Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACSETC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

C PROGRAMMING FOR PROBLEM SOLVING

(Common to ECE, CSE, CAI, CDS, CCS, CAM)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Define algorithmic problem solving.	1	1	1
	ii.	What is control flow?	1	1	1
	iii.	List the basic sections of a C program.	1	2	1
	iv	What is a constant?	1	2	1
	v.	Define user-defined function.	1	3	1
	vi	What is parameter passing?	1	3	1
	vii.	How is an array name treated in C?	1	4	1
	viii.	Which arithmetic operations are allowed on pointers?	1	4	1
	ix.	How is a structure declared?	1	5	1
	x.	Which header file is used for dynamic memory allocation?	1	5	1
Q.2(A)		Illustrate the various control flow structures used in algorithm design and Write an algorithm using sequence, selection and iteration to find the largest of three numbers.	18	1	2
		OR			
Q.2(B)		Explain the RAPTOR programming tool and its advantages in algorithm learning and design a RAPTOR flowchart to find the factorial of a number.	18	1	3
Q.3(A)		Compare for, while, and do-while loops with examples and build a C program to check whether a given number is palindrome or not.	18	2	3
		OR			
Q.3(B)		Illustrate expressions and type conversion in C and write a C program to calculate simple interest using appropriate data types.	18	2	2
Q.4(A)		Explain function parameters and different methods of passing arguments to functions in C and develop a C program to swap two numbers using call by value and call by reference.	18	3	3
		OR			
Q.4(B)		Demonstrate two-dimensional arrays with memory representation and build a C program for matrix addition.	18	3	3
Q.5(A)		Explain the relationship between arrays and pointers with memory diagrams and write a C program to access array elements using pointers.	18	4	2
		OR			

Q.5(B)	Explain the difference between pointers and arrays and write a C program to find the length of a string without using string library functions.	18	4	2
Q.6(A)	Explain dynamic memory allocation in detail with suitable examples.	18	5	2
	OR			
Q.6(B)	Illustrate structures in C with syntax, declaration and examples and explain arrays of structures and nested structures with suitable examples.	18	5	2

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACAITC02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

FOUNDATIONS OF ARTIFICIAL INTELLIGENCE

(Common to CIV, EEE, MEC)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	What is the main goal of AI?	1	1	1
	ii.	Give an AI application in Manufacturing.	1	1	1
	iii.	Define training data.	1	2	1
	iv	List two examples of Classification.	1	2	1
	v.	State knowledge base.	1	3	1
	vi	Define a threshold-based decision.	1	3	1
	vii.	Define an agent?	1	4	1
	viii.	What is problem-solving in AI?	1	4	1
	ix.	Define responsible AI.	1	5	1
	x.	List the fields in engineering where AI is used.	1	5	1
Q.2(A)	i)	Explain Artificial Intelligence and its scope in engineering.	9	1	2
	ii)	What are the benefits and limitations of AI in human life? Discuss.	9	1	2
		OR			
Q.2(B)	i)	Describe the role of AI in automation and robotics with examples	9	1	2
	ii)	Discuss the evolution and growth of AI	9	1	2
Q.3(A)		What do you understand by learning from past data? Explain with examples how classification and prediction use it.	18	2	3
		OR			
Q.3(B)		Explain supervised and unsupervised learning.	18	2	2
Q.4(A)		Describe AI-based building safety monitoring.	18	3	3
		OR			
Q.4(B)		Discuss in detail the rules used in decision-making with examples	18	3	2
Q.5(A)		Explain AI-based problem-solving with examples.	18	4	2
		OR			
Q.5(B)		Discuss inference mechanisms in AI systems.	18	4	2
Q.6(A)		Explain legal and ethical challenges in AI.	18	5	4
		OR			
Q.6(B)		Discuss AI and sustainability.	18	5	2

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAHUMTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

HUMAN VALUES AND PROFESSIONAL ETHICS

(Common to CE, EEE, ME, ECE, CSE, CCS)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Mention basic aspiration of a human being.	1	1	1
	ii.	Define prosperity.	1	1	1
	iii.	What is the purpose of physical facility?	1	2	1
	iv	What are the activities of the body?	1	2	1
	v.	Give the example for otherwise evaluation.	1	3	2
	vi	Define love.	1	3	1
	vii.	Write the innateness of animal order.	1	4	1
	viii.	Distinguish between conscious unit and material unit.	1	4	2
	ix.	State the term "Ethical human conduct".	1	5	1
	x.	List few holistic technologies in the traditional practices.	1	5	1
Q.2(A)		Discuss in detail the requirements for fulfilling basic human aspirations quoting with suitable examples.	18	1	2
		OR			
Q.2(B)		Discuss the process for transformation from animal consciousness to human consciousness in detail.	18	1	2
Q.3(A)		What do you understand by the term 'Human being'. How the two entities of human being differ each other? Discuss in detail.	18	2	2
		OR			
Q.3(B)		What do you understand the term self-regulation? Discuss the program for health in detail.	18	2	2
Q.4(A)	i	Define trust. Explain in detail the difference between care and guidance quoting with suitable examples.	10	3	2
	ii	Discuss the difference between the competition and complementarity in detail.	8	3	2
		OR			
Q.4(B)		Define Society. Discuss the human goal and systems/dimensions to realize the harmony in the society	18	3	2
Q.5(A)		How human order is different from other three orders in the nature? What are the various measures you suggest to enrich the nature?	18	4	2
		OR			
Q.5(B)		What is meant by coexistence in the existence? Discuss the significance of understanding coexistence in the existence.	18	4	2
Q.6(A)		Discuss the implications of value-based living at four levels with relevant examples.	18	5	2
		OR			
Q.6(B)		Explain strategies to implement for Transition towards Value-based Life and Profession.	18	5	2

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAPHYTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

ENGINEERING PHYSICS

(Common to CE, EEE & ME)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Define resonance.	1	1	1
	ii.	Write the one-dimensional wave equation.	1	1	1
	iii.	State the principle of superposition of waves.	1	2	1
	iv	Define diffraction of light.	1	2	1
	v.	State the Uncertainty principle.	1	3	1
	vi	Define fermi energy level.	1	3	1
	vii.	What is extrinsic type semiconductor.	1	4	1
	viii.	What is spontaneous emission of radiation.	1	4	1
	ix.	Define dielectric constant.	1	5	1
	x.	Define magnetic susceptibility.	1	5	1
Q.2(A)		Derive differential equation for damped harmonic oscillator and also discuss the various cases of damped harmonic oscillator.	18	1	3
		OR			
Q.2(B)	i	What is a transverse wave and deduce the differential equation for propagation of on-dimensional wave.	10	1	3
	ii	A transverse wave with a displacement Y = 10 Sin π (5x- 2t) is propagating in air. Find amplitude (A), wavelength (λ), time period (T) and velocity (V).	8	1	3
Q.3(A)	i	Derive the expressions for diameters of dark and bright Newton's rings with necessary theory.	12	2	2
	ii	Explain the construction and working of Nicol's Prism.	6	2	2
		OR			
Q.3(B)		Illustrate the Fraunhofer diffraction due to single slit. Drive the expression for resultant intensity and obtain the conditions for maxima and minima intensities.	18	2	3
Q.4(A)	i	Write the postulates of quantum mechanics.	4	3	1
	ii	Show that energy of a particle trapped in an infinite potential well is quantized.	14	3	3
		OR			
Q.4(B)	i	Classify the solids based on electrical conductivity and explain their properties.	12	3	4
	ii	What are the merits and demerits of quantum free electron theory.	6	3	1

Q.5(A)		State the Hall effect and derive the mathematical relationship between Hall coefficient and Hall Voltage by applying the principle of Lorentz force balance. Write the applications of Hall effect.	18	4	3
		OR			
Q.5(B)	i	Illustrate the spontaneous and stimulated emission of radiation	6	4	2
	ii	Explain the construction and working of Ruby laser with energy level diagram.	12	4	2
Q.6(A)		Define Local field and derive the expression for Lorentz internal field experienced by an atom in the dielectric material. Using local field derive Clausius-Mossotti equation for dielectrics.	18	5	3
		OR			
Q.6(B)	i.	Classify the magnetic materials based on magnetization and write their properties	8	5	4
	ii.	Using domain theorem ferromagnetism, explain the B-H curve for ferromagnetic materials.	10	5	4

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAPHYTC02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

SEMICONDUCTOR PHYSICS

(Electronics and Communication Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	What is double refraction?	1	1	1
	ii.	What is the phenomena involved in Newton's rings.	1	1	1
	iii.	An electron is moving under a potential filed of 120 V. Evaluate the wavelength of the electron wave.	1	2	1
	iv	What is the velocity at the extreme position of simple harmonic oscillator?	1	2	1
	v.	What is Fermi level?	1	3	1
	vi	What is Bloch's theorem?	1	3	1
	vii.	Draw the symbol for solar cell.	1	4	1
	viii.	How magnetic switch functions?	1	4	1
	ix.	What is the difference between spontaneous and stimulated emissions?	1	5	1
	x.	What is total internal reflection?	1	5	1
Q.2(A)		Describe Newton's rings experiment and explain how it can be used to determine the wavelength of light.	18	1	4
		OR			
Q.2(B)		Derive an expression for the intensities of single slit Fraunhofer diffraction.	18	1	2
Q.3(A)		Explain the construction and working principles of scanning tunneling microscope (STM) with suitable diagrams.	18	2	4
		OR			
Q.3(B)		Assuming the time independent Schrodinger's wave equation, discuss the solution for a particle in one-dimensional potential well or box of infinite height.	18	2	2
Q.4(A)		Classify solids into conductors, semiconductors and insulators on the basis of origin of the energy bands.	18	3	3
		OR			
Q.4(B)		Describe the motion of an electron in a periodic potential field using the Kronig-Penny model for the energies of an electron using E-*k* diagram.	18	3	4

Q.5(A)	What is Hall effect? Deduce the equation for Hall coefficient and Hall voltage.	18	4	2
	OR			
Q.5(B)	Explain the working principles of LDRs (Light-Dependent Resistors) and IR (Infrared) sensors used in switching circuits.	18	4	3
Q.6(A)	Describe the construction and working of a He-Ne laser with a neat diagram,	18	5	4
	OR			
Q.6(B)	Distinguish between light propagation in step index optical fiber and graded index fibers on the basis of refractive index profiles.	18	5	3

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAPHYTCO3

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

MODERN PHYSICS FOR QUANTUM TECHNOLOGIES

(Common to CSE and CCS)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	List any two applications of diffraction.	1	1	1
	ii.	Define interference of light.	1	1	1
	iii.	What is meant by a wave function in quantum mechanics?	1	2	1
	iv	State de Broglie's hypothesis of matter waves.	1	2	1
	v.	Write any two differences between quantum bits and classical bits.	1	3	2
	vi	List any two quantum gates.	1	3	1
	vii.	Write any two examples for intrinsic and extrinsic semiconductors.	1	4	1
	viii.	Define fermi energy in semiconductors.	1	4	1
	ix.	List any two applications of magnetic materials.	1	5	2
	x.	Write any two applications of superconductors.	1	5	1
Q.2(A)		Explain the Newton's rings experiment with a neat sketch and derive the conditions for the diameters of the dark and bright fringes, as well as the radius of curvature of a plano-convex lens.	18	1	3
		OR			
Q.2(B)		Describe the construction, principle, and working of a Nicol prism, and explain how it is used as an analyser for plane-polarized light. Also list the applications of polarization.	18	1	3
Q.3(A)	i	Explain wave–particle duality. State de Broglie's hypothesis and derive an expression for the de Broglie wavelength of a particle of mass m moving with velocity v.	14	2	3
	ii	An electron is accelerated by applying a potential of 2500 V, find the de Broglie wavelength of electron associated with it.	4	2	3
		OR			
Q.3(B)		Find the allowed energy levels and corresponding wave functions of a particle in a one-dimensional box (potential well) of length a, where $V(x) = 0$ for $0 \leq x \leq a$ and $V(x) = \infty$ elsewhere, for the ground state, first excited state, and second excited state.	18	2	3
Q.4(A)	i	Compare classical and quantum computers, explaining at least five key differences.	9	3	3
	ii	Describe quantum entanglement and explain how an EPR (Bell) pair is prepared using simple quantum gates	9	3	2
		OR			

