branch of the circuit shown in the following figure: 	3	C1	2	06
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)	Define linearly dependent and independent vectors, prove that the following system of vectors in $R^3$ are linearly independent $v_1 = (1, 2, -3), v_2 = (1, -3, 2), v_3 = (2, -1, 5)$	2	C2	2	06
02(b)	Determine whether or not the given set of vectors is basis for $R^3$ $S = \{(2, 4, -3), (0, 1, 1), (0, 1, -1)\}$	2	C2	2	06
03(a)	Without expanding prove that $A = \begin{bmatrix} x & a & a & a \\ a & x & a & a \\ a & a & x & a \\ a & a & a & x \end{bmatrix} = (x-a)^3 (x+3a)$	2	C2	2	06
03(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	06
04(a)	Convert the equation of plane $2x - 3y - z + 7 = 0$ (i) intercept form (ii) normal form.	2	C2	2	06
04(b)	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	06
05	Define Eigen values and Eigen vectors, Find the eigen vector corresponding to each eigen value of the following matrix $A = \begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$	2	C2	2	12

Good Luck





**QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH**  
**FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER - FIRST YEAR, 2023 OF 21-BATCH B.S (AI)**

**SUBJECT: PAKISTAN STUDIES**

**Dated: 20.01.2023**

**Maximum Marks: 30**

**Time Allowed: 02 Hours.**

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

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	Describe the Geo-strategic Importance of Pakistan.	2	C2	8	10
Q. 02	What were the main reasons of separation of East Pakistan?	3	C1	8	10
Q. 03	Define the term "Constitution"? Discuss the silent features of 1973 constitution.	3	C2	8	10

**Good Luck**