Code No: R22A0002

R22

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Regular Examinations, August 2023

Professional English

(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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			Marks
		PART-A (10 Marks)	
		(Write all answers of this PART at one place)	
1	A	What are homographs?	**[1M]**
	B	Give an example pair of words for homonyms along with the difference of meaning.	**[1M]**
	C	What is finite verb? Give two examples.	**[1M]**
	D	Use the two examples of finite verbs in your sentences,	**[1M]**
	E	Define an idiom. Give an example.	**[1M]**
	F	Convert the following complex sentence into a simple sentence. 'Birds which have same feather flock together.'	**[1M]**
	G	Define 'modal verbs' and give an example.	**[1M]**
	H	A face-to-face conversation is much easier to follow than a telephonic conversation. Justify.	**[1M]**
	I	The industrialist distributed his property between the four children. (Correct the error in the preposition)	**[1M]**
	J	I have watched the movie last night. (Correct the error in the tense form)	**[1M]**
		PART-B (50 Marks)	
		SECTION-I	
2	A	Briefly discuss the challenges faced by Visvesvaraya during the construction of Krishna Raja Sagar Dam.	**[5M]**
	B	Evaluate great qualities that you can observe from Visvesvaraya's life and career.	**[5M]**
		OR	
3	A	Explain the types of if –clauses with at least two examples per each	**[5M]**
	B	Complete the following type I if-clause sentences.	**[5M]**
		i. If it (rain) _____, we (stay) _____ at home. ii. If you (know/not) _____ the way, I (pick) _____ you up. iii. My mum (bake) _____ a cake if you (come) _____ to see us. iv. If one (go) _____ to Ireland, one (need) _____ a raincoat. v. I (write) _____ to you if you (give) _____ me your address.	
		SECTION-II	
4	A	Identify the following words either as **abbreviations** or **acronyms**. 1. NASA 2. USA 3. LASER 4. attn. 5. UNESCO 6. St. 7. Dept. 8. Dr. 9. cm 10. PIN	**[5M]**
	B	Discuss the concepts of abbreviations, acronyms and initialism with relevant examples.	**[5M]**

OR

5 A What are the essential components of formal/business letter? **[5M]**

B Write a short note on Full Block Format of a letter along with its essential features. **[5M]**

SECTION-III

6 A Differentiate between an abstract and a precis. **[5M]**

B Write an abstract for your proposed technical presentation. **[5M]**

OR

7 A Explain the meanings of the following idioms and use them in sentences. **[5M]**

1. pull someone's leg 2. sit on the fence 3.once in a blue moon 4. come rain or shine 5. spill the beans

B Elaborate on the positive body language required for a presentation. **[5M]**

SECTION-IV

8 A Choose the correct alternative from the given choices having the same relationship with this word as the words of the other pair**. Also, write a sentence for each answer explaining the relationship.** **[5M]**

1. lemon : _____ :: chocolate : sweet
   a. citrus b. tart c. lure d. sauce
2. mean : average :: kind : _____
   a. hurtful b. meaning c. variety d. kindness
3. often : seldom :: ancient : _____
   a. old b. current c. round d. mixed
4. abandon : reclaim :: abate : _____
   a. abolish b. debate c. rise d. level
5. whole : _____ :: hole : pit
   a. pittance b. whale c. donut d. sum

B Fill in the blank with the correct auxiliary verb from the choices provided. **[5M]**

1. What _____ the students doing when you entered the class. (was, were, are)
2. Sarala _____ always wanted to try skydiving. (has, is, have)
3. What _____ you do during your summer vacation? (are, did, does)
4. Ashwin _____ going to be upset when he hears what happened. (will, don't, is)
5. I _____ appreciate his jokes. They weren't funny. (been, didn't, haven't)

OR

9 A Discuss any two types of resumes along with the various sections/components. **[5M]**

B Compose your resume including all the necessary sections/components. **[5M]**

SECTION-V

10 A Define the following technical terms and use them in your sentences. **[5M]**

1. radiation 2. acceleration 3. elasticity 4. absorption 5. Epidemic

B What are the different qualities assessed in the participants during their participation in group discussions. **[5M]**

OR

11 A Define the concept of 'a report'. What are the types of reports based on the subject of the report and the purpose it is meant for? **[4M]**

B Write short notes on the following formats of the reports:

