Code No: R22A0002 **R22**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Professional English

(ECE, CSE-CS, CSE-AIML & CSE-DS)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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		PART-A (10 Marks)	**BCLL**	**CO(s)**	**Marks**
1	A	Define homonyms mentioning an example.	**L1**	**CO-I**	**[1M]**
	B	Mention two differences between a formal and an informal letter.	**L2**	**CO-I**	**[1M]**
	C	What is a 'small talk'? Give an example.	**L1**	**CO-II**	**[1M]**
	D	What are a few situations where 'small talk' can be of use?	**L1**	**CO-II**	**[1M]**
	E	Define 'idiom'. Give an example.	**L2**	**CO-III**	**[1M]**
	F	Write the meaning of the idiom 'black sheep' and use it in a sentence.	**L3**	**CO-III**	**[1M]**
	G	Find out the alternative to replace the question mark. Ornithologist : Bird :: Meteorologist : ? a. Islands b. Weather c. Archaeology d. Aquatic	**L4**	**CO-IV**	**[1M]**
	H	Flow : River :: Stagnant : ? a. Rain b. Stream c. Pool d. Canal	**L4**	**CO-IV**	**[1M]**
	I	Define the technical term: acceleration	**L1**	**CO-V**	**[1M]**
	J	Define the technical term: nucleus	**L1**	**CO-V**	**[1M]**
		PART-B (50 Marks)			
		SECTION-I			
2	A	How was Sir Mokshagundam Visvesvaraya able to overcome all the challenges during the construction of the Krishna Raja Sagar Dam?	**L4**	**CO-I**	**[5M]**
	B	It is appropriate that the nation celebrates the birth anniversary of Visvesvaraya as the Engineers' Day. Justify.	**L4**	**CO-I**	**[5M]**
		OR			
3		What are the three different types of 'if/conditional clauses in English? Discuss their structure along with an example sentence each.	**L2**	**CO-I**	**[10 M]**

SECTION-II

4		Define finite and non-finite verbs in English along with 2 examples each. Identify the verbs in the sentences given either as 'finite or non-finite' and provide the justification. i. It took courage to *continue* after the accident. ii. They have *run* away together. iii. *Leaving* home can be very traumatic. iv. Katie was *watching* TV when the phone rang. v. Leave immediately when you are asked to do so.	**L2**	**CO-II**	**[10M]**
		OR			
5	A	Discuss the concepts of abbreviation, acronym and initialism with two examples each.	**L1**	**CO-II**	**[5M]**
	B	Small Talks are often described as conversation starters. Justify mentioning how they help people socialise.	**L4**	**CO-II**	**[5M]**

SECTION-III

6	A	Differentiate between an abstract and a precis.	**L4**	**CO-III**	**[5M]**
	B	Write an abstract for your proposed technical presentation.	**L6**	**CO-III**	**[5M]**
		OR			
7	A	Explain the meanings of the following idioms and use them in sentences. 1. call it a day 2. apple of my eye 3. hit the nail on the head 4. kill two birds with a stone 5. make a long story short	**L2**	**CO-III**	**[5M]**
	B	Elaborate on the positive body language required for a presentation.	**L2**	**CO-III**	**[5M]**

SECTION-IV

8	A	What are the positive qualities that made Zhou Qunfei lovable to everyone?	**L1**	**CO-IV**	**[5M]**
	B	What is the connection between the emerging smartphone industry and the success of Zhou Qunfei as an entrepreneur?	**L4**	**CO-IV**	**[5M]**
		OR			
9	A	What is the importance of the 'career objective' sentence in a resume? Write your career objective in the resume that you are preparing for your first job.	**L6**	**CO-IV**	**[5M]**
	B	Discuss in detail the main sections of a resume and their contents.	**L2**	**CO-IV**	**[5M]**

SECTION-V

10	A	Identify the errors in the use of prepositions and rewrite the full sentences correcting them. 1. He is married to foreign woman. 2. This is a comfortable house to live. 3. I pitied on him. 4. The workers asked a holiday. 5. The property was distributed between the three siblings.	**L3**	**CO-V**	**[5M]**

