		END SEM EXAMINATION School of Engineering & IT	
Branch	CSE ME EEE	Program	Diploma	Semester	II
Subject Name	Mathematics-II	Year	June 2024		
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; don't Write on the 1st Page Backside • Answer all Questions of Section A (Compulsory) • Answer Any Four out of Six of Section B • Answer Any Three out of Five of Section C • Possession of <u>Mobile Phones</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussing with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Papers.</u>				
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating		
	K2 : Understanding	K4 : Analysing	K6 : Creating		

Section A (Each question Carry 02 Marks from Q1-i to Q1-x) – 20 Marks					
Q. N1	QUESTIONS	Marks	COs	KL	
i	What is the result of the multiplication $5 \times \begin{bmatrix} 5 & 0 \\ 2 & -3 \end{bmatrix}$.	2	CO1	K1	
ii	Evaluate $\lim_{x \rightarrow 3} \frac{x^2 - 9}{x - 3}$.	2	CO1	K3	
iii	Differentiate $\sin(5x+7)$.	2	CO3	K2	
iv	Evaluate $\int \sin 2x \, dx$.	2	CO2	K3	
v	Evaluate $\lim_{x \rightarrow 0} \frac{\sin 3x}{5x}$.	2	CO3	K5	
vi	Evaluate $\int_0^{\pi} \sin^2 x \, dx$.	2	CO4	K4	
vii	Find the order and degree of $\frac{dy}{dx} = \sqrt{\frac{d^3 y}{dx^3}}$.	2	CO1	K3	
viii	Evaluate $\int_0^2 x^2 \, dx$.	2	CO3	K2	
ix	Find the value of $\begin{vmatrix} a+ib & c+id \\ -c+id & a-ib \end{vmatrix}$.	2	CO2	K3	
x	Check the function $f(x) = x^3$ is an even function or odd function.	2	CO3	K5	

Section B (Answer any FOUR out of SIX) - 20 Marks

(Each question carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	Evaluate $\lim_{x \rightarrow 0} \frac{\sqrt{1+x} - \sqrt{1-x}}{x}$.	5	CO1	K3
3	If $A = \begin{bmatrix} 4 & x+2 \\ 2x-3 & x+1 \end{bmatrix}$ is symmetric matrix, find x.	5	CO3	K2
4	Find the integral $\int x^2 e^x dx$.	5	CO1	K3
5	Find the differential equation of $y = a e^{x^2} + e^{-x}$, where a and b are arbitrary constant.	5	CO3	K5
6	Find the rate of change of the area of a circle per second with respect to its radius r, when $r = 5$ cm.	5	CO4	K4
7	Find the slope of tangent and normal to the curve $x^2 + y^2 = 25$ at point $(-3, 4)$.	5	CO2	K3

Section C (Answer any THREE out of FIVE) - 30 Marks-

(Each question Carry 10 Marks)

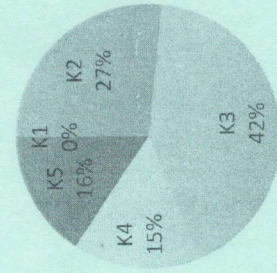
Q. No.	QUESTIONS	Marks	COs	KL
8	A function is defined as $f(x) = x^2 - 3x$ a) Find the value of $f(2)$ b) Find the value of x for which $f(x) = 4$	10	CO1	K3
9	Find the derivatives of $\cos x$ by FIRST PRINCIPLE	10	CO3	K5
10	Solve the system of linear equation using matrix method $x + 3y = 5$ $x + y = 6$	10	CO4	K4
11	Find the inverse of the matrix $A = \begin{bmatrix} 2 & 1 \\ 7 & 4 \end{bmatrix}$	10	CO2	K3
12	Show that the matrix $A = \begin{bmatrix} 5 & 3 \\ 2 & 1 \end{bmatrix}$; satisfy its own characteristic equation.	10	CO3	K2

CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

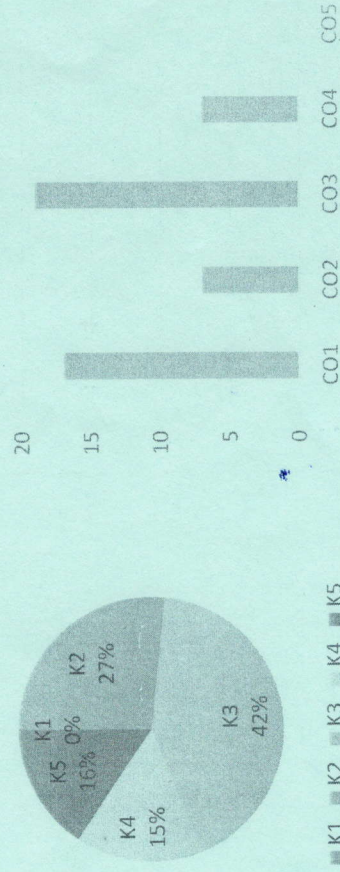
Course Outcomes	CO1	CO2	CO3	CO4	CO5
How to describe several areas of mathematics beyond calculus					
How to Solve differential equations using appropriate methods.					
Concepts of differentiation in physics & engineering courses					
Express their interest in mathematics					
How to evaluate mathematical solutions in a concise and informative manner					



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BLOOM'S LEVELS WISE MARKS DISTRIBUTION



course outcome wise marks distribution



				END SEM EXAMINATION School of Engineering & IT	
Branch	CSE & EEE	Program	Diploma		
Subject Name	Applied Physics	Semester	II		
		Year	June 2024		
Time: 3 Hour Max. Marks : 70	• Start writing from 2nd page onwards; don't Write on the 1st Page Backside • Answer all Questions of Section A (Compulsory) • Answer Any Four out of Six of Section B • Answer Any Three out of Five of Section C • Possession of <u>Mobile Phone</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussion with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Paper(s)</u> .				
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating		
	K2 : Understanding	K4 : Analysing	K6 : Creating		

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N1	QUESTIONS	Marks	COs	KL
i	What vector must be added to the two vectors $\hat{i}-2\hat{j}+2\hat{k}$ and $2\hat{i}+\hat{j}-\hat{k}$ so that the resultant may be a unit vector along x -axis.	2	CO1	K3
ii	Convert 30°C into (i) degree Fahrenheit ($^{\circ}\text{F}$) and (ii) Kelvin(K)	2	CO2	K3
iii	what is a null vector and unit vector?	2	CO1	K2
iv	What is negative and positive work?	2	CO2	K2
v	Define isobaric process?	2	CO3	K1
vi	The resultant of two forces, one double the other in magnitude, is perpendicular to the smaller of the two forces. The angle between the two forces is?	2	CO1	K4
vii	Name two nonconvention sources of energy	2	CO5	K2
viii	What is the working principle of optical fibre	2	CO5	K3
ix	What is Poisson ratio?	2	CO4	K2
x	Explain Reynold's number?	2	CO4	K3

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 05 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	What is the difference between conduction convection and radiation? .	05	CO2	K2
3	Distinguish between streamline and turbulent flow?	05	CO4	K2
4	Distinguish between intrinsic and extrinsic semiconductors?	05	CO5	K3
5	What is surface tension and surface energy?	05	CO4	K2
6	State and proof Lami's theorem?	05	CO1	K2
7	why rain drops are spherical in shape when placed on a glass plate and the surface gets flattened when more drops are added to it?	05	CO4	K4

Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Draw and explain the stress strain curve?	10	CO4	K3
9	Discuss P-N Junction Diode? Explain its V-I Characteristics?	10	CO5	K1
10	Explain the working of a Ruby LASER	10	CO5	K2
11	State the four laws of thermodynamics?	10	CO3	K2
12	Derive ascent formula ?	10	CO4	K3

CO- Course Outcomes,

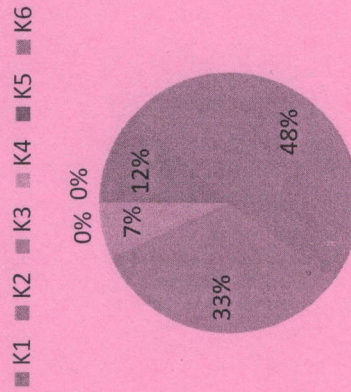
KL- Knowledge Level,

PO – Program Outcome

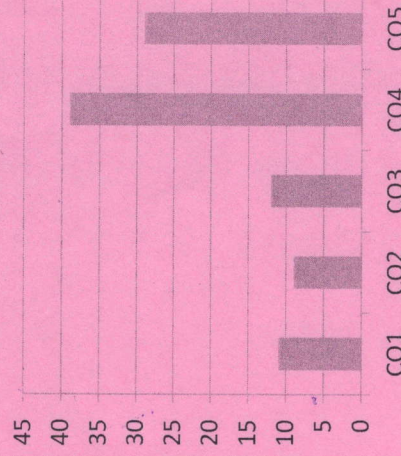
Course Outcomes	CO1	CO2	CO3	CO4	CO5
	Represent physical quantities as scalar and vectors and solve real life relevant problems	Define scientific work, energy and power and their units. Drive relationships for work, energy and power and solve related problems.	Compare and relate physical properties associated with linear motion and rotational motion and apply conservation of angular momentum principle to known problems.	Explain the phenomenon of surface tension, viscosity, fluid motion & Hooke's law, which helps to illustrate the properties of matter.	Apply the basic knowledge of semiconductors to illustrate the functioning of simple electronic devices & nano technology.