1. Memo Format **[2M]**
2. Letter Format **[2M]**
3. Manuscript Format **[2M]**

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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 Regular Examinations, August 2023

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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PART-A (10 Marks) **Marks**

(Write all answers of this PART at one place)

1 A Write Lagrange's interpolation formula for unequally spaced values of x **[1M]**

B Write the normal equations for the parabola $y = a + bx + cx^2$ **[1M]**

C Write formula for Simpson's $\frac{3}{8}$ Rule to find Integration **[1M]**

D Write Euler's formula **[1M]**

E Solve $z = px + qy + p^2q^2$ **[1M]**

F Form the partial differential equation by eliminating the arbitrary function from $z = f(x^2 + y^2)$ **[1M]**

G Evaluate $\int_{y=0}^{2}\int_{x=0}^{3} xydxdy$ **[1M]**

H Evaluate $\int_{0}^{\infty}\int_{0}^{\infty} e^{-(x^2+y^2)}dxdy$ by changing to polar coordinates **[1M]**

I If $\bar{F} = x\bar{i} + y\bar{j} + z\bar{k}$, then find $div\ \bar{F}$ **[1M]**

J State Green's Theroem. **[1M]**

PART-B (50 Marks)

SECTION-I

2 A Using Gauss forward formula find the population in 1935 **[5M]**

Year	1930	1932	1934	1936	1938	1940
Population in crores	12	16	21	27	32	40

B Fit a straight line y=a+bx to the following data **[5M]**

x	0	1	2	3	4
y	1	1.8	3.3	4.5	6.3

OR

3 A Apply Lagrange's formula to obtain the polynomial $f(x)$, given that **[5M]**
$f(0) = 4,\ f(1) = 3,\ f(4) = 24$ and $f(5) = 39$

B Find the curve of best fit of the type $y = ae^{bx}$ to the following data the method of least squares **[5M]**

x	2	4	6	8	10
y	4.077	11.084	30.128	81.897	222.62

SECTION-II

4 A Find the root of the equation $x^3 - 5x + 1 = 0$ using the Bisection method in 5 stages. **[5M]**

B Using Taylor's series method, find y for $x = 0.1,\ 0.2,\ 0.3$ given that **[5M]**

$$\frac{dy}{dx} = x^2 - y,\ y(0) = 1$$

OR

5 Find $y(0.1)$ and $y(0.2)$ by using Runga-Kutta fourth order formula, Given that **[10M]**

$$\frac{dy}{dx} = xy + y^2,\ \ y(0) = 1$$

SECTION-III

6 A Form the partial differential equation by eliminating the arbitrary functions f *and* g from $z = f(x+at) + g(x-at)$ **[5M]**

B Solve $(y-z)\,p + (x-y)\,q = z - x$ **[5M]**

OR

7 Using the method of separation of variables, solve $\frac{\partial u}{\partial x} = 2\frac{\partial u}{\partial t} + u$ where **[10M]**

$u(x, 0) = 6e^{-3x}$

SECTION-IV

8 A Evaluate by Change of order of integration in $\int_{-a}^{a}\int_{0}^{\sqrt{a^2-y^2}} dxdy$ **[5M]**

B Find the area of the region bounded by the parabolas $y^2 = 4ax$ and $x^2 = 4ay$ **[5M]**

OR

9 Evaluate $\iiint_V (xy + yz + zx)\,dx\,dy\,dz$ where V is the region of space bounded by **[10M]**

$x = 0, x = 1, y = 0, y = 2, z = 0, z = 3$

SECTION-V

10 A Find the directional derivative of $\phi = xy^2 + yz^2$ at the point $(2, -1, 1)$ in the direction of the vector $\hat{i} + 2\,\hat{j} + 2\,\hat{k}$ **[5M]**

B Find *div F* and *curl F* where $F = grad\left(x^3 + y^3 + z^3 - 3xyz\right)$ **[5M]**

OR

11 Verify Stokes theorem for $\overline{F} = (x^2 + y^2)\,\hat{i} - 2xy\,\hat{j}$ taken round the rectangle bounded by $x = \pm a,\ y = 0,\ y = b.$ **[10M]**