	B	What are some techniques to be followed in group discussions for making your participation more effective?	**L2**	**CO-V**	**[5M]**
		OR			
11	A	Write brief notes on the following formats of the reports: 1. Memo Format 2. Letter Format 3. Manuscript Format	**L1**	**CO-V**	**[5M]**
	B	Write a short report in the memo format on a technical event conducted in your department.	**L1**	**CO-V**	**[5M]**

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R22

Code No: R22A0024

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Mathematics-II

(Common to all branches)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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			BCLL	CO(s)	Marks
		PART-A (10 Marks)			
		(Write all answers of this part at one place)			
1	A	Define Interpolation	**L1**	**CO-I**	**[1M]**
	B	Write the normal equations for the parabola $y = a + bx + cx^2$	**L1**	**CO-I**	**[1M]**
	C	Evaluate $\int_0^1 x^3 \, dx$ by Trapezoidal rule (taking n=4)	**L3**	**CO-II**	**[1M]**
	D	Write the Euler's modified method formula	**L1**	**CO-II**	**[1M]**
	E	Form the partial differential equation by eliminating the arbitrary function from $z = f(x^2 + y^2)$	**L3**	**CO-III**	**[1M]**
	F	Solve $z = px + qy + p^2 - q^2$	**L3**	**CO-III**	**[1M]**
	G	Evaluate $\int_0^2 \int_0^x y \, dy \, dx$	**L5**	**CO-IV**	**[1M]**
	H	Evaluate $\int_0^1 \int_0^1 \int_0^1 xyz \, dx \, dy \, dz$	**L5**	**CO-IV**	**[1M]**
	I	If $\bar{F} = x\bar{i} + y\bar{j} + z\bar{k}$, then find $div\ \bar{F}$	**L5**	**CO-V**	**[1M]**
	J	State Gauss Divergence theorem	**L1**	**CO-V**	**[1M]**
		PART-B (50 Marks)			
		SECTION-I			
2		Using Gauss backward difference formula, find y(8) from the following data:	**L3**	**CO-I**	**[10M]**

x	0	5	10	15	20	25
y	7	11	14	18	24	32

OR

3	A	Using Newton's backward interpolation formula find the population for the year 1976				**L5**	**CO-I**	**[5M]**	

Year	1941	1951	1961	1971	1981	1991
Population in lakhs	12	15	20	27	39	52

	B	Obtain a relation of the form $y = ab^x$ for the following data by the method of least squares				**L3**	**CO-I**	**[5M]**	

x	1	2	3	4
y	6	11	18	27

SECTION-II

4		Find a real root of the equation $f(x) = x^3 - x - 1 = 0$ using bisection method	**L5**	**CO-II**	**[10M]**
		OR			
5	A	Evaluate $\int_0^6 \frac{1}{1+x^2}\,dx$ by using simpson's $\frac{1}{3}$ rule	**L3**	**CO-II**	**[5M]**
	B	Solve $\frac{dy}{dx} = x + y + xy,\ y(0)$ for $y(0.1)$ by taking $h = 0.025$ using Euler's method	**L3**	**CO-II**	**[5M]**

SECTION-III

6	A	Solve $p \tan x + q \tan y = \tan z$	**L5**	**CO-III**	**[5M]**
	B	Solve $\frac{\partial u}{\partial x} = 2\frac{\partial u}{\partial t} + u$ where u(x, 0) = 6 e^{-3x} by method of separation of variables	**L3**	**CO-III**	**[5M]**
		OR			
7	A	Solve $x(y-z)p + y(z-x)q = z(x-y)$	**L5**	**CO-III**	**[5M]**
	B	Solve $p^2 + q^2 = x + y$ by Charpit's method	**L3**	**CO-III**	**[5M]**

SECTION-IV

8	A	Change the order of integration in $\int_{-a}^{a}\int_{0}^{\sqrt{a^2-y^2}} f(x,y)\,dxdy$	**L3**	**CO-IV**	**[5M]**
	B	Evaluate $\iint r^3 dr\,d\theta$ over the area included between the circles $r = 2\sin\theta$ and $r = 4\sin\theta$	**L5**	**CO-IV**	**[5M]**
		OR			
9		Find the area of the region bounded by the parabolas $y^2 = 4ax$ and $x^2 = 4ay$	**L5**	**CO-IV**	**[10M]**