Q.4(B)	i	Discuss matrix representations of the Pauli-X, and Hadamard gates, and explain entanglement using quantum gates.	9	3	2
	ii	State the principle of superposition for a qubit and illustrate it by expressing an arbitrary qubit state as a linear combination of $\|0\rangle$ and $\|1\rangle$.	9	3	2
Q.5(A)		Explain the formation of energy bands in a crystalline solid, and illustrate, with neat diagrams, the classification of solids as conductors, insulators, and semiconductors based on band theory.	18	4	3
		OR			
Q.5(B)	i	Explain the concepts of drift current and diffusion current in a semiconductor and derive expressions for the drift current density and diffusion current density.	6	4	3
	ii	What is the Hall effect, derive the relation between Hall voltage and Hall coefficient.	12	4	3
Q.6(A)	i	Discuss the properties of dia, para and ferro magnetic materials.	9	5	2
	ii	With a neat sketch, explain the hysteresis (B–H) curve of a ferromagnetic material.	9	5	3
		OR			
Q.6(B)	i	Discuss the important properties of superconductors, such as zero electrical resistance, the Meissner effect, critical temperature, critical magnetic field, and critical current.	9	5	3
	ii	What is a Josephson junction? Describe its basic structure and explain the flow of supercurrent between two superconductors across it	9	5	3

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACIVTC02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

INTRODUCTION TO ENVIRONMENT AND SUSTAINABILITY

(Common to CAI, CDS, CAM)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Define environment.	1	1	1
	ii.	What is a food web?	1	1	1
	iii.	Define noise pollution.	1	2	1
	iv	What is meant by E-waste?	1	2	1
	v.	What is NGT?	1	3	1
	vi	Define carbon credit.	1	3	1
	vii.	What are Millennium Development Goals (MDGs)?	1	4	1
	viii.	Mention any one challenge in sustainable development.	1	4	1
	ix.	What does 3R concept stand for?	1	5	1
	x.	What is meant by circular economy?	1	5	1
Q.2(A)	i	Explain the carbon cycle and its role in climate regulation.	9	1	2
	ii	Describe the nitrogen cycle and its importance in agriculture.	9	1	3
		OR			
Q.2(B)	i	Differentiate between renewable and non-renewable resources with examples.	9	1	4
	ii	Analyze the threats to biodiversity caused by human activities.	9	1	4
Q.3(A)	i	Explain the causes and effects of air pollution on human health and environment.	9	2	2
	ii	Discuss soil pollution and methods of its control.	9	2	3
		OR			
Q.3(B)	i	Explain the greenhouse effect and its relation to global warming.	9	2	2
	ii	Describe the causes and consequences of ozone layer depletion.	9	2	3
Q.4(A)	i	Explain the functions and powers of CPCB and SPCBs in water pollution control.	9	3	2
	ii	Describe the Air (Prevention and Control of Pollution) Act and its significance.	9	3	3
		OR			
Q.4(B)	i	Discuss the Kyoto Protocol and its mechanisms.	9	3	3
	ii	Explain the importance of energy auditing in industries.	9	3	2

Q.5(A)	i	Explain the principles of sustainability with suitable examples.	9	4	2
	ii	Discuss the evolution of global sustainability frameworks from Agenda 21 to SDGs.	9	4	3
		OR			
Q.5(B)	i	Analyze the interrelationship between economy, society, and environment.	9	4	2
	ii	Evaluate the success of global sustainability initiatives.	9	4	4
Q.6(A)	i	Explain the guiding principles of sustainable engineering.	9	5	2
	ii	Discuss the circular economy model and its advantages.	9	5	3
		OR			
Q.6(B)	i	Explain sustainable materials selection in engineering design.	9	5	2
	ii	Analyze the challenges in implementing sustainable engineering practices.	9	5	4

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMATTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

ENGINEERING CALCULUS

(Common to CE, EEE, ME & ECE)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	State Lagrange's mean value theorem	1	1	1
	ii.	Replace the Cartesian equation $x^2+(y-2)^2=4$ with equivalent polar equation.	1	1	2
	iii.	Write the formula for the volume of the curve revolved about the x-axis to generate a solid.	1	2	2
	iv	Define Beta function	1	2	1
	v.	Calculate the first order partial derivatives of $f(x,y)=5xy+\sin x+7e^x$	1	3	2
	vi	When the function $f(x,y)$ has local maxima at the point (a,b)	1	3	1
	vii.	Calculate the area $\int_0^2\int_x^2 dydx$	1	4	2
	viii.	Evaluate $\iint_R dA$ where $0\le r\le 2, 0\le\theta\le\pi$	1	4	2
	ix.	Find the $CurlF$ when $F=(x^2-z)i+xe^z j+xy\,k$	1	5	2
	x.	Find $DivF$ when $F=x^2i+2y^2j+3z^2k$	1	5	2
Q.2(A)	i.	State Cauchy's mean value theorem. Find all values of c for the functions $f(x)=e^x$ and $g(x)=e^{-x}$ in (a,b)	9	1	3
	ii.	Find the value of C for the functions in the specified interval $f(x)=x^2$ in (a,b) using Lagrange's mean value theorem.	9	1	3
		OR			
Q.2(B)	i.	Graph the curve $r=1-\sin\theta$	9	1	3
	ii.	Graph the Four-leaved rose $r=\sin 2\theta$	9	1	3
Q.3(A)	i.	Find the area of the curve $r=a\cos 2\theta$.	9	2	3
	ii.	Find the volume of the spindle shaped solid generated by the revolution of the asteroid $x^{\frac{2}{3}}+y^{\frac{2}{3}}=a^{\frac{2}{3}}$ about the x-axis.	9	2	3
		OR			

Q.3(B)	i.	Prove that $\beta\left(m,\frac{1}{2}\right)=2^{2m-1}\beta(m,m)$	9	2	3
	ii.	Define Gamma function. Prove that $\Gamma(m)\Gamma\left(m+\frac{1}{2}\right)=\frac{\sqrt{\pi}}{2^{2m-1}}\Gamma(2m)$	9	2	3
Q.4(A)	i.	Find $\frac{\partial w}{\partial r}$ and $\frac{\partial w}{\partial s}$ in terms of r and s if $w=(x+y+z)^2$, $x=r-s$, $y=\cos(r+s)$, $z=\sin(r+s)$ *at* $(r,s)=(1,-1)$.	9	3	3
	ii.	Find the derivative of $g(x,y,z)=3e^x\cos yz$ at the point (0, 0, 0) in the direction of $u=2i+j-2k$.	9	3	3
		OR			
Q.4(B)	i.	Find the local extreme values of the function $f(x,y)=x^3+y^3+3x^2-3y^2-8$	9	3	3
	ii.	Find the greatest and smallest values of the function $f(x,y)=xy$ takes on the ellipse $\frac{x^2}{8}+\frac{y^2}{2}=1$.	9	3	3
Q.5(A)	i.	Sketch the region of integration, reverse the order of integration, and evaluate the integral $\int_0^2\int_0^{4-x^2}\frac{xe^{2y}}{4-y}dy\,dx$	9	4	3
	ii.	Change the Cartesian integral into an equivalent polar integral. Then evaluate the polar integral of $\int_0^1\int_0^{\sqrt{1-y^2}}(x^2+y^2)dxdy$	9	4	3
		OR			
Q.5(B)		Set up the limits of integration and evaluate the triple integral of a function $F(x,y,z)=1$ over the tetrahedron D with vertices $(0,0,0)$, $(1,1,0)$, $(0,1,0)$ and $(0,1,1)$. Use any two orders of integration and verify their volumes are same.	18	4	3
Q.6(A)	i.	Use Green's theorem to find the counter clockwise circulation for the field $F=(x^2+4y)i+(x+y^2)j$ over the square bounded by x = 0, x = 1, y = 0, y = 1.	9	5	3
	ii.	Use stokes theorem to evaluate $\int_c F.dr$. If $F=xz\,i+xy\,j+3xz\,k$ and C is boundary of the portion of the plane $2x+y+z=2$ in the first octant traversed counter clockwise direction.	9	5	3
		OR			
Q.6(B)		Verify the divergence theorem for the expanding vector field $F=x\,i+y\,j+z\,k$ over the sphere $x^2+y^2+z^2=a^2$.	18	5	3

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMATTC02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

CALCULUS FOR COMPUTER SCIENCE

(Common to CSE, CAI, CDS, CCS, CAM)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q. No.		Question	Marks	CO	BL
Q.1.	i.	Identify whether the series $\sum_{n=1}^{\infty}\cos n\pi$ converges or diverges.	1	1	2
	ii.	Identify whether the series $\sum_{n=1}^{\infty}\frac{1}{n^4}$ converges or diverges.	1	1	2
	iii.	State the Fourier series expansion of $f(x)$ in $(0,2\pi)$	1	2	1
	iv	Find the value of $\int_0^{\infty} e^{-x}x^5\,dx$	1	2	2
	v.	State Rolle's theorem	1	3	1
	vi	Illustrate the Symmetry test about the x-axis	1	3	1
	vii.	Calculate the first order partial derivatives of $f(x,y)=e^{xy}+\ln y$	1	4	2
	viii.	When the function $f(x,y)$ has local minima at the point (a,b)	1	4	1
	ix.	Calculate $\int_0^2\int_1^3 dxdy$	1	5	2
	x.	Find the Jacobian $\frac{\partial(x,y)}{\partial(r,\theta)}$ when $x=r\cos\theta, y=r\sin\theta$	1	5	2
Q.2(A)		Determine whether the series converges (or) diverges i) $\sum_{n=1}^{\infty}\sqrt{\frac{n+4}{n^4+4}}$ ii) $\sum_{n=1}^{\infty}\frac{(n-1)!}{(n+1)^2}$ iii) $\sum_{n=1}^{\infty}\left(\frac{4n+3}{3n-5}\right)^n$	18	1	3
		OR			
Q.2(B)		Test whether the series converges absolutely/conditionally or diverges. i) $\sum_{n=1}^{\infty}\frac{(-100)^n}{n!}$ ii) $\sum_{n=1}^{\infty}\frac{(-1)^n(n+1)^n}{(2n)^n}$ iii) $\sum_{n=1}^{\infty}(-1)^n\frac{(n!)^2 3^n}{(2n+1)!}$	18	1	3
Q.3(A)	i.	Obtain Fourier series for the function $f(x)=\begin{cases}-\pi, & -\pi<x<0\\ x, & 0<x<\pi\end{cases}$.	9	2	3
	ii.	Obtain the half-range cosine and sine series for $f(x)=x^2$ in $0\le x\le\pi$.	9	2	3
		OR			
Q.3(B)		Derive the value of $\Gamma\left(\frac{1}{2}\right)$ and evaluate $\int_0^{\frac{\pi}{2}}\sqrt{\sin\theta}\,d\theta\times\int_0^{\frac{\pi}{2}}\frac{d\theta}{\sqrt{\sin\theta}}$	18	2	3

Q.4(A)	i.	State Lagrange's mean value theorem. Find the value of c for the function $f(x)=\frac{1}{x}$ in the specified interval $[a,b]$	6	3	3
	ii.	State Cauchy's mean value theorem. Find all values of c for the given function $f(x)=\frac{x^3}{3}-4x, g(x)=x^2$ in $(0,3)$.	6	3	3
	iii.	Evaluate $\underset{x\to\infty}{Lt}(1+2x)^{\frac{1}{2\ln x}}$	6	3	3
		OR			
Q.4(B)	i.	Graph the curve $r=1-\cos\theta$	9	3	3
	ii.	Graph the rose $r=\sin 2\theta$	9	3	3
Q.5(A)	i.	Find all second derivatives and verify the mixed derivative theorem of **a)** $f(x,y)=x^2y+\cos y+y\sin x$ **b)** $f(x,y)=e^x+x\ln y+y\ln x$	9	4	3
	ii.	Express $\frac{\partial w}{\partial r}$ and $\frac{\partial w}{\partial s}$ in terms of r and s if $w=x+2y+z^2$, $x=\frac{r}{s}$, $y=r^2+\ln s$ and $z=2r$.	9	4	3
		OR			
Q.5(B)	i.	Find the derivative of $f(x,y,z)=\cos xy+e^{yz}+\ln zx$ at the point $P\left(1,0,\frac{1}{2}\right)$ in the direction of $u=i+2j+2k$	9	4	3
	ii.	Find the dimensions of the closed rectangular box with maximum volume that can be inscribed in the unit sphere.	9	4	3
Q.6(A)	i.	Sketch the region of integration, reverse the order of integration, and evaluate the integral $\int_0^1\int_y^1 x^2e^{xy}\,dx\,dy$	9	5	3
	ii.	Change the Cartesian integral into an equivalent polar integral. Then evaluate the polar integral of $\int_0^2\int_0^x y\,dy\,dx$	9	5	3
		OR			
Q.6(B)	i.	Find the volume of the region D enclosed by the surfaces $z=x^2+y^2$ and $z=8-x^2-y^2$.	9	5	3
	ii.	Convert the integral $\int_{-1}^{1}\int_0^{\sqrt{1-y^2}}\int_0^x (x^2+y^2)\,dz\,dx\,dy$ to an equivalent integral in cylindrical coordinates and hence evaluate.	9	5	3