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R22

Code No: R22A0201

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

I B.Tech II Semester Regular Examinations, August 2023

Principles of Electrical and Electronics Engineering

(EEE, 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) **Marks**

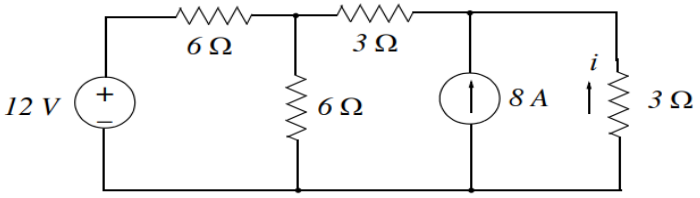
(Write all answers of this PART at one place)

1	A	State Kirchhoff's Voltage Law and Kirchhoff's Current Law.	**[1M]**
	B	State Norton theorem.	**[1M]**
	C	Define peak factor.	**[1M]**
	D	What is the relation between phase voltage and a line voltage of three phase delta connected system.	**[1M]**
	E	What is fleming's right hand rule.	**[1M]**
	F	What is back EMF.	**[1M]**
	G	List the applications of zener diode.	**[1M]**
	H	State the drawbacks of half wave rectifier.	**[1M]**
	I	Draw the circuit symbol of NPN transistor.	**[1M]**
	J	Draw the symbol of MOSFET.	**[1M]**

PART-B (50 Marks)

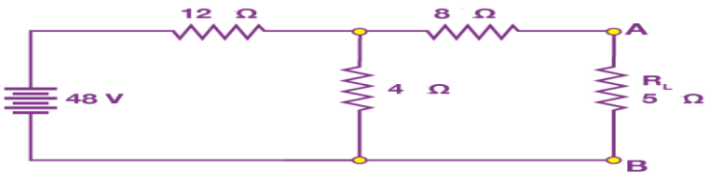
SECTION-I

2		Find the value of the current i in the circuit by using nodal analysis.	**[10M]**



OR

3		Find current flowing through the 5Ω in the circuit below using Norton's Theorem.	**[10M]**



SECTION-II

4		Determine the form factor and peak factor of the pure sine wave.	**[10M]**
		OR	
5	A	Analyze the Pure R circuit connected with an AC voltage source	**[5M]**
	B	Three loads, each of resistance 30Ω, are connected in star to a 415 V, 3-phase supply. Determine (a) the system phase voltage, (b) the phase current and (c) the line current.	**[5M]**

SECTION-III

6		Explain the construction of DC Generator with neat diagram.	**[10M]**
		OR	
7	A	Derive the torque equation of DC motor explain the significance of it.	**[5M]**
	B	A 6600/440V, single phase 600kVA transformer has 1200 primary turns. Find (i) Transformation ratio, (ii) Secondary turns, (iii)Voltage/turn, (iv)Secondary current when it supplies a load of 400kW at 0.8pf lagging.	**[5M]**

SECTION-IV

8	A	Explain the construction and operation of a P-N junction diode.	**[5M]**
	B	*Draw the V-I characteristics of* a P-N junction diode.	**[5M]**
		OR	
9	A	Draw and explain the half wave rectifier circuit and waveforms.	**[5M]**
	B	Derive the average value and RMS value of output voltage waveform of a half wave rectifier.	**[5M]**

SECTION-V

10	A	Draw the circuit and explain the characteristics of CB configuration.	**[5M]**
	B	Draw the circuit and explain the characteristics of CE configuration.	**[5M]**
		OR	
11	A	Draw the circuit and explain the drain characteristics of a JFET.	**[5M]**
	B	Explain construction and operation of JFET.	**[5M]**

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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 Regular Examinations, August 2023

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) **Marks**

(Write all answers of this PART at one place)

1	A	What are the features of Python Programming Language?	**[1M]**
	B	Distinguish between List and Tuple.	**[1M]**
	C	List different conditional statements in python.	**[1M]**
	D	What is python continue statement?	**[1M]**
	E	write the any three advantages of arrays in Python	**[1M]**
	F	Define Dictionaries in python programming	**[1M]**
	G	Define function? Write its syntax.	**[1M]**
	H	Define lambda function.	**[1M]**
	I	What are text files? How are they useful?	**[1M]**
	J	Give an example for how to read data from file.	**[1M]**

PART-B (50 Marks)