SECTION-V

10	A	Find *div F* and *curl F* where $F = grad\left(x^3 + y^3 + z^3 - 3xyz\right)$	**L3**	**CO-V**	**[5M]**
	B	Find the angle between two surfaces $x^2 + y^2 + z^2 = 9$ and $z = x^2 + y^2 - 3$ at (2, -1, 2)	**L3**	**CO-V**	**[5M]**
		OR			
11		Verify Stokes theorem for $\bar{F} = (x^2 + y^2)\bar{\imath} - 2xy\bar{\jmath}$ taken round the rectangle bounded by the lines $x = \pm a, y = 0, y = b$	**L3**	**CO-V**	**[10M]**

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R22

Code No: R22A0021

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Applied Physics

(CSE,CSE-AIML & CSE-DS)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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		PART-A (10 Marks) **(Write all answers of this part at one place)**	**BCLL**	**CO(s)**	**Marks**
1	A	Why do we need pumping in lasers	**L4**	**CO-I**	**[1M]**
	B	Calculate the acceptance angle of an optical fiber, if the refractive indices of core and cladding are 1.564 and 1.498 respectively	**L5**	**CO-I**	**[1M]**
	C	What are matter waves	**L1**	**CO-II**	**[1M]**
	D	What is the ratio of first and fourth excited energy states of a particle in potential box	**L3**	**CO-II**	**[1M]**
	E	Explain the term periodic potential	**L2**	**CO-III**	**[1M]**
	F	Draw the energy band diagram in case of metals	**L3**	**CO-III**	**[1M]**
	G	Give the examples of pentavalent impurities	**L2**	**CO-IV**	**[1M]**
	H	Illustrate how Fermi level varies with temperature in N-type semiconductor	**L6**	**CO-IV**	**[1M]**
	I	Define electric displacement vector?	**L3**	**CO-V**	**[1M]**
	J	What is the main difference of soft and hard magnetic materials	**L2**	**CO-V**	**[1M]**
		PART-B (50 Marks) **SECTION-I**			
2	A	Explain the construction and working of He-Ne gas laser.	**L2**	**CO-I**	**[6M]**
	B	List Five applications of lasers in different fileds	**L3**	**CO-I**	**[4M]**
		OR			
3	A	Explain the structure of an optical fiber with a neat sketch	**L2**	**CO-I**	**[4M]**
	B	Derive an expression for Numerical aperture and acceptance angle of an optical fiber	**L5**	**CO-I**	**[6M]**
		SECTION-II			
4	A	Explain Davission-Germer experiment that verifies wave nature of electron.	**L5**	**CO-II**	**[8M]**
	B	Find the lowest energy, first and second excited state energy of an electron confined in a box of side 1nm each	**L5**	**CO-II**	**[2M]**

		OR			
5	A	Deduce the 1-Dimensional time independent Schrodinger's wave equation for an electron	**L5**	**CO-II**	**[6M]**
	B	Explain the physical significance of wave function	**L2**	**CO-II**	**[4M]**
		SECTION-III			
6	A	Explain the formation of energy bands in solids	**L2**	**CO-III**	**[5M]**
	B	Distinguish metals, semiconductors and insulators on the basis of band theory of solids	**L3**	**CO-III**	**[5M]**
		OR			
7	A	Draw & Explain E-K diagram	**L2**	**CO-III**	**[4M]**
	B	Explain the concept of effective mass of an electron & derive an expression for it	**L2**	**CO-III**	**[6M]**
		SECTION-IV			
8	A	Explain the formation PN junction	**L2**	**CO-IV**	**[4M]**
	B	Explain the Hall Effect. Derive the Equation for Hall coefficient	**L4**	**CO-IV**	**[6M]**
		OR			
9	A	Derive an expression for carrier concentration of electrons in N-type semiconductor	**L3**	**CO-IV**	**[5M]**
	B	Explain the construction and working of LED	**L2**	**CO-IV**	**[5M]**
		SECTION-V			
10	A	Define electronic, ionic and orientation polarization mechanisms	**L1**	**CO-V**	**[4M]**
	B	Derive an expression for ionic polarizability	**L3**	**CO-V**	**[6M]**
		OR			
11	A	Explain the concept of domain theory of ferro magnetism	**L2**	**CO-V**	**[5M]**
	B	Draw & Explain the B-H curve of ferromagnetic materials	**L4**	**CO-V**	**[5M]**