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAENGTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

PROFESSIONAL COMMUNICATION

(Common to CIV, EEE, MEC, ECE, CSE, CCS)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Write the suitable verb form for the following sentence. He _____ (work) in this company since 2009.	1	1	1
	ii.	Identify the parts of speech for the underlined words. Sita has been waiting for Rama in deep forest.	1	1	1
	iii.	Fill in the blank with the correct past tense form of the verb given in bracket. "They ____ (finish) their homework last night."	1	2	1
	iv	Correct the following sentence. I am agree with your opinion.	1	2	2
	v.	Change the following sentence into passive voice: They painted the door.	1	3	2
	vi	Convert the statement into polite expression. "Let me use your mobile phone for a call."	1	3	2
	vii.	Define Skimming.	1	4	1
	viii.	What is intensive reading?	1	4	1
	ix.	What is meant by email etiquette?	1	5	1
	x.	Give any two do's and don'ts of a presentation.	1	5	2
Q.2(A)		Develop a dialogue between you, your friend, and a faculty coordinator regarding campus placements in your college.	18	1	3
		OR			
Q.2(B)		Describe a situation of participating in a cultural program highlighting your experiences with suitable adjectives.	18	1	3
Q.3(A)		Describe an incident when you helped someone in need, using appropriate past tense verbs.	18	2	3
		OR			
Q.3(B)	i)	Describe the person who inspired you the most in 150 words.	9	2	3
	ii)	Describe the place which you would like to visit again in 150 words	9	2	3
Q.4(A)		Explain the principles of communication in detail.	18	3	3
		OR			
Q.4(B)		Explain the steps involved in giving directions to an unfamiliar place.	18	3	3
Q.5(A)		Describe the relationship between Red Chief and the two kidnappers, Bill and Sam.	18	4	3
		OR			

Q.5(B)		Explain how Rabindranath Tagore presents the idea of surrender as the highest form of victory.	18	4	3
Q.6(A)		Construct a letter to an online seller about the delay in dispatching the laptop you ordered.	18	5	3
		OR			
Q.6(B)	i)	Prepare a report on Tree plantation drive in your institution.	9	5	2
	ii)	Draft an email to the Registrar of your University requesting to extend the library timings.	9	5	2

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACHETC03

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

SMART CHEMISTRY

(Common to CAI, CDS, CAM)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	State the Heisenberg's uncertainty principle.	1	1	2
	ii.	Write MO configuration of N_2 molecule.	1	1	1
	iii.	What is the class and order of the C_{2v} point group?	1	2	1
	iv	State and explain Beer-Lambert's law.	1	2	2
	v.	Define semiconductor.	1	3	1
	vi	Mention any two applications of memristors.	1	3	2
	vii.	List out any two applications of molecular logic gate	1	4	2
	viii.	Write down the circuit representation of AND logic gate	1	4	1
	ix.	Name the nitrogenous bases present in RNA.	1	5	1
	x.	What is Alfa fold?	1	5	1
Q.2(A)	i.	Derive the equation for the wave function and energy of a particle in the one-dimensional box	10	1	2
	ii.	Derive de Broglie's relation. Calculate (a) wavenumber and (b) frequency of yellow radiation having wavelength of 6000 Å.	8	1	2
		OR			
Q.2(B)	i.	Define HOMO and LUMO by drawing the π-molecular orbital diagram of 1,3-butadiene.	10	1	2
	ii.	Calculate the bond order of the O_2 molecule by using the MO diagram	8	1	2
Q.3(A)	i.	What is spectroscopy?	2	2	1
	ii.	Explain the principle, instrumentation, and applications of UV-Visible spectroscopy.	16	2	2
		OR			
Q.3(B)	i.	What is a molecular point group? Explain any four symmetry elements with examples.	12	2	2
	ii.	Write the 3X3 matrix representation of all symmetry element of C_{2h} point group.	6	2	2
Q.4(A)	i.	Explain the classification, properties and applications of carbon nanotubes.	8	3	2
	ii.	Explain the doping mechanism in polyaniline conducting polymer.	10	3	2
		OR			

Q.4(B)	i.	What is super conductor? Explain BCS theory and write few applications of superconductors.	12	3	2
	ii.	Explain the physical properties and chemical properties of fullerenes.	6	3	2
Q.5(A)	i.	Explain the concept of **OR** molecular logic gate and provide their design principle, and mechanism using any one example.	10	4	2
	ii.	Identify and discuss the main limitations and challenges in designing and implementing molecular logic gates.	8	4	2
		OR			
Q.5(B)	i.	Explain the concept of **AND** molecular logic gate and provide their design principle, and mechanism using any one example.	10	4	2
	ii.	Explain the applications of molecular logic gates.	8	4	2
Q.6(A)	i.	Discuss the structure and functions of proteins.	12	5	2
	ii.	Discuss the structure and function of carbohydrates.	6	5	2
		OR			
Q.6(B)	i.	What are neurons? Discuss the mechanism of action potential transfer through the neuro-muscular junction (NMJ).	12	5	2
	ii.	What is the complementary strand for the codons CCGGAATTG, and find out the total number of H-bonds present in it?	6	5	2

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACIVTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

ENGINEERING GEOLOGY

(Civil Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Which branch of includes the study of ground water?	1	1	1
	ii.	Give any two examples of geological failures with reference to dams	1	1	1
	iii.	What is Physical weathering?	1	2	1
	iv	Which type of landforms are formed at the river's mouth due to deposition of sediments?	1	2	1
	v.	Give two examples of Halides.	1	3	1
	vi	What is Biomineralization?	1	3	1
	vii.	Define rock.	1	4	1
	viii.	Mention any two concordant bodies in intrusive igneous rocks	1	4	1
	ix.	Write the difference between Outcrop and Incrop.	1	5	1
	x.	List the types of Seismic waves.	1	5	1
Q.2(A)	i)	Discuss about various branches of Geology.	18	1	2
	ii)	Explain the scope of Geology in Town and Regional Planning.			
		OR			
Q.2(B)	i)	Discuss about the composition of Mantle and Core.	18	1	2
	ii)	What are the geological causes of a dam failure?			
Q.3(A)	i)	What are the factors influencing weathering?	18	2	2
	ii)	Discuss how chemical weathering take place in the rocks.			
		OR			
Q.3(B)	i)	List the factors that drives the soil formation and development.	18	2	2
	ii)	Explain the process involved in the soil formation.			
Q.4(A)	i)	What is mineral?	18	3	2
	ii)	How are minerals classified based on chemical composition?			
		OR			
Q.4(B)		Explain the formation of minerals through the following	18	3	2
	i)	from solutions			
	ii)	Hydrothermal process			
Q.5(A)	i)	What is petrology?	18	4	2
	ii)	Explain the importance of petrology in Civil Engineering.			
	iii)	Explain the process of rock cycle with a neat sketch.			
		OR			

Q.5(B)	i)	Define a rock.	18	4	2
	ii)	How are rocks classified based on their origin and mode of formation?			
Q.6(A)	i)	Explain about the Strike and Dip in Geological structures.	18	5	2
	ii)	How are folds classified based on Dip, Symmetry and Cylindricity?			
		OR			
Q.6(B)	i)	What are different types of earthquakes?	18	5	2
	ii)	Explain the various impacts of earthquakes.			

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAEEETC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

FUNDAMENTALS OF ELECTRICAL ENERGY SYSTEMS

(Electrical and Electronics Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	What is the significance of reactive power?	1	1	1
	ii.	List out the consequences of poor power factor.	1	1	2
	iii.	List out the main parts of nuclear reactor.	1	2	2
	iv	Give the classification of turbines.	1	2	1
	v.	What do you mean by Emitter layer of a PV cell?	1	3	4
	vi	Brief about ocean energy systems?	1	3	3
	vii.	What are smart grid enablers?	1	4	1
	viii.	Mention what are the smart grid domains.	1	4	2
	ix.	State Kelvin's law.	1	5	1
	x.	List out the insulating materials being used in Cables.	1	5	2
Q.2(A)		Describe the interconnected structure of power generation, transmission, distribution, and utilization. Provide a block diagram and explain each stage briefly.	18	1	2
		OR			
Q.2(B)		Explain the Indian energy scenario with reference to installed capacity, major energy sources, and current challenges in meeting energy demand.	18	1	4
Q.3(A)		Draw the neat layout of thermal power plant and explain the function of each component and detail the operation?	18	2	2
		OR			
Q.3(B)		With the help of neat diagram, explain the operation and working of nuclear reactor.	18	2	2
Q.4(A)	i)	Detail about various types of solar PV systems.	10	3	2
	ii)	Give the overview of a biomass plant with neat block diagram.	8		1
		OR			
Q.4(B)		Elaborate the challenges in integration of renewable energy sources with grid.	18	3	2
Q.5(A)	i)	Distinguish between conventional power system and smart grid.	9	4	2
	ii)	Discuss about communication architecture and protocols for smart grid.	9		
		OR			
Q.5(B)		Detail the overview of the structure of the microgrid.	18	4	3
Q.6(A)		Detail about various semiconducting materials and give their significance in the field of renewable energy.	18	5	1
		OR			
Q.6(B)		What is low resistivity material and what are the properties of low resistivity material.	18	5	1

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

MATERIALS SCIENCE FOR ENGINEERS

(Mechanical Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	What is the difference between a crystal lattice and a unit cell?	1	1	1
	ii.	The edge length of the unit cell of alpha polonium which crystallizes in a simple cubic structure is 336 pm. Determine the radius of polonium.	1	1	1
	iii.	What is the significance of material testing?	1	2	1
	iv	What is the difference between brass and bronze?	1	2	1
	v.	What are the desirable properties of a matrix used in composite materials?	1	3	1
	vi	What is the primary purpose of the heated die in the pultrusion process?	1	3	1
	vii.	Why cannot thermosetting polymers be remolded?	1	4	1
	viii.	Why are ceramics brittle in nature?	1	4	1
	ix.	Mention any two applications of nanomaterials.	1	5	1
	x.	How do electroactive materials respond to an electric field?	1	5	1
Q.2(A)		A crystal plane of lattice intercepts the principal axes $\overrightarrow{a1}$, $\overrightarrow{a2}$, and $\overrightarrow{a3}$ at $3a_1$, $4a_2$ and $2a_3$, respectively. Calculate the Miller indices of the plane. Discuss the physical significance of Miller indices in crystallography.	18	1	3
		OR			
Q.2(B)		Write a short note on: • Ceramic • Polymer • Composite • Biomaterials	18	1	2
Q.3(A)		Discuss the types of microstructure found in materials based on the shape of the microstructure.	18	2	2
		OR			
Q.3(B)		Briefly describe the different types of heat treatment processes used for metals and alloys.	18	2	2
Q.4(A)		Describe the hand lay-up technique with a neat sketch, including its procedure, advantages, and limitations.	18	3	2
		OR			

Q.4(B)	A laminate of Kelvaro/polyester composite is manufactured using the hand layup technique. The density of Kelvar49 is 1.45 g/cm^3. The fiber volume fractions are 40%. The density of polyester is 1.3 g/cm^3. A specimen of 36 g was taken from the laminate and immersed in water to become 8 g. Calculate the theoretical and the measured density of the composite laminate.	18	3	3
Q.5(A)	Briefly describe the manufacturing process of ceramic tiles.	18	4	2
	OR			
Q.5(B)	Briefly discuss the steps in the slip casting process of ceramics. Also, state its advantages and limitations.	18	4	2
Q.6(A)	Explain self-healing materials in detail. Discuss their mechanism, types, properties, advantages, limitations, and applications.	18	5	2
	OR			
Q.6(B)	Explain photonic crystals in detail. Discuss their principle, classification, properties, and applications.	18	5	2

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 2BAECETC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