SECTION-I

2	A	List various types of operators in Python and write any Four types of operators.	**[5M]**
	B	Define List in Python? Describe the List usage with suitable examples.	**[5M]**
		OR	
3	A	Write short notes on the following? i) Multiline comments ii) Rules and Naming convention for variables and constants. iii) Python Indentation	**[5M]**
	B	Write a python program to simulate a basic calculator using functions for add, subtract, multiply and divide.	**[5M]**

SECTION-II

4	A	What are the supported data types in Python? Explain it in detail?	**[5M]**
	B	Write a program to simulate a guessing number game. Generate a number from 1 to 100 and ask the user to guess it correctly within 5 tries. After each guess, the program must tell whether the number is higher than, lower than, or equal to your guess.	**[5M]**

OR

5	A	Explain if, if-else, if-elif-else statements with syntax and examples.	**[5M]**
	B	Write the syntax and examples for loops supported by python.	**[5M]**

SECTION-III

6	A	Distinguish between Indexing and Slicing on Arrays.	**[5M]**
	B	Implement a Python program to find the minimum and maximum in an array of integers.	**[5M]**

OR

7	A	Define an Array? Explain in details about types of arrays? Outlining to creating, access and manipulate elements in arrays?	**[5M]**
	B	Design and Develop a Python Program to find the Electricity unit charges by using following condition and calculate the total electricity, Bill? For first 50 units Rs. 1.50/unit For next 100 units Rs. 1.75/unit For next 100 units Rs. 2.20/unit For unit above 250 Rs. 2.50/unit NOTE: An additional surcharge of 20% is added to the bill. Take Input: - Enter units: 120 Find the output?	**[5M]**

SECTION-IV

8	A	Write the different types of Python Function arguments. Explain in detail	**[5M]**
	B	Write a python program for given number is Armstrong number or not.	**[5M]**

OR

9	A	Write a program to print Fibonacci sequence up to given number 'n'.	**[5M]**
	B	Design and develop a Python program to find the factorial of a number.	**[5M]**

SECTION-V

10	A	Define a file? What are the different types of files and write the Access modes of file? Give an example.	**[5M]**
	B	Write a GUI program that converts temperature from Celsius to Fahrenheit**.**	**[5M]**

OR

11	A	Define exception. Explain any 4 exceptions that could occur in code with suitable examples?	**[5M]**
	B	Explain exception handling mechanisms with example program.	**[5M]**

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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 Regular Examinations, August 2023

Applied Physics

(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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PART-A (10 Marks) **Marks**

(write all answers of this PART at one place)

1	A	What are the important characteristics of lasers?	**[1M]**
	B	Define the term Numerical Aperture (NA)	**[1M]**
	C	Calculate the lowest energy of an electron moving in a 1D potential well of length $4A^0$	**[1M]**
	D	State Heisenberg's uncertainty principle.	**[1M]**
	E	Give the equation for effective mass	**[1M]**
	F	Illustrate E-K diagram	**[1M]**
	G	Define solar cell.	**[1M]**
	H	Show the energy diagram of PN diode in forward bias	**[1M]**
	I	Illustrate the spin alignment in Antiferro magnetic material.	**[1M]**
	J	Write the relation between electric susceptibility and relative permittivity	**[1M]**

PART-B (50 Marks)

SECTION-I

2	A	Explain the Construction and working of He-Ne laser.	**[8M]**
	B	List out few applications of lasers.	**[2M]**
		OR	
3	A	Explain the principle of an optical fiber.	**[3M]**
	B	Distinguish between a step index and a graded index optical fiber.	**[7M]**

SECTION-II

4	A	Give the significance of wave function	**[4M]**
	B	Deduce an expression for one dimensional Schrodinger time-independent wave equation.	**[6M]**
		OR	
5	A	State and explain de Broglie's hypothesis.	**[2M]**
	B	Discuss in detail about the Davisson and Germer's experiment	**[8M]**