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Bloom's level wise marks distribution



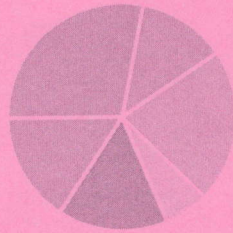
Course outcome wise marks distribution



CO1	Learn the different forms & type of communication.
CO2	Learn the writing formats and letter story.
CO3	Learn the Reading comprehension.
CO4	Learn Grammar and Vocabulary.
CO5	Learn Soft skills and Professional Excellence.

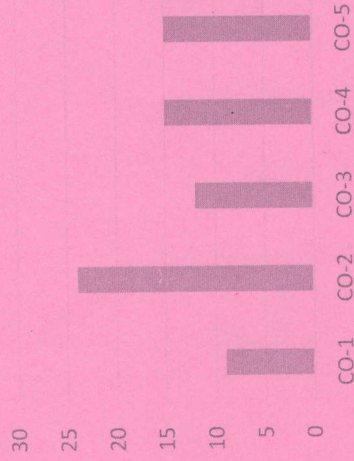
GRAFICAL REPRESENTATION

Bloom's Level Wise Marks Distribution



■ KL1 ■ KL2 ■ KL3 ■ KL4 ■ KL5 ■ KL6

Course Outcome wise Marks Distribution



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END SEM EXAMINATION
School of Engineering & IT

Branch

EEE & CSE

Program

Diploma

Subject Name

Communication Skills in English

Semester

II

Year

June 2024

• Start writing from 2nd page onwards; don't Write on the 1st Page Backside

• Answer all Questions of Section A (Compulsory)

• Answer Any Four out of Six of Section B

• Answer Any Three out of Five of Section C

• Possession of Mobile Phone or any kind of Written Material, Arguments with the Invigilator or Discussion with Co-Student will come under Unfair Means and will Result in the Cancellation of the Paper(s).

Time: 3 Hour

Max. Marks : 70

Knowledge Level (KL)

K1 : Remembering

K3 : Applying

K5 : Evaluating

K2 : Understanding

K4 : Analysing

K6 : Creating

Section A (Each question Carry 02 Marks from Q1-i to x – 20 Marks)

Q. N1	QUESTIONS	Marks	COs	KL
i	It is raining _____ (heavily/ tightly).	2	Co1	KL1
ii	Who is the receiver in the process of communication?	2	Co2	KL2
iii	Fill in the correct verb: Nobody _____ when he will arrive(know/knows)?	2	Co2	KL1
iv	Write the antonyms of the words: For & Imaginary.	2	Co3	KL3
v	Name the 3 Ps of speaking skills.	2	Co3	KL4
vi	Write the synonyms of the words: Encourage and Enlarge.	2	Co4	KL5
vii	Why communication skill is important?	2	Co2	KL2
viii	Mention any two qualities of a good leader.	2	Co5	KL4
ix	Name the author & publishing date of "Room on the Roof".	2	Co2	KL5
x	Name the protagonist of "Gift of Magi".	2	Co5	KL6

Section B (Answer any FOUR out of SIX) – 20 Marks**(Each question Carry 05 Marks)**

Q. No.	QUESTIONS	Marks	COs	KL
2	Write the meaning of these administrative terms in Hindi: Honourable, Governor, Census, Chief Minister, Prime Minister.	05	Co5	KL6
3	Why being 'courteous' is important in the process of communication?	05	Co2	KL3
4	Write down the format of formal letter.	05	Co1	KL2
5	Explain how 'choice of time' is important in the process of communication?	05	Co2	KL4
6	Write a short summary of the poem "Stopping by woods on a snowy evening".	05	Co3	KL2
7	Write a short note on "Self-Awareness".	05	Co3	KL5

Section C (Answer any THREE out of FIVE) – 30 Marks-**(Each question Carry 10 Marks)**