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R22

Code No: R22A0022

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Engineering Chemistry

(CSE, CSE-AIML, CSE-DS & B.Tech-AIML)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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			BCLL	CO(s)	Marks
		PART-A (10 Marks)			
		(Write all answers of this part at one place)			
1	A	What are the applications of batteries?	**L1**	**CO-I**	**[1M]**
	B	How will you represent the quinhydrone electrode?	**L1**	**CO-I**	**[1M]**
	C	List out any two effects of corrosion.	**L1**	**CO-II**	**[1M]**
	D	Define passivity.	**L1**	**CO-II**	**[1M]**
	E	Write the preparation method for nylon - 6,6?	**L2**	**CO-III**	**[1M]**
	F	Classify the different types of conducting polymers.	**L2**	**CO-III**	**[1M]**
	G	Give two examples for shape memory alloys.	**L2**	**CO-IV**	**[1M]**
	H	What is the principle involved in CVD method of synthesis of nano materials.	**L3**	**CO-IV**	**[1M]**
	I	Why hardness expressed in terms of $CaCO_3$ equivalents.	**L2**	**CO-V**	**[1M]**
	J	What is meant by disinfection ?	**L1**	**CO-V**	**[1M]**
		PART-B (50 Marks)			
		SECTION-I			
2	A	Write down the mathematical representation of Nernst equation and mention its applications?	**L2**	**CO-I**	**[5M]**
	B	Explain the method of determining pH of unknown solution by using calomel electrode.	**L3**	**CO-I**	**[5M]**
		OR			
3	A	What do you understand by electrochemical series? Give its important features and applications.	**L2**	**CO-I**	**[5M]**
	B	Explain the working function and applications of Pb-acid battery by mentioning detailed chemical equations.	**L3**	**CO-I**	**[5M]**
		SECTION-II			
4		Discuss all the possible mechanism of WET corrosion involved in wet or galvanic corrosion..	**L2**	**CO-II**	**[10M]**
		OR			
5	A	Explain the corrosion control method to protect ship hulls from corrosion.	**L3**	**CO-II**	**[5M]**

	B	Discuss Nickel electroless plating and mention its advantages.	**L2**	**CO-II**	**[5M]**
		SECTION-III			
6	A	Differentiate thermoplastic and thermosetting polymers.	**L3**	**CO-III**	**[5M]**
	B	Explain the preparation method and applications for Teflon and PVC.	**L3**	**CO-III**	**[5M]**
		OR			
7	A	What are conducting polymers? Discuss the mechanism of conducting polymers of poly acetylene.	**L3**	**CO-III**	**[5M]**
	B	Explain the importance of bio degradable polymers.	**L3**	**CO-III**	**[5M]**
		SECTION-IV			
8	A	Explain the method of synthesis of nano materials using sol-gel process	**L3**	**CO-IV**	**[5M]**
	B	Write a note on applications of nano materials.	**L2**	**CO-IV**	**[5M]**
		OR			
9	A	Discuss the concept of carbon nano tubes and explore its applications.	**L2**	**CO-IV**	**[5M]**
	B	What are smart materials? Make a note on classification of smart materials and comment on its application.	**L2**	**CO-IV**	**[5M]**
		SECTION-V			
10	A	Calculate the amount of temporary and permanent hardness of a water sample which contain following impurity $Ca(HCO_3)_2$=121.5ppm, $Mg(HCO_3)_2$=116.8ppm, $CaSO_4$=102ppm	**L4**	**CO-V**	**[5M]**
	B	Explain the internal treatment of boiled feed water.	**L3**	**CO-V**	**[5M]**
		OR			
11	A	Describe the Ion exchange process for softening of hard water with appropriate reactions and diagram.	**L3**	**CO-V**	**[5M]**
	B	What is caustic embrittlement? Discuss reasons and prevention methods for caustic embrittlement.	**L2**	**CO-V**	**[5M]**

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Code No: R22A0201 **R22**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Principles of Electrical and Electronics Engineering