SECTION-III

6	A	Summarize the concept of origin of energy bands in solids	**[4M]**

	B	Distinguish between conductors, semiconductors and insulators based on their energy band structure.	**[6M]**
		OR	
7	A	Discuss in detail about the motion of an electron in a periodic potential by using Kronig-Penny model.	**[7M]**
	B	Draw E-k diagram and explain in detail	**[3M]**
		SECTION-IV	
8	A	Elaborately explain the formation of p-n junction diode	**[4M]**
	B	Illustrate the I-V characteristics of a p-n junction and explain it.	**[6M]**
		OR	
9	A	Explain about direct and indirect band gap semiconductors.	**[3M]**
	B	Derive an expression for concentration of electrons in intrinsic semiconductor	**[7M]**
		SECTION-V	
10	A	Define polarization and list the types of polarization?	**[2M]**
	B	Define ionic polarization. Deduce an expression for ionic polarizability.	**[8M]**
		OR	
11	A	What are magnetic domains?	**[2M]**
	B	Compare the properties of dia, para and ferro magnetic materials based on their magnetic moment	**[8M]**

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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 Regular Examinations, August 2023

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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			Marks
		PART-A (10 Marks)	
		(Write all answers of this PART at one place)	
1	A	What is electrode potential?	**[1M]**
	B	Cell is made from aluminium and silver half-cells. Which electrode is anode, and which is cathode?	**[1M]**
	C	What is electroless plating?	**[1M]**
	D	What is the effect of humidity on rate of corrosion?	**[1M]**
	E	What are biodegradable polymers?	**[1M]**
	F	What are conducting polymers?	**[1M]**
	G	Define nanomaterials.	**[1M]**
	H	Write the examples of shape memory alloys.	**[1M]**
	I	What is the disinfectation of water?	**[1M]**
	J	Which salts cause permanent hardness to water?	**[1M]**
		PART-B (50 Marks)	
		SECTION-I	
2	A	How do you determine the pH of a solution using calomel electrode. Describe with a diagram.	**[5M]**
	B	Define emf series. Describe its applications with examples.	**[5M]**
		OR	
3	A	Derive Nernst equation for the calculation of emf of a cell.	**[5M]**
	B	Describe lithium ion battery. Write the reactions involved in Lithium ion battery while charging and discharging.	**[5M]**
		SECTION-II	
4	A	Explain the mechanism of corrosion of Fe metal in acidic medium with a diagram.	**[5M]**
	B	Explain Galvanic corrosion with an example.	**[5M]**
		OR	
5	A	What is cathodic protection? How do you protect buried metal pipelines under the ground by sacrificial anodic method? Explain.	**[5M]**
	B	Explain the process of Cu-plating.	**[5M]**

SECTION-III

6	A	Write the differences between thermosetting and thermoplastic resins.	**[5M]**
	B	Write the preparation, properties and engineering applications of polyvinylchloride	**[5M]**
		OR	
7	A	Describe Glass Fibre Reinforced Plastics and write their applications.	**[5M]**
	B	Describe the method of conduction of Polyacetylene .	**[5M]**

SECTION-IV

8	A	Write the industrial applications of nanomaterials.	**[5M]**
	B	Explain the preparation of nanomaterials by Chemical Vapor Deposition method.	**[5M]**
		OR	
9	A	Explain the properties and applications of CNTs.	**[5M]**
	B	Write the applications of piezoelectric materials.	**[5M]**

SECTION-V

10	A	Describe the ion-exchange process used for softening of water.	**[5M]**
	B	What is potable water? Write the specifications of potable water.	**[5M]**
		OR	
11	A	Explain the desalination of brackish water by Reverse Osmosis.	**[4M]**
	B	Describe the following boiler troubles with preventive measures	
		i. Caustic embrittlement	**[3M]**
		ii. Scale formation	**[3M]**

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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 Regular Examinations, August 2023

Computer Aided Engineering Graphics

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

Roll No										

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

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 12 marks.

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SECTION-I **Marks**

1	***A***	Draw a circle of 100 mm diameter and divide six equal parts.	**[6M]**
	B	Draw a Regular Hexagon having 40 mm sides, using general method.	**[6M]**
		OR	
2	***A***	Divide a 150 mm long straight line into eight equal parts.	**[6M]**
	B	Inscribe a polygon of 4 and 6 sides in a circle of 80 diameter.	**[6M]**