SENSORS AND TRANSDUCERS

(Electronics and Communication Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Distinguish between a sensor and a transducer.	1	1	2
	ii.	State what is meant by response time.	1	1	1
	iii.	Define a potentiometric sensor.	1	2	1
	iv	State one limitation of capacitive displacement sensors.	1	2	1
	v.	Explain the operating principle of an inductive sensor.	1	3	2
	vi	What is a resistive sensor?	1	3	1
	vii.	Identify the physical quantity measured by a Hall-effect sensor.	1	4	1
	viii.	Mention one application of optical sensors.	1	4	1
	ix.	Explain the function of an embedded processor in a smart sensor.	1	5	2
	x.	Identify the sensor commonly used for humidity measurement.	1	5	1
Q.2(A)	i)	Classify sensors and transducers according to their application, power requirement, and output signal, and illustrate each classification with appropriate examples.	18	1	2
		OR			
Q.2(B)	i)	Explain the static characteristics of sensors, namely sensitivity, accuracy, and linearity.	9	1	2
	ii)	Describe the dynamic characteristics of sensors with suitable definitions.	9	1	2
Q.3(A)	i)	Explain the working principle of capacitive displacement sensors and evaluate their suitability for small displacement measurements.	18	2	2
		OR			
Q.3(B)	i)	Illustrate the use of LVDT in pressure measurement systems.	9	2	3
	ii)	Discuss the working principle of an inductive displacement sensor.	9	2	4
Q.4(A)	i)	Analyse and compare the performance characteristics of RTDs, thermistors, and thermocouples used in industrial temperature measurement systems.	18	3	4
		OR			
Q.4(B)	i)	Explain the working principle of inductive sensors with suitable applications.	9	3	2
	ii)	Describe the principle of operation of capacitive sensors used in measurement systems.	9	3	2

Q.5(A)	i)	Evaluate the role of proximity sensors and magnetic encoders in automation and motion control systems.	18	4	5
		OR			
Q.5(B)	i)	Illustrate the application of magnetic encoders for position and speed measurement.	9	4	3
	ii)	Compare photodiodes and phototransistors with respect to sensitivity and response time.	9	4	4
Q.6(A)	i)	Explain the architecture, working principle, and applications of smart sensors with suitable examples.	18	5	2
		OR			
Q.6(B)	i)	Describe the working principle of a MEMS-based humidity sensor.	9	5	2
	ii)	Explain the principle of operation of gas sensors used for air-quality monitoring.	9	5	2

*****END*****

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACCSTC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

FUNDAMENTALS OF CYBER SECURITY

(CSE- Cyber Security)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	Which type of cyber-attack uses fraudulent emails or messages to steal sensitive information from users?	1	1	1
	ii.	State one characteristic of malware.	1	1	2
	iii.	Expand the term WAN and explain its primary use in networking	1	2	1
	iv	Identify the network attack that involves secret interception of data.	1	2	1
	v.	Which cipher uses a 5 × 5 matrix for encryption?	1	3	1
	vi	Identify the type of classical cipher to which Rail Fence belongs.	1	3	2
	vii.	State one feature of secure browsing.	1	4	2
	viii.	Give one limitation of antivirus software.	1	4	2
	ix.	What does data integrity ensure in information systems?	1	5	1
	x.	Expand the term IoT and mention one of its practical uses.	1	5	1
Q.2(A)		Discuss the need for cyber security, its scope, and major application areas in the digital era. Support your explanation with suitable real-world examples.	18	1	3
		OR			
Q.2(B)		During a major public event, a government website was defaced, resulting in the spread of false information and public panic. Analyse the incident by:		1	4
	i)	Identifying the possible cyber-attacks involved.	4		
	ii)	Examining the impact on public trust and information integrity.	4		
	iii)	Discussing the legal and ethical implications.	5		
	iv)	Suggesting suitable measures to prevent such incidents in the future.	5		
Q.3(A)	i)	Explain the Man-in-the-Middle (MITM) attack with a suitable example.	9	2	2
	ii)	Explain eavesdropping and spoofing attacks, highlighting how they compromise secure communication.	9		
		OR			
Q.3(B)		A company's web server became unreachable during business hours due to an unusually high volume of incoming traffic. Analyse the incident by addressing the following:		2	4

	i)	Identify and explain the type of network attack responsible.	4		
	ii)	Describe the role of firewalls in controlling and mitigating malicious traffic.	4		
	iii)	Discuss how traffic filtering and rate-limiting mechanisms help in preventing service disruption.	5		
	iv)	Suggest additional preventive measures to protect servers from similar attacks in the future.	5		
Q.4(A)	i)	Explain the Caesar Cipher along with steps	5	3	2
	ii)	Encrypt "Sem Exam" with key K=25 with Caesar Cipher	5		
	iii)	Encipher the plaintext "MEET ME AT THE PARK" (ignore spaces) using the Rail Fence Cipher with 3 rails.	4		
	iv)	Explain how a Transposition cipher (like Rail Fence) differs fundamentally from a Substitution cipher (like Caesar).	4		
		OR			
Q.4(B)		The Playfair cipher is a classical encryption technique based on digraph substitution.		3	2
		With reference to the Playfair cipher:			
	i)	Describe the construction of the Playfair key matrix.	6		
	ii)	Explain the rules used for encryption and decryption.	6		
	iii)	Using the key *MONARCHY*, encrypt the plaintext *INSTRUMENT*.	6		
Q.5(A)	i)	Explain security features provided by the Windows operating system.	6	4	2
	ii)	Explain security features of the Linux operating system.	6		
	iii)	Explain security features of the Android operating system.	6		
		OR			
Q.5(B)		Data protection has become a critical requirement for modern organizations due to increasing cyber threats and regulatory requirements.		4	2
	i)	Explain its importance in the context of modern organizations.	4		
	ii)	Discuss the major threats to organizational data.	4		
	iii)	Describe methods used to secure data at rest and data in transit.	5		
	iv)	Outline best practices for effective data handling and protection.	5		
Q.6(A)	i)	Explain incident response and its importance in cyber security management.	6	5	2
	ii)	Explain the phases of the incident response lifecycle.	6		
	iii)	Explain the role of incident response teams.	6		
		OR			
Q.6(B)		Explain Internet of Things (IoT) security in detail. Discuss common threats, vulnerabilities, and security challenges associated with IoT environments	18	5	4

END

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BACSETC02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

FUNDAMENTALS OF WEB TECHNOLOGY

(Computer Science & Engineering)

Time: 3Hrs **Max Marks: 100**

Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.		Question	Marks	CO	BL
Q.1.	i.	What is the role of a client in the web model?	1	1	1
	ii.	Name two new input types in HTML5.	1	1	2
	iii.	Differentiate between inline and external CSS.	1	2	2
	iv	What is the primary purpose of CSS?	1	2	1
	v.	List any two JavaScript operators.	1	3	2
	vi	Which loop executes at least once?	1	3	1
	vii.	What is the purpose of the required attribute?	1	4	1
	viii.	A user wants to enter an email address in a form with automatic validation. Which HTML5 input type should be used?	1	4	2
	ix.	What is a wireframe in web design?	1	5	1
	x.	Name any one tool used for creating wireframes.	1	5	1
Q.2(A)	i)	Explain in detail about the structure of HTML with suitable example.	9	1	2
	ii)	Explain in detail about the web server with neat diagram.	9		2
		OR			
Q.2(B)		Your college plans to launch an online course registration page. The page should collect details from students such as: • Name, Email, and Phone number • Course selection using radio button (choose from "Web Design", "Data Science", and "Cyber Security") • A submit button	18	1	3
Q.3(A)		Apply different page layout techniques in CSS to design a webpage.	18	2	3
		OR			
Q.3(B)		An online examination system needs to calculate grades for students based on their marks: • Marks ≥ 90 → Grade A • Marks ≥ 75 → Grade B • Marks ≥ 60 → Grade C • Else → Fail Write a JavaScript program to implement this logic.	18	2	3

Q.4(A)	Interpret the Document Object Model (DOM) and analyze the methods used to access and manipulate HTML elements.	18	3	3
	OR			
Q.4(B)	Illustrate how conditional statements and loops are applied in JavaScript to control program flow.	18	3	3
Q.5(A)	Evaluate client-side form validation techniques in HTML5 in terms of effectiveness and usability.	18	4	4
	OR			
Q.5(B)	Analyse CSS animations using keyframes with an example.	18	4	4
Q.6(A)	Describe different web hosting options available for deploying a website.	18	5	2
	OR			
Q.6(B)	Explain how HTML, CSS, and JavaScript are integrated to build a functional website.	18	5	2

*****END*****

SET-1

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

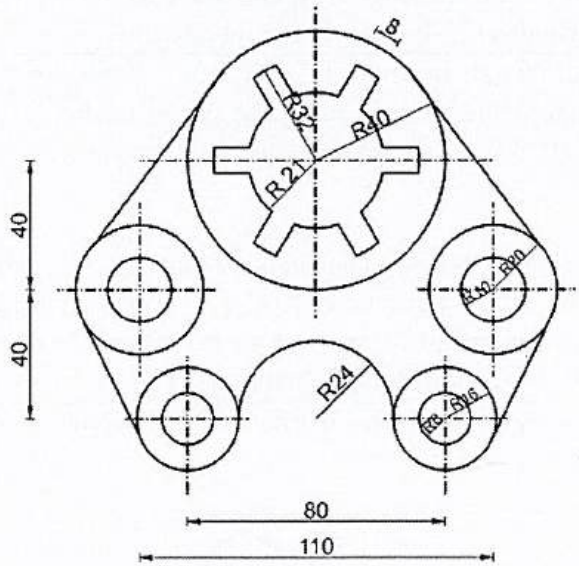
ENGINEERING GRAPHICS

(CSE-DS)

Time: 3Hrs **Max Marks: 100**

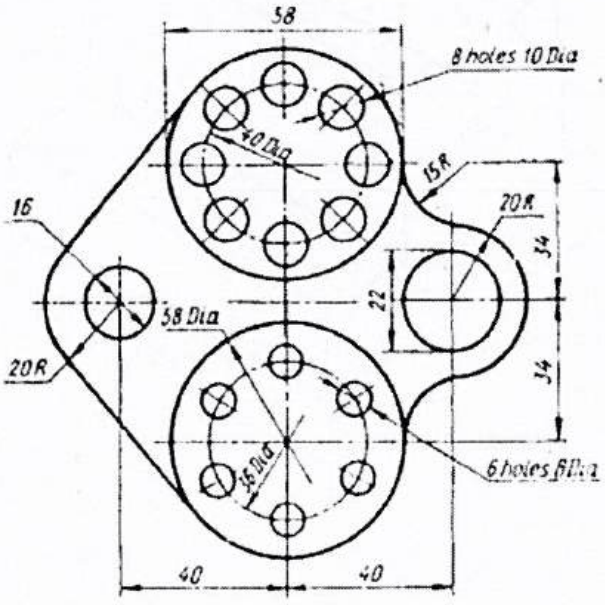
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Reproduce the below diagram with considering that all dimensions are in millimeter (mm).	20	1	3

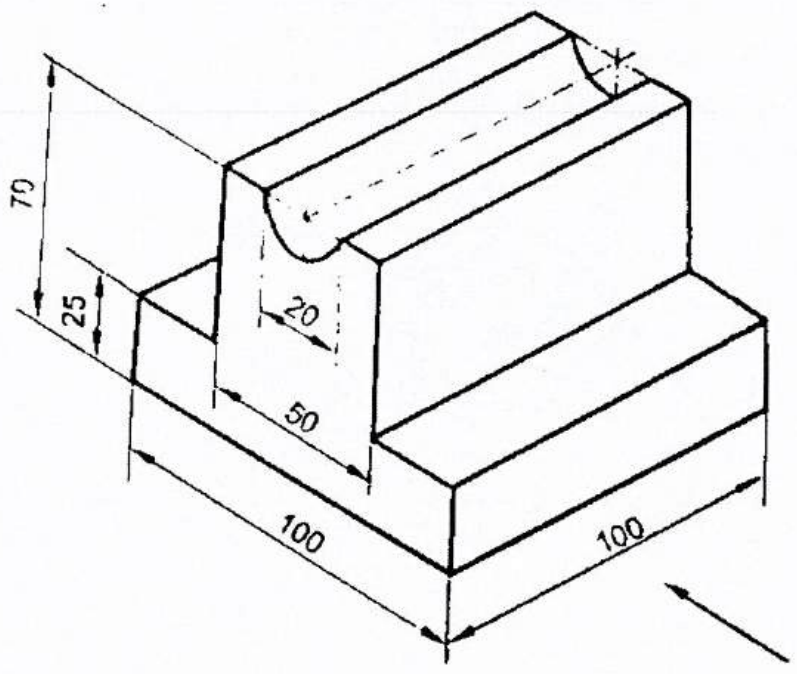


OR

Q.1(B)	Reproduce the below diagram with considering that all dimensions are in millimeter (mm).	20	1	3