Q. No.	QUESTIONS	Marks	COs	KL
8	Explain any five types of Communication?	10	Co2	KL 3
9	Write an essay on the topic "Time Management".	10	Co2	KL 3
10	Write a letter to your class teacher requesting her to extend the submission date of your assignment.	10	Co1	KL 1
11	Explain why child marriage should be banned.	10	Co3	KL 4
12	Write the summary of the short story "Gift of Magi".	10	Co4	KL 4



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END SEM EXAMINATION
School of Engineering & IT

Branch	EEE & CSE	Program	Diploma
Subject Name	Applied Chemistry	Semester	II
		Year	June 2024
Time: 3 Hour Max. Marks : 70	<ul style="list-style-type: none"> Start writing from 2nd page onwards; <u>don't Write on the 1st Page Backside</u> Answer all Questions of Section A (Compulsory) Answer Any Four out of Six of Section B Answer Any Three out of Five of Section C Possession of <u>Mobile Phone</u> or any kind of <u>Written Material, Arguments with the Invigilator or Discussion with Co-Student</u> will come under <u>Unfair Means</u> and will <u>Result in the Cancellation of the Paper(s)</u>. 		
Knowledge Level (KL)	K1 : Remembering	K3 : Applying	K5 : Evaluating
	K2 : Understanding	K4 : Analysing	K6 : Creating

Section A (Each question Carry 02 Marks from Q1-i to x) – 20 Marks

Q. N 1	QUESTIONS	Marks	COs	KL
i	What is the subshell designation for each of the following cases a) $n = 3, l = 1$ b) $n = 4, l = 0$ c) $n = 2, l = 2$ d) $n = 1, l = 3$	2	CO1	K1
ii	Write the name of monomer of following compound: a. Teflon b. Polystyrene c. Nylon-6,6	2	CO3	K2
iii	Write the name of indicator used in alkalinity.	2	CO2	K2
iv	Difference between gangue and flux	2	CO3	K1
v	Distinguish between strong and weak electrolyte with example.	2	CO5	K3
vi	What is cloud and pour point?	2	CO4	K2
vii	Rusting of iron is quicker in saline water than in ordinary water.	2	CO5	K1
viii	Define BOD.	2	CO2	K1
ix	Define high calorific value.	2	CO4	K3
x	Define covalent bond with example.	2	CO1	K4

Section B (Answer any FOUR out of SIX) – 20 Marks
(Each question Carry 5 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
2	State Faraday's first law of electrolysis and derive the mathematical relation.	5	CO5	K3
3	Write a note on Pauli's exclusion principle. In what way does it help us to understand the electronic configuration in atoms?	5	CO1	K2
4	Write the composition and uses of Coal gas and Natural gas.	5	CO4	K4
5	Discuss about the Principal quantum number and Azimuthal quantum number?	5	CO1	K5
6	Write preparation, properties and uses of PVC, Polystyrene.	5	CO3	K4
7	Difference between thermosetting and thermoplastic polymer.	5	CO2	K1

Section C (Answer any THREE out of FIVE) – 30 Marks
(Each question Carry 10 Marks)

Q. No.	QUESTIONS	Marks	COs	KL
8	Discuss the extraction of iron from haematite on the basis of following point: a) Concentration of ore b) Calcination c) Smelting	10	CO2	K2
9	a) Explain the rusting of iron on the basis of electrochemical theory of corrosion. Discuss the mechanism of hydrogen evolution and oxygen absorption. b) Name various methods of corrosion control.	10	CO5	K3
10	Define fuel? Explain the classification of fuel along with suitable example. What are the characteristics of good fuel?	10	CO4	K1
11	a) Define alkalinity. How it is determined? Explain with calculating table of alkalinity of water. b) Degree of hardness.	10	CO3	K4
12	a) Explain the Rutherford's Model of atom. What is the main drawback of this model. b) B ₂ F ₂ molecule is linear, B ₂ Cl ₃ molecule is triangular, while CH ₄ molecule is tetrahedral in structure. How do you account this?	10	CO1	K3

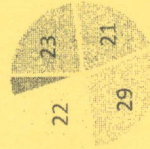
CO- Course Outcomes, KL- Knowledge Level, PO – Program Outcome

Course Outcomes	CO1	CO2	CO3	CO4	CO5
To appreciate the need and importance of engineering chemistry for industrial and domestic use.					
To gain the knowledge on existing and future upcoming materials used in device fabrication.					
To impart basic knowledge related to material selection and the techniques for material analysis.					
To impart knowledge of green chemical technology and its applications.					
To enhance the thinking capabilities in line with the modern trends in engineering and technology.					

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Bloom levelwise mark distribution

5 0



* K1 * K2 * K3 * K4 * K5 * K6

Course outcome wise mark distribution

