R22

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
English
(ECE, CSE, IT & CSE-CS)

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
(Write all answers of this PART at one place)

1 A Add question tag to the following sentence.   **[1M]**
          The CM has declared scholarship to all Physically Challenged persons.
     B Write a word each with the given prefixes.   **[1M]**
          i. De-   ii. pre-
     C Mention 2 synonyms for the word 'incredible'   **[1M]**
     D Write 2 antonyms for the word 'diverge'.   **[1M]**
     E Give two important points to be followed while writing an email.   **[1M]**
     F Define transitive and intransitive Verbs.   **[1M]**
     G When is a comma (,) used?   **[1M]**
     H State any two rules of using the Definite Article.   **[1M]**
     I Choose the correct word from brackets to make the sentence meaningful.   **[1M]**
          i. Bose _____ discovered/invented high definition Speakers.
          ii. Medical representative job is not _____ stationery/stationary.
     J Correct the following sentence with subject verb agreement.   **[1M]**
          i. The committee members and the student takes note in the meeting.
          ii.Idli and sambar are good combination for breakfast.

Part B

2 A Describe J.K.Rowling's opinion about the importance of imagination.   **[5M]**

     B Construct a paragraph on the topic "Measures to be taken to reduce Air   **[5M]**
        Pollution" in 150 words.
                                     OR
3 A Illustrate when the following tenses are used with one example sentence.   **[5M]**
          i. Present Perfect   ii. Past Continuous   iii. Future Continuous
     B What did J.K.Rowling learnt from her past as expressed in her speech at   **[5M]**
        Harvard?

SECTION-II
4 A Which road did the poet Robert Frost take? Why did he chose it? Substantiate. **[5M]**
     B Distinguish Intensive and Extensive Reading? Give two examples each.   **[5M]**
                                     OR
5 A What does the poet mean by "worn them about the same"? Support your   **[5M]**
        answer with example from the poem "The Road not taken".

	B	Develop an Essay on the topic "Engineering Technology help people to a large extent".	**[5M]**

SECTION-III

6	A	Explain how employees find meaning in their work according to Satya Nadella.	**[5M]**
	B	You are involved in doing a Project at your College. You need equipment such as remote, motor, electrical appliances etc. Draft a requisition letter to the Principal to sanction the required budget.	**[5M]**

OR

7	A	"Our industry doesn't respect tradition-it only respects innovation". Elaborate the answer as explained in "Satya Nadella's Email to His Employees"	**[5M]**
	B	Write an email to the Manager, Softech Solutions opting for the position of a Trainee Engineer, giving necessary details required for the job.	**[5M]**

SECTION-IV

8	A	Abraham Lincoln proposes a long list of contrasting values to be inculcated in his son by the teacher. What are they? Enumerate.	**[5M]**
	B	Blanks below are numbered. Each number has got 4 options out of which only one is correct. Choose the correct option and fill the blanks.	**[5M]**

As a member of Viceroy's Council, Gokhale succeeded --1----. On March 26,1902, he spoke on the budget and his ---2---was applauded all over the country. Never before 3---- was the political history of India such an able, powerful 4----made. Even Lord Curjon, who --------5 stoutly opposed him.

1. a. immediately b. rightfully c. immensely d. at once
2. a. debate b. performance c. principles d. idea
3. a. in   b. on   c. by   d. such
4. a. debate b. speech c. sermon   d. argument
5. a. frequently b. rarely   c. often   d. seldom

OR

9	A	Explain "glory in failure and despair in success" according to Lincoln.	**[5M]**
	B	Construct own sentences using the following phrasal verbs.	**[5M]**

i. break into ii. Work out iii. Make up iv. set aside   v. cave in

SECTION-V

10	A	Elaborate the statement 'A.P.J.Kalam-the Missile man of India' as described in his biography.	**[5M]**
	B	Write a letter to the Principal requesting for original certificates in view of passport verification.	**[5M]**

OR

11	A	What did you learn from the biography of Dr. A.P.j.Abdul Kalam?	**[5M]**
	B	Choose the correct word and fill in the blanks in the sentences given below.	**[5M]**