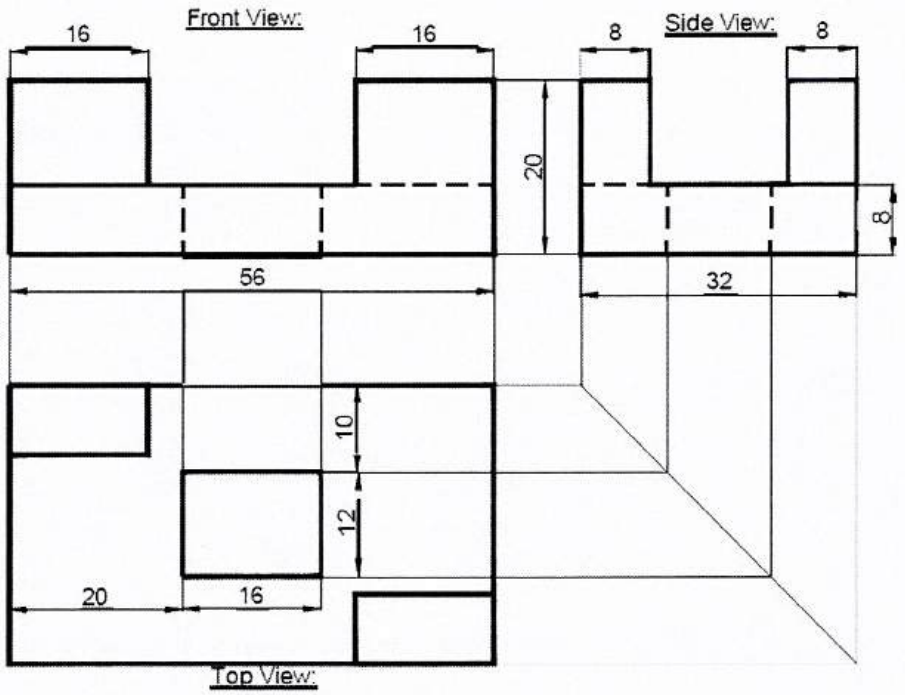


Q.2(A)	Mark the projections of the following points on a common reference line. i. Point A is 30 mm above HP and 45 mm in front of VP. ii. Point B is 45 mm above HP and 60 mm behind VP. iii. Point C is 35 mm below HP and 25 mm behind VP. iv. Point D is 45 mm below HP and 60 mm in front of VP. v. Point E is lying on HP and 50 mm in front of VP. vi. Point F is 55 mm above HP and lying on VP. vii. Point G is lying on VP and 40 mm below HP. viii. Point H is lying on HP and 35 mm behind VP.	20	2	3
	OR			
Q.2(B)	The top view of a 75mm long line AB measures 65mm, while its front view measures 50mm. Its one end A is in HP and12mm in front of VP. Draw the projections of AB and determine its inclination with HP and VP	20	2	3
Q.3(A)	A thin rectangular plate of sides 50 mm × 25 mm has its shorter side in the HP and inclined at an angle of 60° to the HP. Draw its projections.	20	3	3
	OR			
Q.3(B)	A Pentagonal prism with a base side of 25 mm and an axis 50 mm long, rests with one of its edges on HP such that the base containing that edge makes an angle of 30° to HP and its axis is parallel to VP. Draw its projections.	20	3	3
Q.4(A)	A cone with a diameter of 60 mm and a height of 80 mm is resting on its base on HP. It is cut by a section plane that passes through the axis at a point 40 mm above HP and is inclined 30° to HP. Draw its front view, sectional top view and true shape of the section.	20	4	3
	OR			
Q.4(B)	A cylinder with a diameter of 40 mm and a height of 50 mm is resting vertically on one of its ends on HP. It is cut by a plane perpendicular to VP and inclined at 30° to HP. The plane meets the axis at a point 30 mm from the base. Draw the development of the lateral surface of the lower portion of the truncated cylinder.	20	4	3
Q.5(A)	Draw the front, top, and right-side views of the below diagram in first-angle projection.	20	5	3



OR

Q.5(B) Draw the isometric view from the given orthographic front, top and right side views of the diagram below. 20 5 3



END

SET-2

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

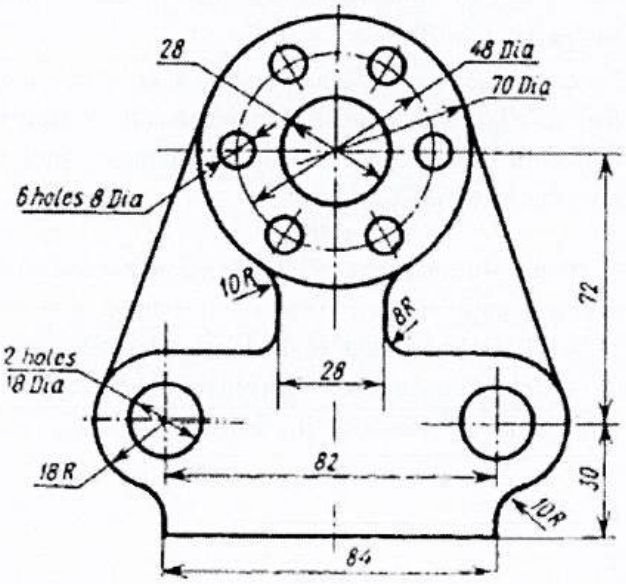
ENGINEERING GRAPHICS

(CSE-DS)

Time: 3Hrs **Max Marks: 100**

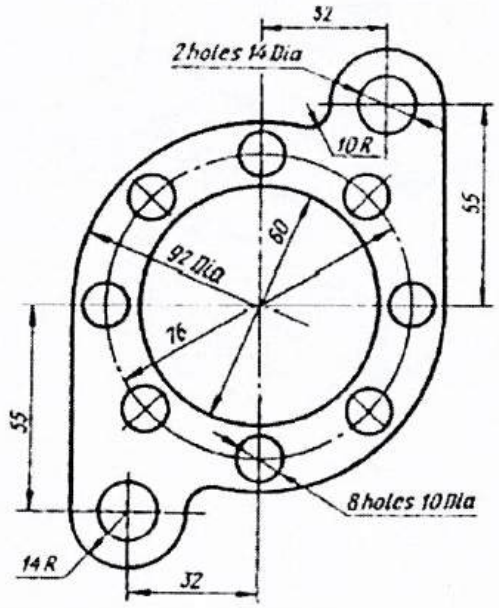
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Reproduce the below diagram with considering that all dimensions are in millimeter (mm).	20	1	3

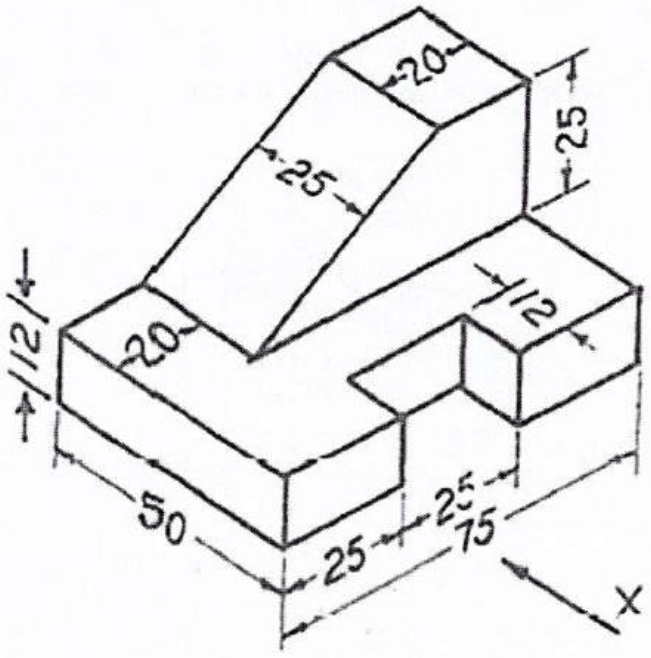


OR

Q.1(B)	Reproduce the below diagram with considering that all dimensions are in millimeter (mm).	20	1	3

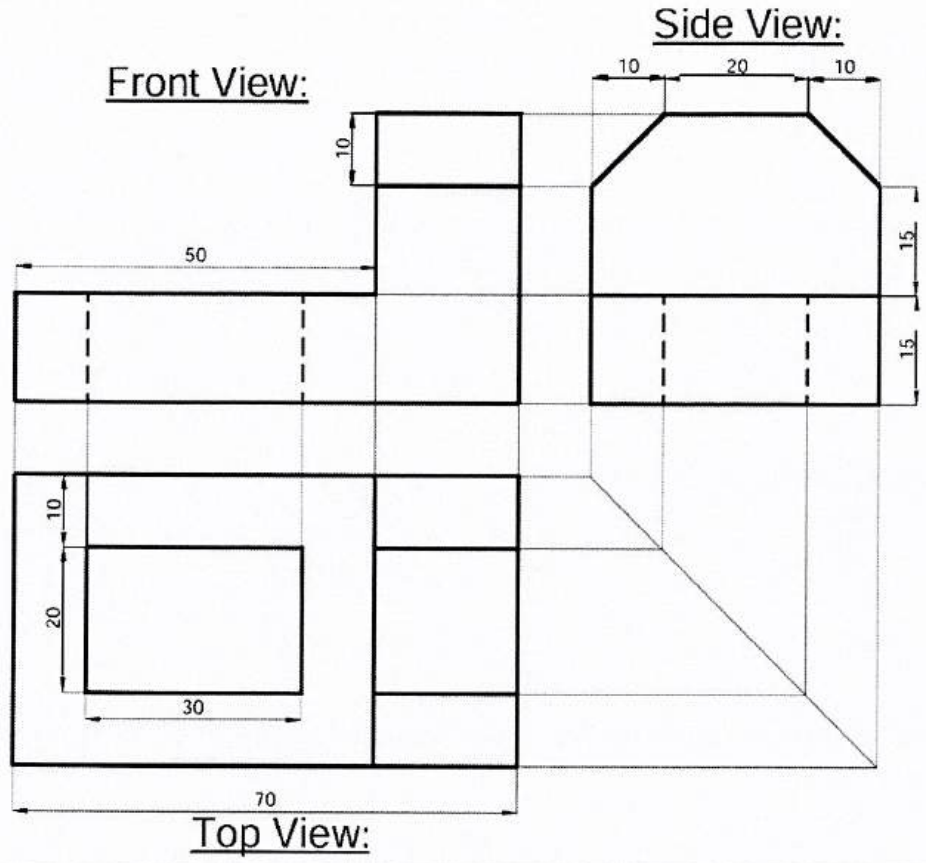


Q.2(A)	Mark the projections of the following points on a common reference line. (a) Point A is 25 mm above HP and 35 mm in front of VP. (b) Point B is 25 mm above HP and 40 mm behind VP. (c) Point C is 30 mm below HP and 45 mm behind VP. (d) Point D is 30 mm below HP and 40 mm in front of VP. (e) Point E is 25 mm above HP and lying on VP. (f) Point F is 35 mm below HP and lying on VP. (g) Point G is lying on HP and 25 mm in front of VP. (h) Point H is 20 mm behind VP and lying on HP.	20	2	3
	OR			
Q.2(B)	A-line AB measuring 80 mm is inclined at an angle of 30° to HP and 45° to VP. Point A is 20 mm above HP and 30 mm in front of VP. Draw the projections of the straight line.	20	2	3
Q.3(A)	A pentagonal lamina of side 25 mm is resting on HP with one of its corners. The surface is at 45° to HP. Draw its projections.	20	3	3
	OR			
Q.3(B)	Draw the projection of a cylinder with a base 30 mm in diameter and axis 60 mm long, resting with a point of its base circle on HP such that the axis is making an angle of 30° with HP and parallel to VP.	20	3	3
Q.4(A)	A pentagonal pyramid with a base side of 30 mm and an axis 60 mm long, rests with its base on HP and an edge of its base is parallel to VP. A section plane perpendicular to VP and inclined at 45° to HP passes through the axis at a point 35 mm above the base. Draw the sectional top view.	20	4	3
	OR			
Q.4(B)	A square pyramid, base 40 mm side and axis 65 mm long, has its base on the HP and all the edges of the base equally inclined to the VP. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP and bisecting the axis. Draw its development of the remaining portion. Use radial line method.	20	4	3
Q.5(A)	Draw the front, top, and right-side views of the below diagram in first-angle projection.	20	5	3



OR

Q.5(B) Draw the isometric view from the given orthographic front, top and side views of the diagram below. 20 5 3