SECTION-II

3		Draw the projections of the following points on a common reference line keeping the distance between their projectors 30 mm apart. a) Point A is 30 mm below the H.P and 50 mm in front of the V.P b) Point B is in the H.P and 50 mm behind the V.P. c) Point C is 35 mm in front of the V.P and in the H.P d) Point D is 50 mm above the H.P and 20 mm behind the V.P **e)** Point E is 30 mm below the H.P and 55 mm behind the V.P **f)** Point F is 20 mm below the H.P and 40 mm in front of the V.P	**[12M]**
		OR	
4	***A***	A line AB 50 mm long is in V.P and inclined at an angle of 35° to H.P. The end A is 10 mm above H.P. Draw the projections.	**[6M]**
	B	A line RS 35 mm long is in H.P and inclined at an angle of 45° to V.P. The end R is 10 mm in front of V.P. Draw the projections.	**[6M]**

SECTION-III

5	***A***	A regular pentagonal plane of 25 mm side, has one side on the H.P. Its plane is inclined at an angle of 30° to the H.P. and perpendicular to the V.P. Draw the projections of the pentagon.	**[6M]**
	B	Draw the projections of a circular lamina of 50 mm diameter, the circumference of the circle on the H.P whose centre is 30 mm above the H.P and 20 mm in front of V.P. The circular lamina is inclined at an angle of 30° to H.P and perpendicular to V.P.	**[6M]**
		OR	
6		A hexagonal prism having base with 30 mm side and 75 mm long axis, has	**[12M]**

and edge of its base on the H.P. Its axis is parallel to the V.P. and inclination at 45^0 to the H.P. Draw its projections.

SECTION-IV

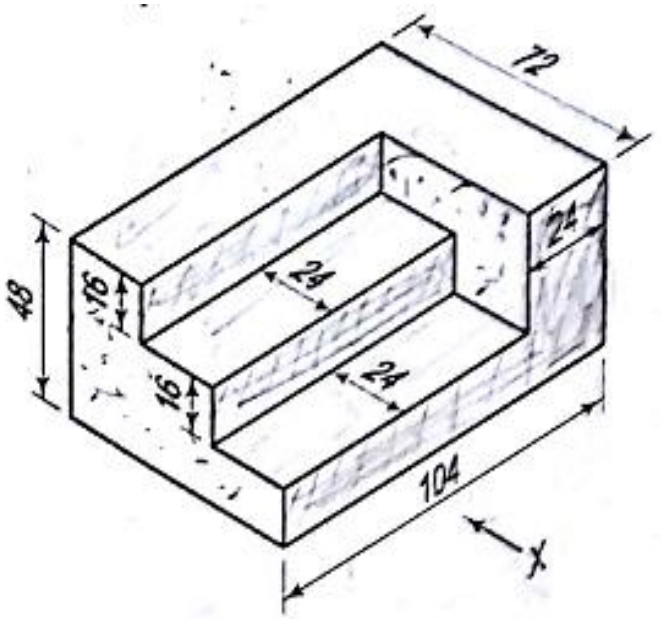
7 Draw an isometric projection of a pentagonal prism of base side 30 mm and axis 60 mm. The prism rests on its base on the H.P. with an edge of the base parallel to the V.P. **[12M]**

OR

8 A Hexagonal pyramid of base side 30 mm and axis 70 mm long is resting on a base on the H.P. with axis parallel to the V.P. Draw its isometric projection of the hexagonal pyramid. **[12M]**

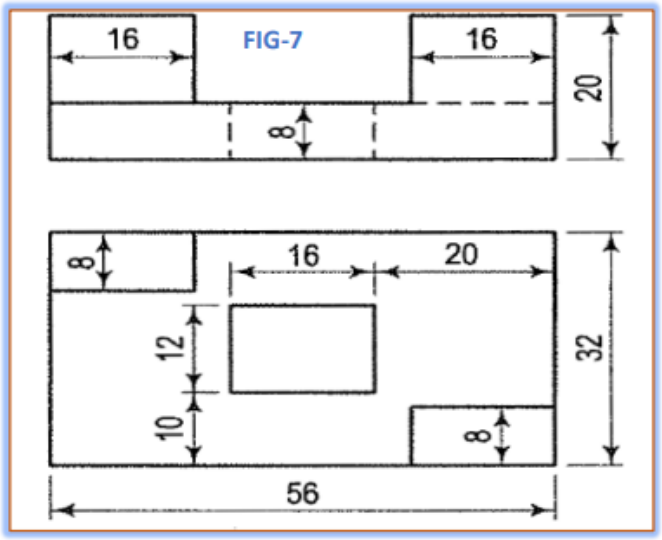
SECTION-V

9 Draw the (i) Front view (ii) Top View (iii) Side view of the Following Isometric Drawings **[12M]**



OR

10 Draw the isometric drawing for the following diagram **[12M]**



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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 Regular Examinations, August 2023

Computer Aided Engineering Graphics

(ECE & IT)

Roll No										

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

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 12 marks.