(EEE, ME, ECE, IT, AE, CS&IT, CSE-CS & CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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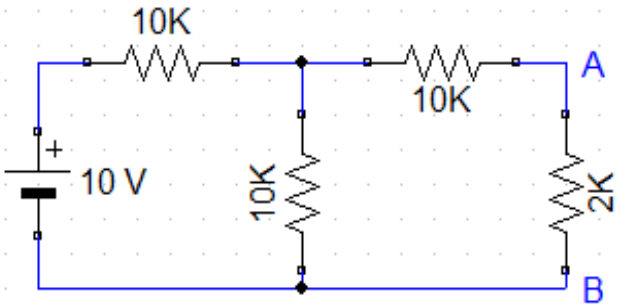
		PART-A (10 Marks) **(Write all answers of this part at one place)**	**BCLL**	**CO(s)**	**Marks**
1	A	List Basic elements of electrical circuits.	**L1**	**CO-I**	**[1M]**
	B	Give the statement of Kirchhoff's Voltage Law.	**L1**	**CO-I**	**[1M]**
	C	Define form factor.	**L1**	**CO-II**	**[1M]**
	D	Write the relation between Maximum value and RMS value.	**L2**	**CO-II**	**[1M]**
	E	What is the function of transformer?	**L1**	**CO-III**	**[1M]**
	F	List the parts of DC machine.	**L1**	**CO-III**	**[1M]**
	G	Draw the VI characteristics of PN junction diode in forward bias mode.	**L1**	**CO-IV**	**[1M]**
	H	Draw the output wave form full wave rectifier.	**L3**	**CO-IV**	**[1M]**
	I	Define BJT?	**L2**	**CO-V**	**[1M]**
	J	Draw the symbol of MOSFET.	**L1**	**CO-V**	**[1M]**
		PART-B (50 Marks) **SECTION-I**			
2	A	Explain about Mesh analysis.	**L2**	**CO-I**	**[5M]**
	B	Give the statement of Norton's theorem and explain about it with an example	**L2**	**CO-I**	**[5M]**
		OR			
3	A	State thevenin's theorem	**L1**	**CO-I**	**[2M]**
	B	Apply Thevenin's theorem to find Thevenin's equivalent circuit. Between the nodes A-B	**L3**	**CO-I**	**[8M]**



SECTION-II

4	A	Define following terms a) Instantaneous value b) Cycle c) Time period	**L2**	**CO-II**	**[5M]**
	B	Analyse R circuit with necessary diagrams and equations.	**L4**	**CO-II**	**[5M]**
		OR			
5	A	Compare three phase system with single phase system	**L3**	**CO-II**	**[5M]**
	B	Derive the relation between line current and phase current in delta connected three phase system	**L3**	**CO-II**	**[5M]**

SECTION-III

6	A	Describe the operation and working principle of DC Generator.	**L2**	**CO-III**	**[5M]**
	B	Derive the torque equation of DC motor there by relate Gross and shaft torques	**L3**	**CO-III**	**[5M]**
		OR			
7	A	Explain the working principle of DC motor.	**L2**	**CO-III**	**[5M]**
	B	Explain the working principle of transformer.	**L2**	**CO-III**	**[5M]**

SECTION-IV

8	A	What is the most important working of a normal PN junction diode? And explain its working with neat circuit diagram (one device).	**L2**	**CO-IV**	**[5M]**
	B	Explain the difference between avalanche breakdown and zener breakdown	**L2**	**CO-IV**	**[5M]**
		OR			
9	A	Explain the operation of half wave rectifier with relevant circuit diagram waveforms.	**L2**	**CO-IV**	**[5M]**
	B	Derive the equations of efficiency and ripple factor for half wave rectifier.	**L3**	**CO-IV**	**[5M]**

SECTION-V

10	A	Describe the Construction and Principle of Operation of N-P-N transistor	**L3**	**CO-V**	**[5M]**
	B	Describe the operation of BJT in common Emitter mode bias.	**L3**	**CO-V**	**[5M]**
		OR			
11	A	With a neat diagram, explain the working of n-channel MOSFET in enhancement mode.	**L2**	**CO-V**	**[5M]**
	B	Describe the construction and operation of p-channel MOSFET in enhancement mode.	**L3**	**CO-V**	**[5M]**

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R22

Code No: R22A0301

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Computer Aided Engineering Graphics

(EEE, ME, ECE, AE, CS&IT & CSE-CS)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains
f 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 12 marks.