END

SET-3

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

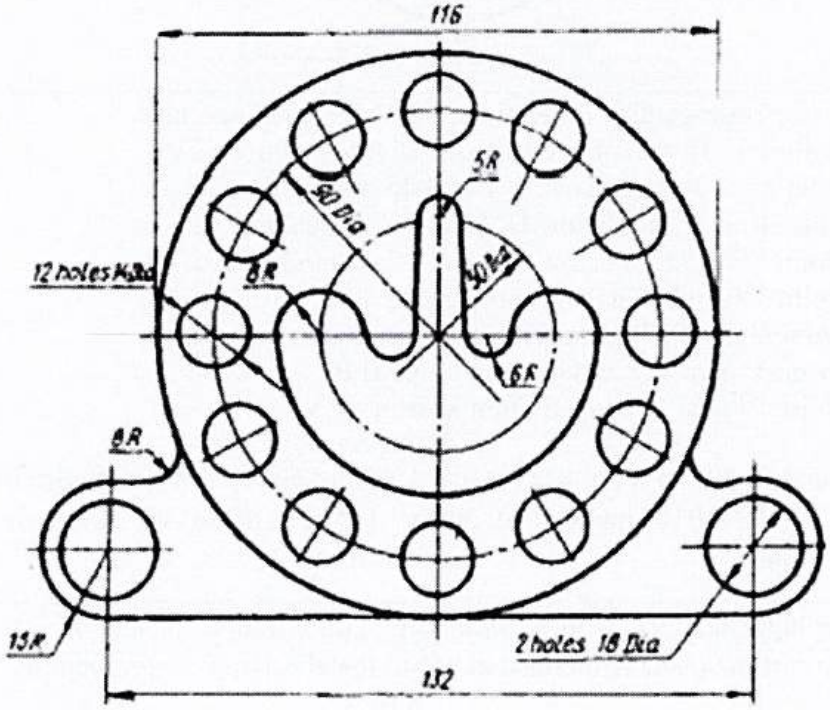
ENGINEERING GRAPHICS

(CSE-AI)

Time: 3Hrs **Max Marks: 100**

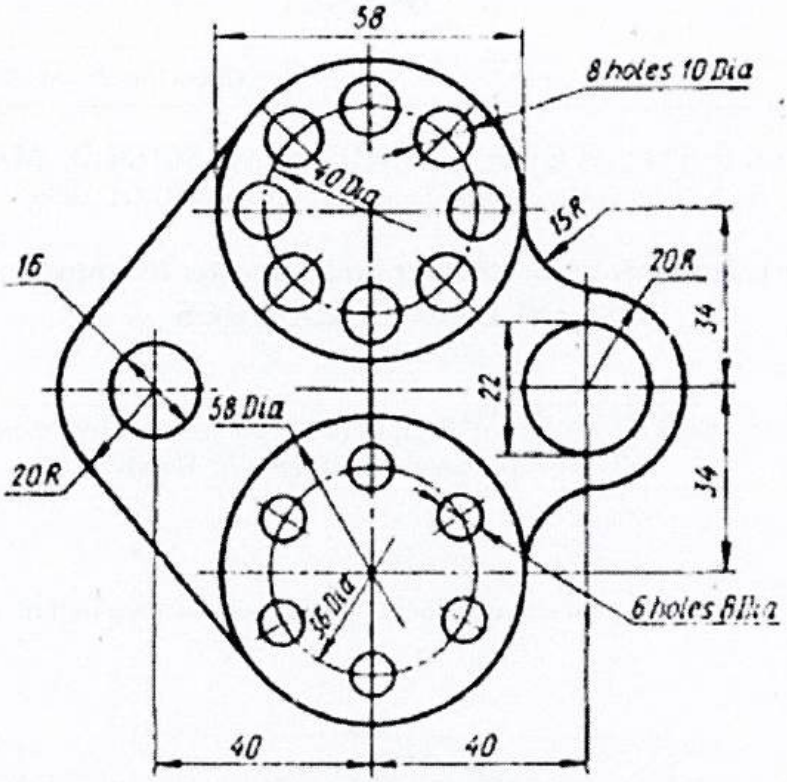
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the below diagram and consider all the dimensions are in mm	20	1	3



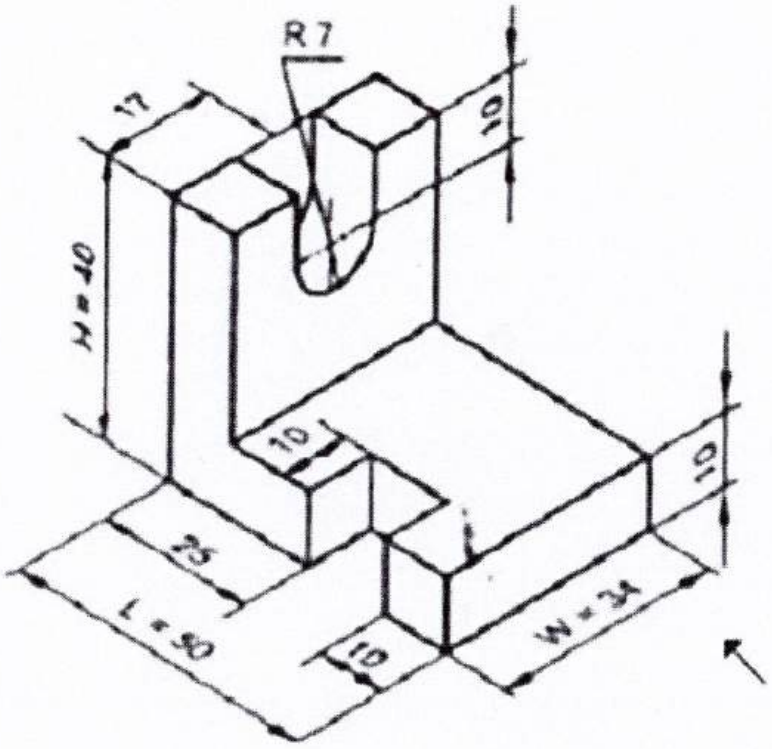
OR

Q.1(B)	Draw the below diagram and consider all the dimensions are in mm	20	1	3



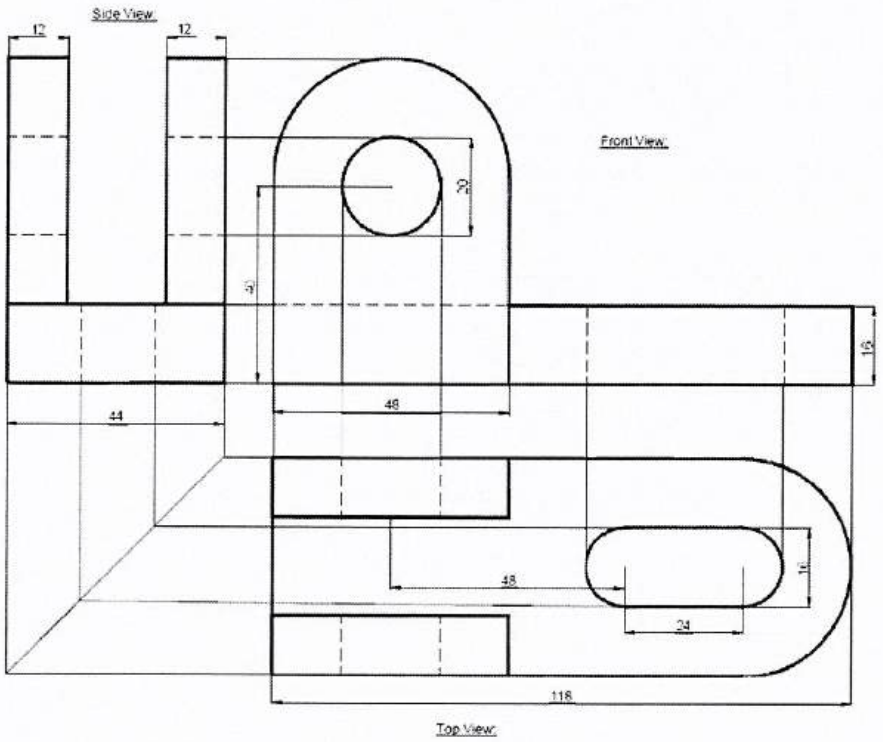
Q.2(A)	Draw the orthographic projections of the following points? (a) Point P is 35 mm above H.P and 45 mm in front of VP (b) Point Q is 30 mm above H.P and 45 mm behind VP (c) Point R is 42 mm below H.P and 50 mm behind VP (d) Point S is 45 mm below H.P and 55 mm in front of VP (e) Point T is in H.P and 40 mm behind VP (f) Point U is in V.P and 55 mm below HP (g) Point V is in V.P and 45 mm above H.P (h) Point W is in H.P and 50 mm in front of VP	20	2	3
	OR			
Q.2(B)	A line AB, 70mm long, has its end A 15mm above HP and 20mm in front of VP. It is inclined at 30° to HP and 45°to VP. Draw its projections.	20	2	3
Q.3(A)	A pentagonal Plane with a 30mm side has an edge on the HP, the surface of the plane is inclined at 45^0 to the HP. Draw its projections?	20	3	3
	OR			
Q.3(B)	Draw projections of a cube of edge 50mm, resting on one of its corners in the H.P. with a solid diagonal vertical.	20	3	3
Q.4(A)	A Pentagonal Prism 30mm base side & 60mm axis is standing on HP on its base whose one side is perpendicular to VP. It is cut by a section plane 45° inclined to HP, through mid-point of axis. Draw FV, sec. TV and sec. Side View.	20	4	3
	OR			
Q.4(B)	A Cylinder of base 50mm and axis 60mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to VP and inclined at 45° to HP passing through the top of the generator and cuts all other generators. Draw the development of surface. Use parallel line method.	20	4	3

Q.5(A)	Draw the three Orthographic Views of the given solid.	20	5	3



OR

Q.5(B)	Draw the isometric View from the given orthographic views of a solid	20	5	3



END

SET-4

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

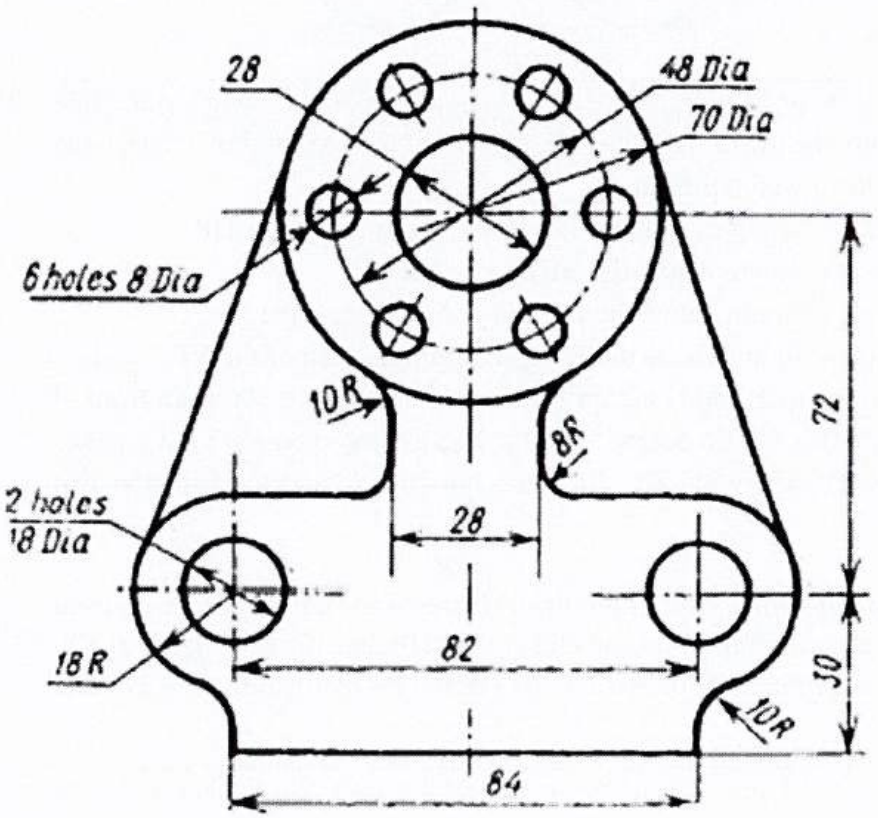
ENGINEERING GRAPHICS

(CSE-AI)