1. The Rockies are a beautiful ----------. (site, sight)
2. John Keats is famous for his --------- poetry.(sensual/sensuous)
3. End semester Exams are conducted on ---------- days.(alternate/alternative)
4. My father is a member of Municipal ---------.(counsel/council)
5. The doctor amputated the --------- part of the limb.(diseased/deceased)

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Mathematics-I
(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)

1. A) Find the value of k such that the rank of $\begin{bmatrix} 1 & 2 & 3 \\ 2 & k & 7 \\ 3 & 6 & 10 \end{bmatrix}$ is 2. **[1M]**

   B) Define Hermitian and skew Hermitian matrices. **[1M]**

   C) Let a 3x3 matrix A have eigen values 1, 2, -1. Find the trace of the matrix **[1M]**
   $B = A - A^{-1} + A^2$

   D) Find the matrix of the Q.F $3x_1^2 + 4x_2^2 - x_3^2 + 3x_1x_2$ **[1M]**

   E) Find the differential of the function $f(x, y) = x\cos y - y\cos x$ **[1M]**

   F) Show that $\underset{(x,y)\to(0,0)}{Lim} \dfrac{xy}{x^2 + y^2}$ does not exist. **[1M]**

   G) Solve $p^2 - 5p + 6 = 0$ **[1M]**

   H) Solve $xdx + ydy + 2(x^2 + y^2)dx = 0$ **[1M]**

   I) Find the general solution of D.E $y^{111} + y^1 = 0$ **[1M]**

   J) Find P.I of $(D - 2)^3 y = e^{2x}$ **[1M]**

PART-B (50 MARKS)
SECTION-I

2. a) Reduce the matrix $\begin{bmatrix} 1 & -1 & 2 & -3 \\ 4 & 1 & 0 & 2 \\ 0 & 3 & 0 & 4 \\ 0 & 1 & 0 & 2 \end{bmatrix}$ to normal form and find its rank. **[5M]**

   b) Find the values of a and b for which the equations **[5M]**
   $x + y + z = 3; x + 2y + 2z = 6; x + ay + 3z = b$ have i) No solution ii) a unique solution
   iii) Infinite solutions

(OR)

3. a) Solve the equations $2x + 2y + 4z = 18; x + 3y + 2z = 13; 3x + y + 3z = 14$ using Gauss elimination method. **[5M]**

b) Solve the system of equations $\begin{bmatrix} 6 & 1 & 2 \\ 1 & 4 & 3 \\ 2 & 1 & 8 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6 \\ -4 \\ 8 \end{bmatrix}$ by Gauss-Seidel Iteration Method. **[5M]**

SECTION-II

4. a) Diagonalize $A = \begin{bmatrix} 1 & 6 & 1 \\ 1 & 2 & 0 \\ 0 & 0 & 3 \end{bmatrix}$ **[5M]**

b) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 5 \\ 3 & 5 & 6 \end{bmatrix}$, find A^{-1}, by using Cayley-Hamilton theorem. **[5M]**

(OR)

5. a) Find the orthogonal transformation which transforms the Q.F $x^2 + 3y^2 + 3z^2 - 2yz$ to Canonical form, and also finds its rank, index, signature and nature. **[5M]**

b) If $A = \begin{bmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & -3 & 3 \end{bmatrix}$, determine the algebraic and geometric multiplicity of the eigen values of A. **[5M]**

SECTION-III

6. a) If $u = f(x - y, y - z, z - x)$, then find $\dfrac{\partial u}{\partial x} + \dfrac{\partial u}{\partial y} + \dfrac{\partial u}{\partial z}$ **[5M]**

b) Find $\dfrac{\partial(u,v)}{\partial(r,\theta)}$, if $u = 2xy, v = x^2 - y^2$ and $x = r\cos\theta, y = r\sin\theta$ **[5M]**

(OR)

7. a) Find the maximum and minimum values of $f(x, y) = x^3 + 3xy^2 - 15x^2 - 15y^2 + 72x$ **[5M]**

b) Use Taylor's series to expand $f(x, y) = x^2 + xy + y^2$ in the powers of $(x-1)$ and $(y-2)$ **[5M]**