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SECTION-I

1	A	Construct a regular heptagon with a side of 30mm by general method.	**L1**	**CO-I**	**[6M]**
	B	Draw a line AB 80mm long and divide it into five equal parts.	**L1**	**CO-I**	**[6M]**
		OR			
2	A	Construct a regular hexagon with a side of 30mm with inscribe circle method.	**L1**	**CO-I**	**[6M]**
	B	Inscribe an ellipse in a rectangle having sides of 150mm and 100mm long.	**L2**	**CO-I**	**[6M]**

SECTION-II

3	A	A Point D is 25mm below the HP and 25mm behind the VP and Point B, on the H.P. and 40mm infront of the V.P. Draw its projections.	**L2**	**CO-II**	**[6M]**
	B	A line of length 70 mm is parallel and 20 mm in front of VP and 30 mm above HP . It is also inclined at 45° to HP and one end is on it. Draw its projections.	**L3**	**CO-II**	**[6M]**
		OR			
4		A line PQ has its end P 15 mm above HP and 10 mm infront of VP. The end Q is 55 mm above HP and the line is inclined at 35^o to HP. The distance between the ends projectors of the line when measured parallel to the line of intersection of HP and VP is 50 mm. Draw the projections of the line and find its true length and true inclination with VP.	**L4**	**CO-II**	**[12M]**

SECTION-III

5		A line PQ inclined at an angle of 30^0 to the HP has ends P and Q 30 mm and 65 mm in front of the VP, respectively. The length of the top view is 60 mm and its HT is 15 mm in front of the VP. Draw the projections of the line PQ and determine its true length and the VT.	**L3**	**CO-III**	**[12M]**

OR

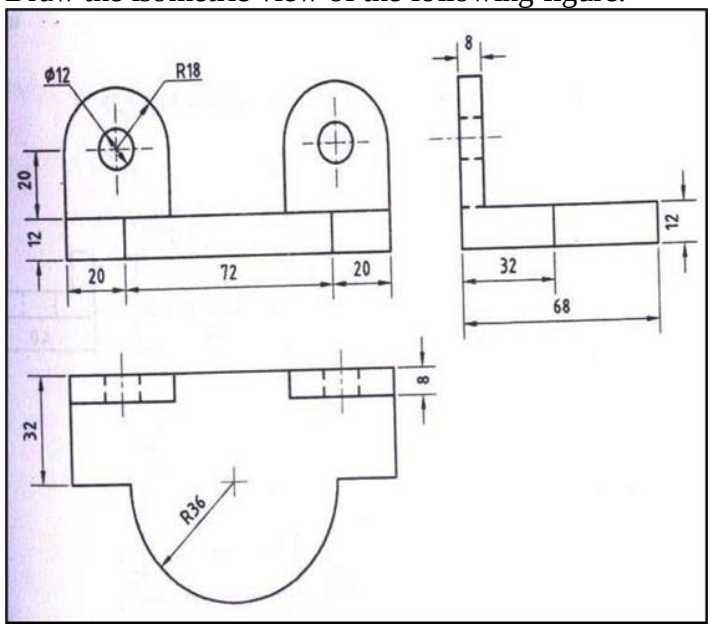
6		A pentagonal pyramid of base side 30 mm and axis 55 mm and base on HP its axis is perpendicular to the H.P. Axis is inclined at 30^0 to the HP. Draw its projections.	**L4**	**CO-III**	**[12M]**

SECTION-IV

7	***A***	Draw the isometric view of a square of side 40 mm kept in Horizontal and Vertical Positions.	**L4**	**CO-IV**	**[6M]**
	B	Draw the isometric view of a hexagon of side 30 mm whose surface is parallel to the V.P. and a side perpendicular to the H.P.	**L4**	**CO-IV**	**[6M]**
		OR			
8	***A***	Draw the isometric view of a Circle (Isocircle) with a 60mm Diameter on all three Principle Planes	**L5**	**CO-IV**	**[6M]**
	B	Draw the isometric view of a pentagon of side 30 mm whose surface is parallel to the V.P. and a side perpendicular to the H.P.	**L4**	**CO-IV**	**[6M]**