Time: 3Hrs **Max Marks: 100**

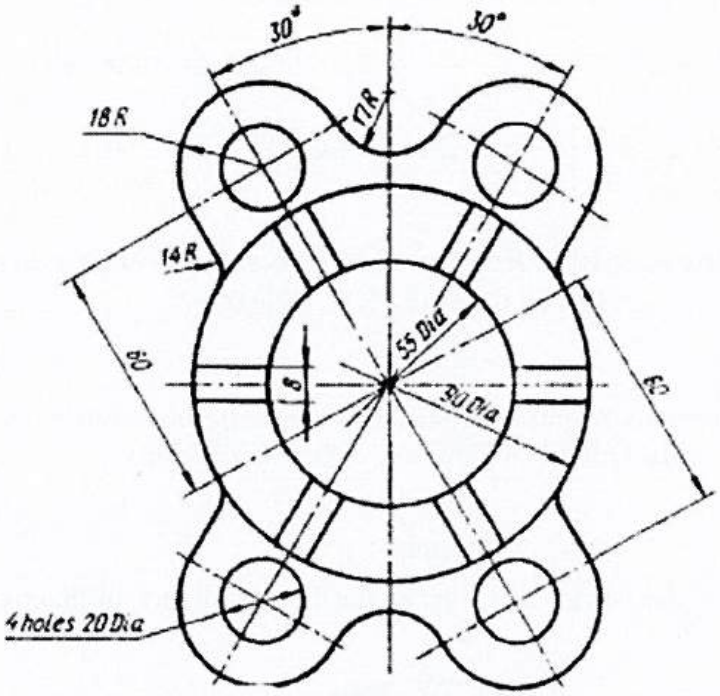
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the simple diagram and consider all the dimensions are millimetre.	20	1	3



OR

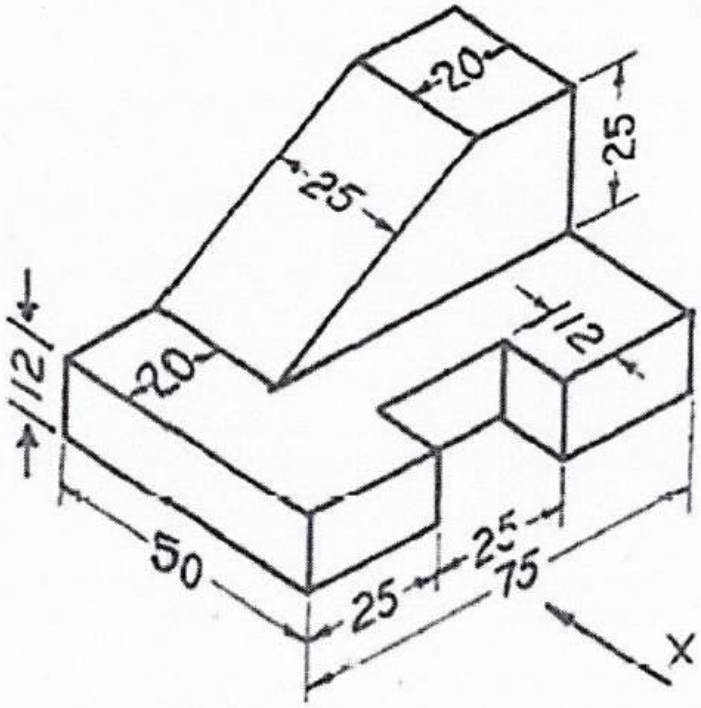
Q.1(B)	Draw the simple diagram and consider all the dimensions are millimetre.	20	1	3



Q.2(A)	(i) Draw the projections of the following points on the same ground line and keep the distance between the projectors as 50mm. Name the quadrants in which they are? a) Point P – 52mm in front of the VP & 32mm above the HP b) Point Q – 66mm below the HP and on the VP c) Point R – 33mm below the HP and 55mm behind the VP d) Point S – 50mm above the HP and 55mm in front of the VP (ii).Two points F and G are on HP. The point F being 30mm in front of VP while G is 40mm behind VP. The line joining their top views makes an angle of 45° with XY. Find the horizontal distance between two points.	10+10	2	3
	OR			
Q.2(B)	The top view of a 75mm long line AB measures 65mm, while its front view measures 50mm. Its one end A is in HP and 12mm in front of VP. Draw the projections of AB and determine its inclination with HP and VP	20	2	3
Q.3(A)	A hexagonal Plate with a 30mm side and neglisibile thickness has its surface perpendicular to the HP and inclined at 45^0 to the VP. Draw its Projections? When one of its sides of the plane is parallel to and 15 mm in front of the VP.	20	3	3
	OR			
Q.3(B)	A Cylinder of base diameter 50 mm and axis 70 mm has a generator in the V.P and inclined at 45^0 to the H.P. Draw its projections.	20	3	3
Q.4(A)	A Hexagonal prism of 30mm sides and 80mm long is resting on HP on its base with two of its lateral faces parallel to VP. The prism is sectioned by an inclined section plane that passes through the midpoint of the axis and makes 60° with the HP. Draw the sectional top views and the true shape of the section of the section plane is perpendicular to VP.	20	4	3

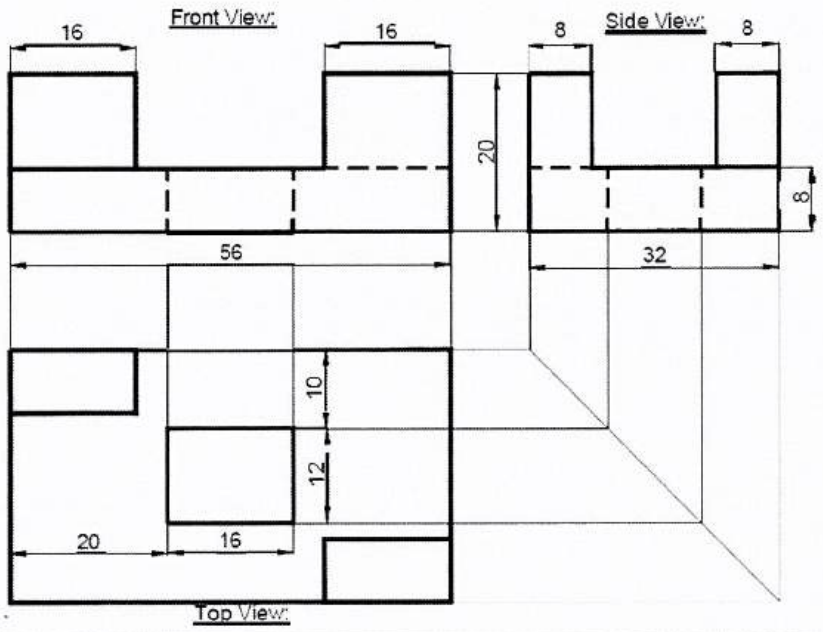
OR

Q.4(B)	A Pentagonal Prism 30mm base side & 60mm axis is standing on HP on its base whose one side is perpendicular to VP. It is cut by a section plane 45° inclined to HP, through mid-point of axis. Draw true shape of section and Development of surface of remaining Solid. Use parallel line method.	20	4	3
Q.5(A)	Draw the three Orthographic Views of the given solid.	20	5	3



OR

Q.5(B)	Draw the isometric View from the given orthographic views of a solid	20	5	3



END

SET-5

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

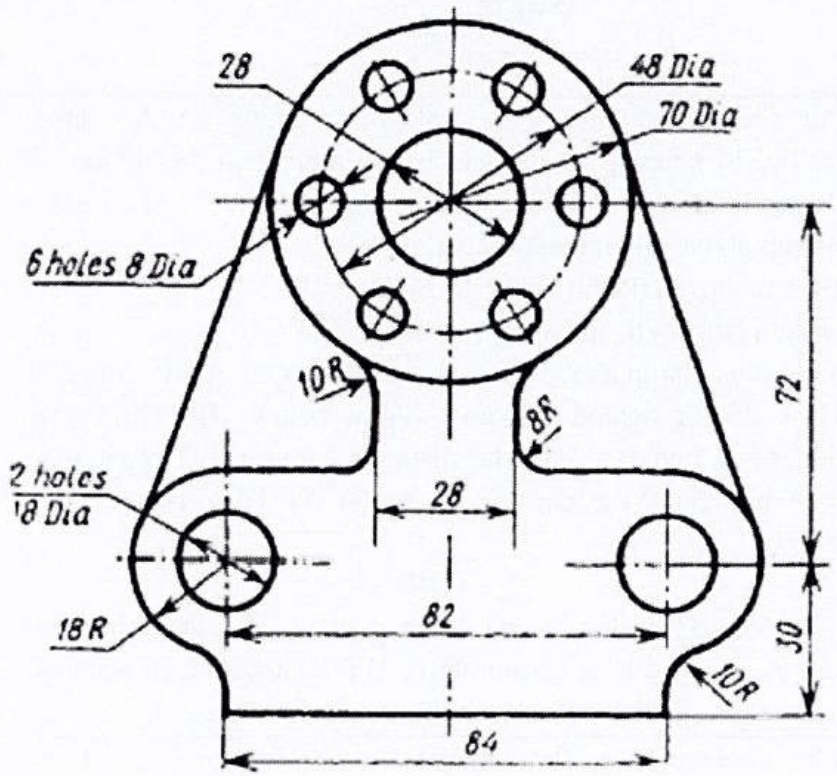
ENGINEERING GRAPHICS

(CSE-AI & ML)

Time: 3Hrs **Max Marks: 100**

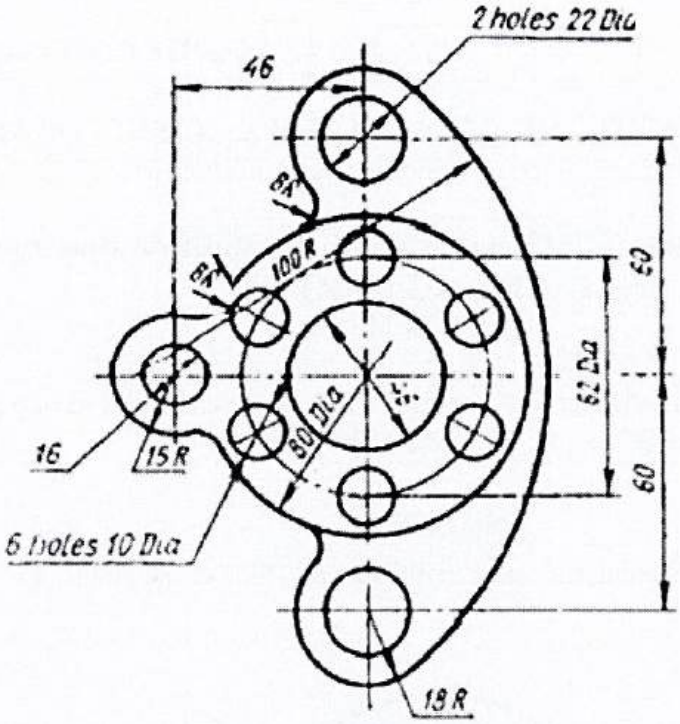
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	2



OR

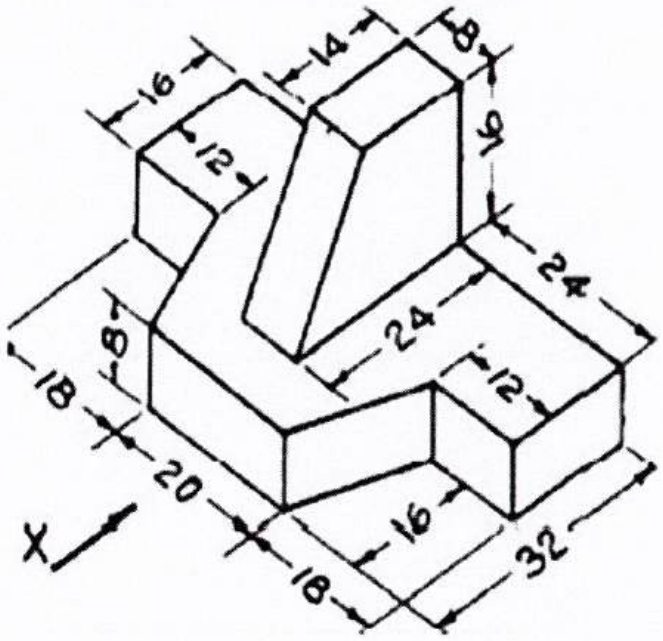
Q.1(B)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	2