SECTION-IV

8. a) Solve $(5x^3 + 12x^2 + 6y^2)dx + 6xydy = 0$ **[5M]**

b) A copper ball is heated to a temperature of $100^0 C$, then at a time t = 0 it is placed in water which is maintained at a temperature of $30^0 C$. At the end of 3 minutes the temperature of the ball is reduced to $70^0 C$. Find the time at which the temperature of the ball drops to $31^0 C$. **[5M]**

(OR)

9. a) Solve $p^3 + 2xp^2 - y^2 p^2 - 2xy^2 p = 0$ **[5M]**

b) Solve $(\cos x \cos y - \cot x)dx - (\sin x \sin y)dy = 0$ **[5M]**

SECTION-V

10. Solve $(D^2 - 2D + 1)y = x^2 e^{3x}$ **[10M]**

(OR)

11. a) Solve $(D^2 + 1)y = \cos x$ **[5M]**

b) Solve $(D^2 + a^2)y = \operatorname{cosec} ax$ by the method of variation of parameter. **[5M]**

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Code No: R22A0201

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Principles of Electrical and Electronics Engineering
(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
(Write all answers of this PART at one place)

|			
1	A	Write the volt-ampere relations of R, L, C parameters	**[1M]**
	B	State Superposition Theorem?	**[1M]**
	C	Define form factor and peak factor of an alternating quantity.	**[1M]**
	D	Differentiate ac and dc quantities?	**[1M]**
	E	Define back emf?	**[1M]**
	F	Give the emf equation of a transformer.	**[1M]**
	G	Write the applications of zenor diode.	**[1M]**
	H	Differentiate between pn junction diode and Zener diode.	**[1M]**
	I	Define current amplification factor	**[1M]**
	J	Compare JFET with BJT	**[1M]**

PART-B(50 MARKS)
SECTION-I

2	A	State and Explain Thevenin's theorem with an example	**[5M]**
	B	Explain the terms Voltage and current.	**[5M]**

OR

3	A	Find the current I in the circuit shown in figure below..	**[5M]**
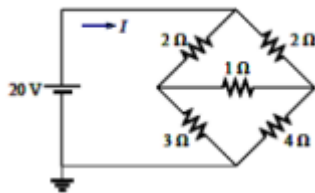
	B	Explain the Kirchhoff's laws.	**[5M]**

SECTION-II

4	A	Explain with diagrams, what do you understand by (i) in- phase (ii) lagging (iii) leading as applied to sinusoidal ac quantities.	**[5M]**
	B	Define RMS values, Average values, form factor and peak factor of a sinusoidal waveform	**[5M]**

5	A	a) Define (1) Phase (2) Phase Angle (3) Frequency (4) Amplitude (5) True value	**[5M]**
	B	a) A coil having an inductance of 31.8mH is connected to 230V, 50Hz supply. Calculate (i) the circuit current (ii)phase angle (iii) power factor (iv) power consumed	**[5M]**

SECTION-III

6	A	Write the principle of operation of DC generator.	**[5M]**
	B	Derive the EMF equation of a DC Generator.	**[5M]**

OR

7	A	Explain the construction and principle of operation of a transformer in detail.	**[5M]**
	B	A 50Hz single phase transformer has 6600V/400V. Having e.m.f per turn is 10V and the maximum flux density in the core is 1.6 Tesla. Find the: i) Suitable number of primary and secondary turns ii) Cross sectional area of the core.	**[5M]**

SECTION-IV

8	A	Explain the operation of Full wave bridge rectifier with neat circuit diagram.	**[5M]**
	B	With neat sketches explain the I-V characteristics of PN junction diode.	**[5M]**

OR

9	A	Compare Half wave rectifier, Full wave rectifier and Bridge rectifier in any four aspects.	**[5M]**
	B	Explain the Operation of NPN Transistor.	**[5M]**