***

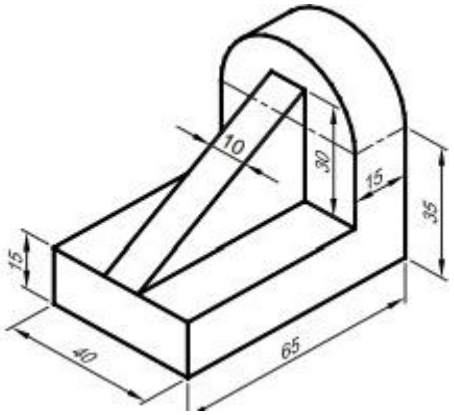
			Marks
		SECTION-I	
1	***A***	Divide an 90 mm long straight line into eight equal parts.	**[6M]**
	B	Draw a regular pentagon of 40 mm side using general method	**[6M]**
		OR	
2		Construct a regular pentagon of 25 mm radius, by inscribe and circumscribe method.	**[12M]**
		SECTION-II	
3		Draw the projections of the following points? (a.) Point P is 30 mm. above H.P and 40 mm. in front of VP (b.) Point Q is 25 mm. above H.P and 35 mm. behind VP (c.) Point R is 32 mm. below H.P and 45 mm behind VP (d.) Point Sis 35 mm. below H.P and 42 mm in front of VP (e.) Point T is in H.P and 30 mm behind VP (f.) Point U is in V.P and 40 mm. below HP	**[12M]**
		OR	
4	A	A line AB 60 mm long has its end A 20 mm above HP and 30 mm in front of VP. The line is inclined at 40^0 to VP and parallel to HP. Draw its projections.	**[6M]**
	B	A line AB 70 mm long has its end A 30 mm above HP and 20 mm in front of VP. The line is inclined at 60^0 to HP and parallel to HP. Draw its projections.	**[6M]**
		SECTION-III	
5		A hexagonal plane of side 30 mm has an edge on the H.P. The surface is inclined at 45° to the H.P and, 30^o to V.P. Draw its projections.	**[12M]**
		OR	
6		A pentagonal prism having base with 30 mm side and 75 mm long axis has an edge of its base on the H.P. Its axis is inclined to 45^0 to the HP and parallel to V.P draw its projections.	**[12M]**
		SECTION-IV	
7		Draw an isometric view of a cylinder, with a 50mm base diameter and a 70mm long axis when (a) The base is on the HP (b) The base is on the VP	**[12M]**

OR

8 A Pentagonal pyramid of base side 40 mm and axis 60 mm long is resting on a base on the H.P. with axis parallel to the V.P. Draw its isometric projection of the hexagonal pyramid. **[12M]**

SECTION-V

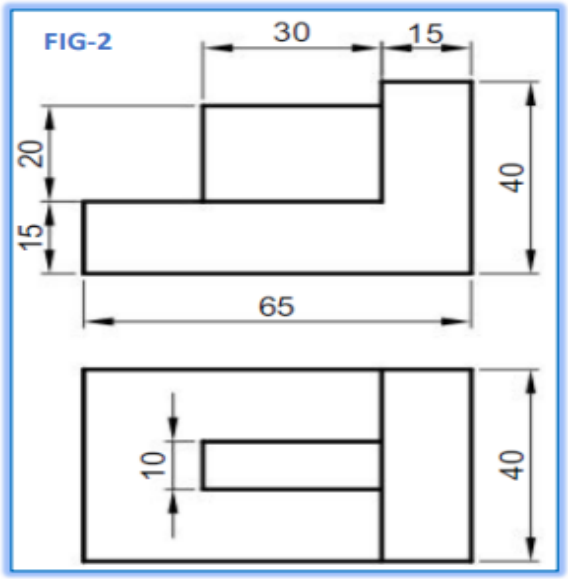
9 The front and side views of an angle plate are shown in below Fig. Draw **[12M]**



its orthographic view.

OR

10 **[12M]**



The front and side views of an angle plate are shown in above Fig. Draw its isometric view.

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