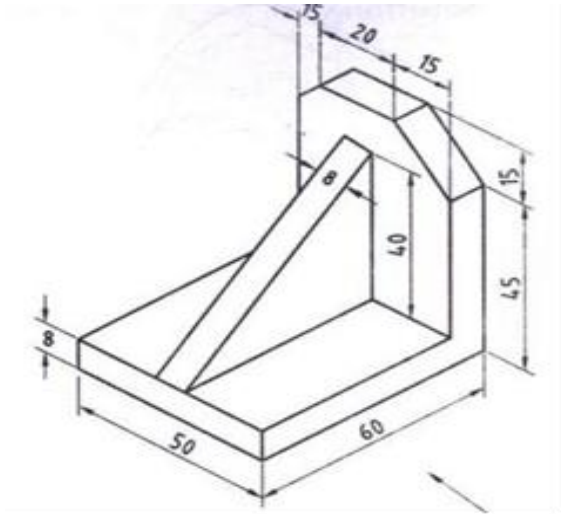
SECTION-V

9	Draw the isometric view of the following figure.	**L5**	**CO-V**	**[12M]**



OR

10	From the given figure draw Front View, Top View & Left Side View.	**L6**	**CO-V**	**[12M]**



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R22

Code No: R22A0502

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Supplementary Examinations, January 2025

Python Programming

(Common to all branches)

Roll No										

Time: 3 hours **Max. Marks: 60**

Note: This question paper contains two parts A and B
Part A is compulsory which carries 10 marks and Answer all questions.
Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 10 marks.

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		PART-A (10 Marks) **(Write all answers of this part at one place)**	**BCLL**	**CO(s)**	**Marks**
1	A	List out any two python features.	**L3**	**CO-I**	**[1M]**
	B	What is tuple? Give an example.	**L1**	**CO-I**	**[1M]**
	C	Write the difference between List and Turple.	**L2**	**CO-II**	**[1M]**
	D	Define the membership operator. Give an Example.	**L1**	**CO-II**	**[1M]**
	E	What is slicing in strings?	**L1**	**CO-III**	**[1M]**
	F	How does NumPy array work?	**L4**	**CO-III**	**[1M]**
	G	Why use lambda instead of functions?	**L3**	**CO-IV**	**[1M]**
	H	Give an example of the keyword argument.	**L2**	**CO-IV**	**[1M]**
	I	Write the main differences between a logical error and syntax error?	**L2**	**CO-V**	**[1M]**
	J	List out the types of exceptions.	**L3**	**CO-V**	**[1M]**
		PART-B (50 Marks)			
		SECTION-I			
2	A	What are the features of Python?	**L1**	**CO-I**	**[5M]**
	B	Briefly explain the list. Give an example.	**L2**	**CO-I**	**[5M]**
		OR			
3	A	With suitable examples discuss any 5 built-in functions on strings?	**L2**	**CO-I**	**[5M]**
	B	Explain sets and dictionaries.	**L2**	**CO-I**	**[5M]**
		SECTION-II			
4	A	Write a program to display following structure given below : 1 2 2 3 3 3 4 4 4 4 5 5 5 5 5	**L6**	**CO-II**	**[5M]**

	B	Explain the conditional control statements. Give an example.	**L3**	**CO-II**	**[5M]**
		OR			
5	A	Explain various types of looping statements in python.	**L2**	**CO-II**	**[5M]**
	B	Write a program to display all the elements before number 99.	**L6**	**CO-II**	**[5M]**
		SECTION-III			
6	A	Define array ? Explain how to import an create an array with examples	**L5**	**CO-III**	**[5M]**
	B	Distinguishing between array indexing and array slicing.	**L2**	**CO-III**	**[5M]**
		OR			
7		Explain numpy methods and attributes with suitable example	**L1**	**CO-III**	**[10M]**
		SECTION-IV			
8		Explain about local and global scope of variables in python with an example?	**L3**	**CO-IV**	**[10M]**
		OR			
9	A	List and explain Python function arguments.	**L2**	**CO-IV**	**[5M]**
	B	Explain powerful lambda functions with examples.	**L2**	**CO-IV**	**[5M]**
		SECTION-V			
10	A	Explain any 5 exceptions that could occur in code with suitable examples?	**L4**	**CO-V**	**[5M]**
	B	Explain file modes in python with example.	**L2**	**CO-V**	**[5M]**
		OR			
11	A	Explain exception handling in python with example.	**L2**	**CO-V**	**[5M]**
	B	Write a python program to open and write the content to file and read it.	**L6**	**CO-V**	**[5M]**

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