SECTION-V

10		Draw the input and output characteristics of an NPN transistor in CE Configuration.	**[10M]**

OR

11	A	Compare FET & MOSFET with a neat diagram.	**[5M]**
	B	Explain the Depletion type MOSFET	**[5M]**

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Programming for Problem Solving
(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 (10Marks)
(Write all answers of this PART at one place)

1	A	List the characteristics of an algorithm.	**[1M]**
	B	What is Compiler? Why we use in C Program.	**[1M]**
	C	Write the uses and syntax of continue statement.	**[1M]**
	D	Explain exit control loop in C.	**[1M]**
	E	Define formal parameter.	**[1M]**
	F	What is the use of printf() and scanf().	**[1M]**
	G	Define pointers in C.	**[1M]**
	H	Explain the use of realloc().	**[1M]**
	I	Write the process of opening and closing a file pointer.	**[1M]**
	J	Write a note on fprintf() & fscanf().	**[1M]**

PART-B (50Marks)

SECTION-I

2	A	Draw a flowchart to find a number is Even or Odd.	**[5M]**
	B	Explain C-Tokens with example.	**[5M]**

OR

3	A	What is a global variable? Explain how it is declared in C Language.	**[5M]**
	B	What are Relational Operators supported by C Language? Explain with suitable example.	**[5M]**

SECTION-II

4   A   Write syntax of switch case statement with suitable example.   **[5M]**

     B   Explain Two dimensional array with its syntax. Write a C program to demonstrate the same.   **[5M]**

<div align="center">OR</div>

5   A   Write a C program to find a given number is Prime number or not.   **[5M]**

     B   Explain the process of accessing and manipulating elements of an array.   **[5M]**

SECTION-III

6   A   Explain the procedure of parameters passing methods in C program.   **[5M]**

     B   Write a C program to find Sum of two numbers using function.   **[5M]**

<div align="center">OR</div>

7   A   Write a C program to swap two numbers using call by reference.   **[5M]**

     B   Write a C program to demonstrate register and extern storage classes.   **[5M]**

SECTION-IV

8   A   Explain with example how Strings are declared, initialized and stored.   **[5M]**

     B   Write a C program to compare two given strings are same or not.   **[5M]**

<div align="center">OR</div>

9   A   Explain how memory is allocated and de-allocated dynamically.   **[5M]**

     B   Explain how pointers are initialized in C. What are the advantages and disadvantages of using pointers.   **[5M]**

SECTION-V

10   A   Explain file in C with different modes of working with files.   **[5M]**

     B   Write a C program to create a binary file.   **[5M]**

<div align="center">OR</div>

11   A   Write a program in C to read an existing file and display the output.   **[5M]**

     B   Write a program in C to Find the Number of Lines in a Text File.   **[5M]**

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Applied Physics
(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
(Write all answers of this PART at one place)

1	A	What is population inversion?	**[1M]**
	B	Define the total internal reflection.	**[1M]**
	C	What is dual nature of the light?	**[1M]**
	D	An electron is accelerated by 100V potential, then calculate its wavelength.	**[1M]**
	E	List out any two assumptions of classical free electron theory.	**[1M]**
	F	What are drawbacks of quantum free electron theory?	**[1M]**
	G	List out few applications of LED?	**[1M]**
	H	Draw V-I Characteristics diagram of PN Junction diode.	**[1M]**
	I	Define Polarization in dielectrics.	**[1M]**
	J	Define magnetic permeability.	**[1M]**

PART-B(50 MARKS)
SECTION-I

2	A	Explain the construction and working principle of Ruby laser.	**[7M]**
	B	With a neat diagram explain construction of optical fiber.	**[3M]**

OR

3	A	What is population inversion? Explain its significance in laser systems.	**[5M]**
	B	What are the Applications of optical fibers.	**[5M]**

SECTION-II

4	A	Write the properties of matter waves.	**[4M]**
	B	Write a note on G.P Thomson experiment.	**[6M]**

OR

5	A	Derive an expression for energy of particle in one dimensional potential well.	**[6M]**
	B	Explain de-Broglie's hypothesis	**[4M]**

SECTION-III

6	A	Derive an expression for Density of states	**[7M]**
	B	Draw E –k diagram. Explain its significance.	**[3M]**

<div align="center">OR</div>

7	A	Describe propagation of an electron in a periodic potential and derive an expression for that.	**[7M]**
	B	Distinguish between classical free electron theory and Quantum free electron theory.	**[3M]**

<div align="center">

SECTION-IV

</div>

8	A	Derive an equation for carrier concentration in valency band of intrinsic semiconductor.	**[5M]**
	B	Distinguish between N –type and P-type semiconductors.	**[5M]**

<div align="center">OR</div>

9	A	Differentiate direct and indirect band gap semiconductors.	**[5M]**
	B	Describe construction and working principle of Photo diode.	**[5M]**

<div align="center">

SECTION-V

</div>

10	A	Derive an equation for ionic polarization.	**[5M]**
	B	Illustrate properties of Soft and Hard magnetic materials.	**[5M]**

<div align="center">OR</div>

11	A	Write the properties of ferro electric materials.	**[5M]**
	B	Describe characteristics of Ferro and Anti-ferro magnetic materials.	**[5M]**

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R22

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Engineering Chemistry
(EEE, ECE, IT, AE, 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.

***

PART-A (10MARKS)
(Write all answers of this PART at one place)

1	A	Write the cell reactions of calomel electrode.	**[1M]**
	B	Define primary battery and give examples.	**[1M]**
	C	Distinguish between wet and dry corrosion?	**[1M]**
	D	Explain why magnesium corrodes faster when it is in contact with copper.	**[1M]**
	E	Write the structure of PVC and write its important properties.	**[1M]**
	F	What are Thermosetting plastics? Give examples	**[1M]**
	G	What are Carbon nanomaterial's? Write one application.	**[1M]**
	H	Write the important application of shape memory alloys.	**[1M]**
	I	Write the principle of reverse osmosis?	**[1M]**
	J	What is caustic embrittlement?	**[1M]**

PAERT-B(50 MARKS)
SECTION-I

2	A	What is Standard Electrode Potential? Write the construction and cell reactions of quinhydrone electrode.	**[5M]**
	B	Explain the construction, cell reactions and uses of Lead acid battery.	**[5M]**

OR

3	A	What are batteries? Describe the construction and cell reactions of Li-ion battery. Give its applications.	**[5M]**
	B	Define Galvanic cell explain the construction and working of Daniel cell.	**[5M]**

SECTION-II

4	A	Describe the electrochemical theory of corrosion by taking the example, rusting of iron. Mention the different types of electrochemical corrosion.	**[5M]**
	B	What is cathodic protection? Explain the impressed current cathodic	**[5M]**

protection.

<div align="center">OR</div>

5   A   Explain with suitable examples the corrosion due to differential aeration and galvanic corrosion?   **[5M]**

   B   How is Nickel plating done by electro less plating? Mention the uses of electro less plating.   **[5M]**

<div align="center">

SECTION-III

</div>

6   A   What is Fiber reinforced plastic. Discuss the advantages of FRP's with examples.   **[5M]**

   B   Discuss the n & p doping in polyacetylene? What are the advantages of doping? Write the application conducting polymers.   **[5M]**

<div align="center">OR</div>

7   A   What is condensation polymerization? Write the preparation properties and engineering applications of Nylon -6,6.   **[5M]**

   B   What are elastomers? Discuss the application of natural rubber.   **[5M]**

<div align="center">

SECTION-IV

</div>

8   A   Discuss the sol-gel method of preparation of nano materials.   **[5M]**

   B   Describe composite materials? Give examples and write their applications   **[5M]**

<div align="center">OR</div>

9   A   What are nano materials ? Write the industrial and medical applications of nanomaterials   **[5M]**

   B   What are Peizoelectric materials? Write their applications.   **[5M]**

<div align="center">

SECTION-V

</div>

10   A   Distinguish the temporary and permanent hardness of water.   **[5M]**

   B   b) Write the causes and effects of scales and sludges in boiler feed water.   **[5M]**

<div align="center">OR</div>

11   A   What are Ion exchange resins? Explain the process of softening of hard water by using ion exchange resins.   **[5M]**

   B   A water sample on analysis gave the following data.   **[5M]**
$CaSO_4$ = 30 mg/l, Mg $(HCO_3)_2$ = 24 mg/l, $CaCl_2$ = 24 mg/l, HCl = 50mg/l, KCl= 10mg/l. Calculate Temporary, Permanent and Total hardness in degree Clark.

<div align="center">*****</div>

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
I B.Tech I Semester Supplementary Examinations, August 2023
Computer Aided Engineering Graphics
(CSE, CSE-AIML, CSE-DS & B.Tech-AIML)

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		Inscribe a polygon of 4 and 6 sides in a circle of 75 mm diameter	**[6M]**
	b		Divide a 85 mm long straight line into six equal parts.	**[6M]**
			OR	
2	a		Draw a Pentagon of side 40 mm using general method	**[6M]**
	b		Draw a circle of 100 mm diameter and divide eight equal parts	**[6M]**

SECTION-II

3 Draw its projections of the following points on a common reference line **[12M]**
A. Point C in the HP and 30 mm behind VP.
B. Point D is in the VP and 20 mm above HP
C. Point E is 30 mm below HP and 40 mm behind VP
D. Point F is 20 mm above HP and 30 mm in front of VP
E. Point G is in HP and 20 mm behind VP.

OR

4 (i) Draw the projections of a line 70mm long when it is perpendicular to **[6M]**
HP and parallel to VP and 15mm in front of VP and 20 mm above HP.
(ii) A line 70mm long is perpendicular to VP and parallel to HP and **[6M]**
20mm above it and 30 mm in front of VP. Draw its projections.

SECTION-III

5 A pentagonal plane of side 25 mm has its surface parallel to and 20 mm **[12M]**
in front of V.P. Draw its projections, when a side is on HP and inclined
at 45° to the H.P and 30° to the V.P

OR

6 A hexagonal pyramid, base 25 mm side and axis 50 mm long, **[12M]**
has an edge of its base on the ground. Its axis is inclined at 30°
to the ground and parallel to the V.P. Draw its projections.

SECTION-IV

7 Draw the isometric view of a pentagonal plane of side 30 mm whose **[12M]**
surface is parallel to the V.P and a side parallel to the H.P

OR

8 Draw the isometric view of a cone of base 30 mm diameter and axis 60 **[12 M]**
mm long resting on its base on H.P. and axis is perpendicular to V.P.

SECTION-V

9 Draw the (i) Front view (ii) Top View (iii) Side view of the Following **[12M]**
Isometric Drawing. Consider all dimensions are in mm
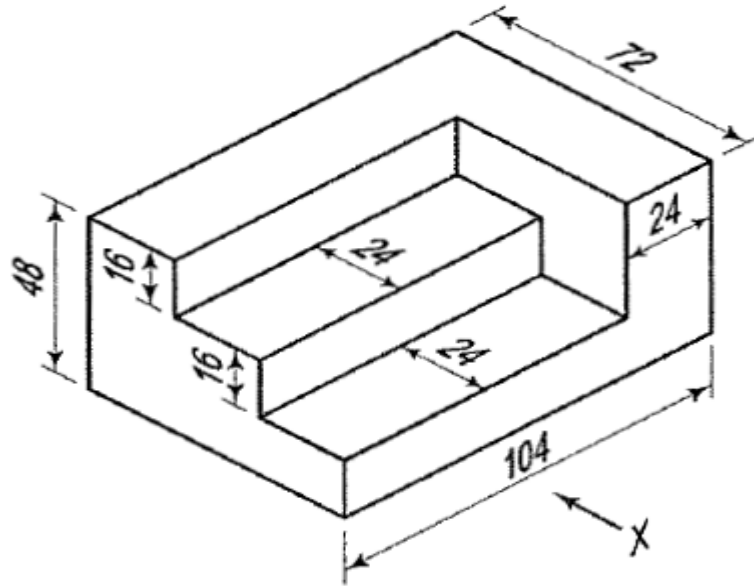
OR

10 Draw the isometric drawing for the following diagram. Consider all **[12 M]**
dimensions are in mm

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