Q.2(A)	(1) Draw the projections of the following points on the same reference line by keeping the distance between projectors as 40mm. a) E – 30mm below HP and 50mm behind VP b) F – 40mm above HP and 60mm behind VP c) G – 50mm above HP and 60mm in front of VP d) H – 40mm below HP and 30mm in front of VP (2) A point A is 15mm above HP and 20mm in front of VP. Another point B is 25mm behind VP and 40mm below HP. Draw the projection of A and B. Keep the distance between the projectors equal to 90mm. Draw straight line joining (i) The Top View (ii) The Front View	20	2	3
	OR			
Q.2(B)	A line AB, 65mm long has its end A 20mm above H.P. and 25mm in front of VP. The end B is 40mm above H.P. and 65mm in front of V.P. Draw the projections of AB and find its inclinations.	20	2	3
Q.3(A)	A circular plane with a 60mm diameter is resting on a point its circumference on the VP. The center is 40mm above the HP, and the surface is inclined at 45^0 to the VP. And perpendicular to the HP. Draw its projections?	20	3	2
	OR			
Q.3(B)	A pentagonal prism of base side 30 mm and axis 70 mm has a corners on the HP and the axis is inclined at 45^0 to the HP. Draw its projection when the plane containing the resting corner and the axis parallel to the VP.	20	3	2
Q.4(A)	A square pyramid, base 40 mm side and axis 65 mm long, has its base on the HP with two edges of the base perpendicular to the VP. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section.	20	4	3

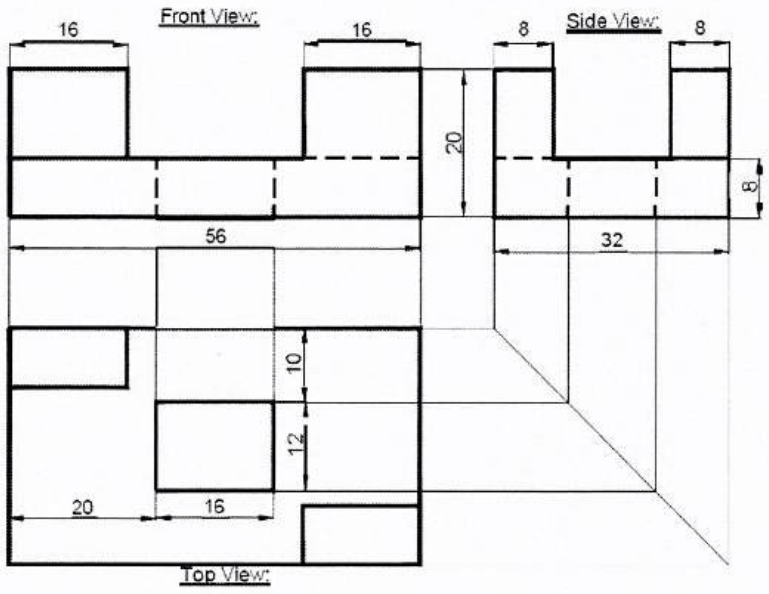
OR

Q.4(B)	A Cylinder of base 50mm and axis 60mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to VP and inclined at 45° to HP passing through the top of the generator and cuts all other generators. Draw the development of surface. Use parallel line method.	20	4	2
Q.5(A)	Draw the three Orthographic Views of the given solid. All dimensions are in mm.	20	5	2



OR

Q.5(B)	Draw the isometric View from the given orthographic views of a solid. All dimensions are in mm.	20	5	2



END

SET-6

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

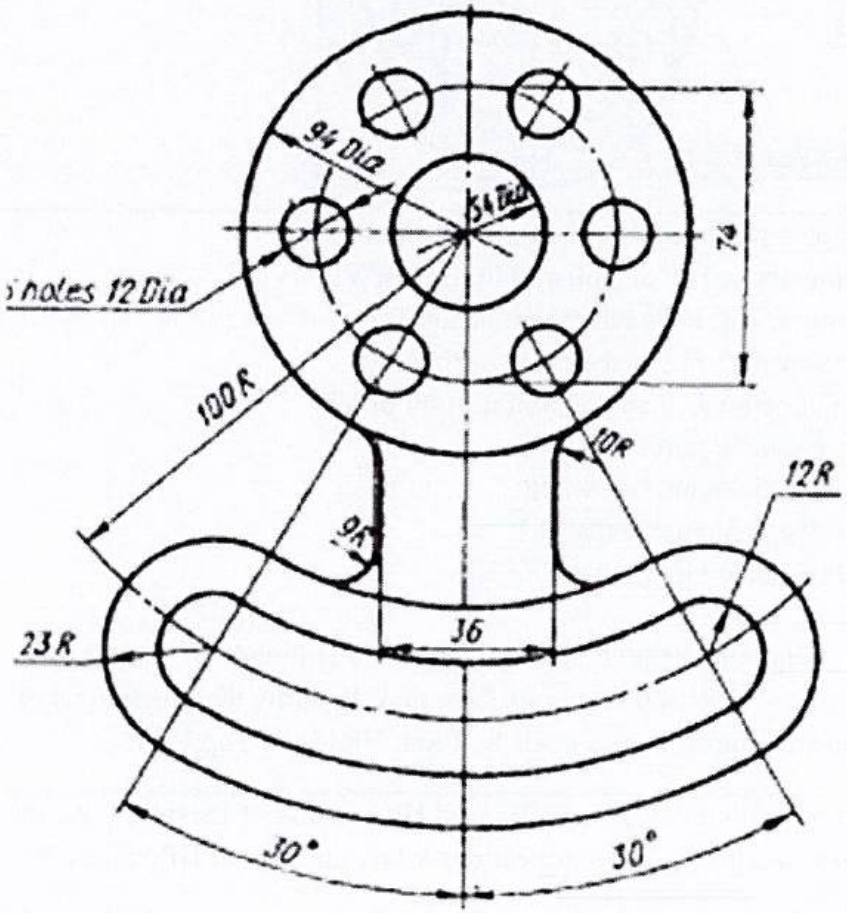
ENGINEERING GRAPHICS

(CSE-AI & ML)

Time: 3Hrs **Max Marks: 100**

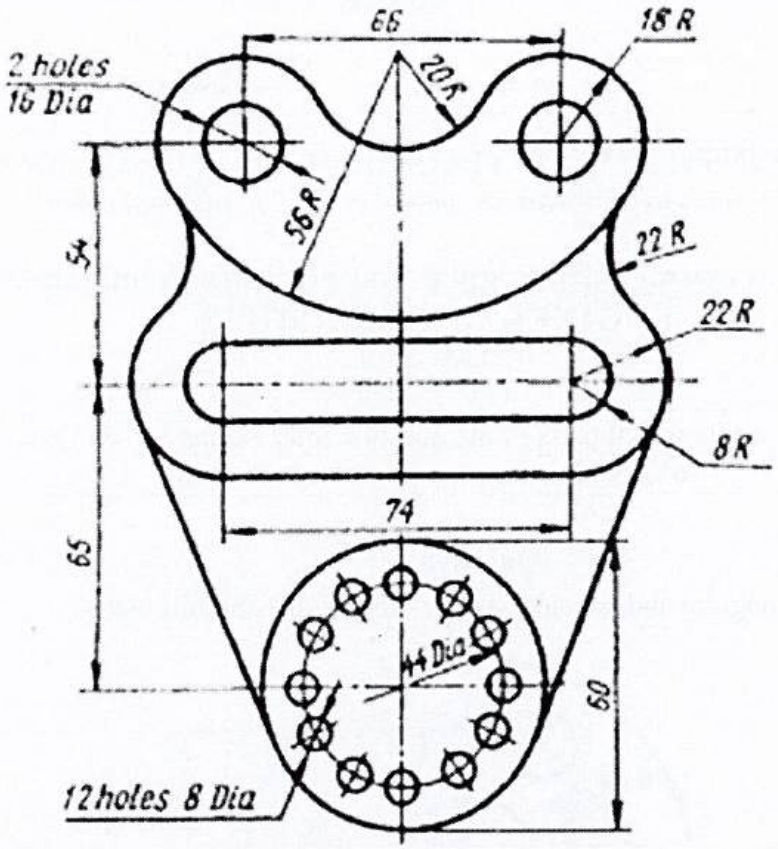
Attempt all the questions. All parts of the question must be answered in one place only.
In Q.No 1 to 5 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	2



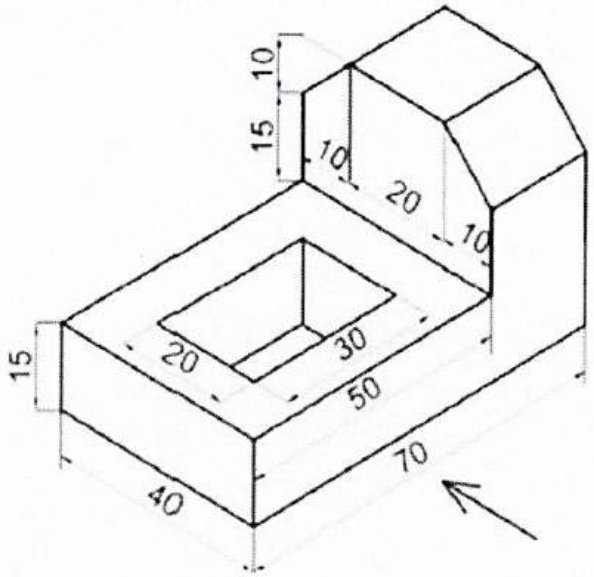
OR

Q.1(B)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	2



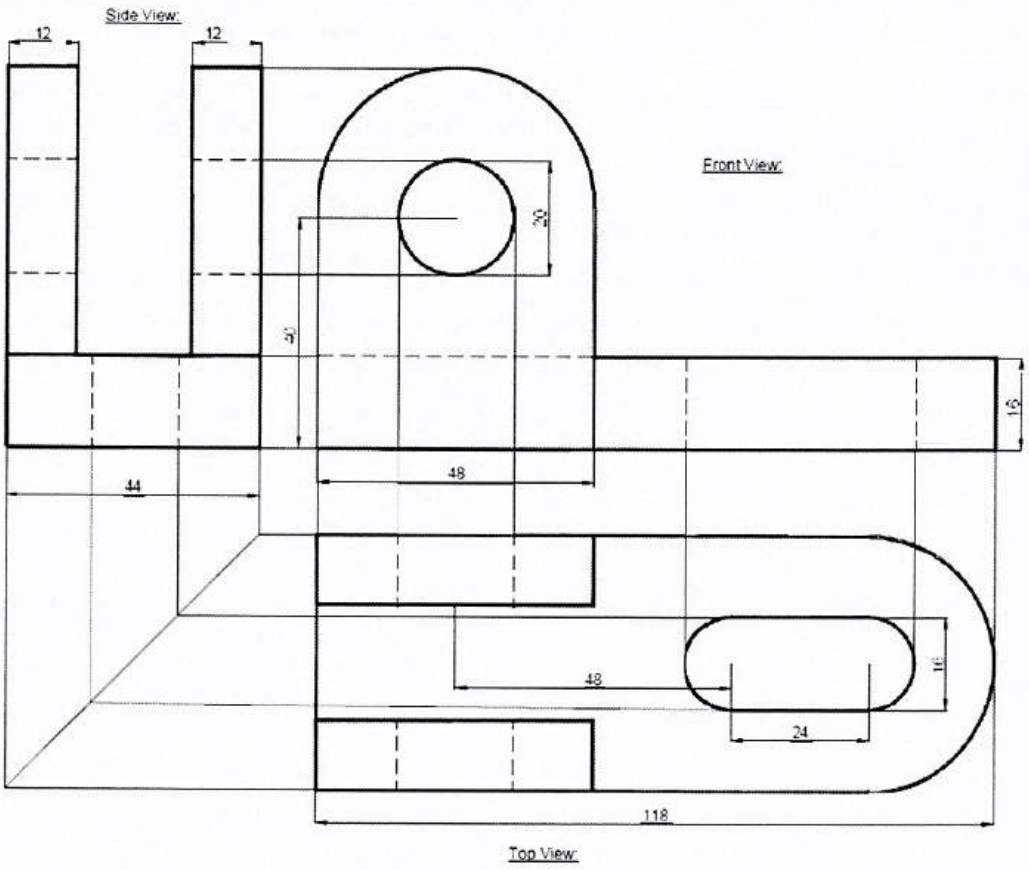
Q.2(A)	Draw the orthographic projections of the following points? (a) Point P is 50 mm above H.P and 60 mm in front of VP (b) Point Q is 45 mm above H.P and 55 mm behind VP (c) Point R is 55 mm below H.P and 60 mm behind VP (d) Point S is 55 mm below H.P and 60 mm in front of VP (e) Point T is in H.P and 50 mm behind VP (f) Point U is in V.P and 60 mm below HP (g) Point V is in V.P and 55 mm above H.P (h) Point W is in H.P and 60 mm in front of VP	20	2	2
	OR			
Q.2(B)	A line AB 80mm long is inclined at an angle of 30° to H.P and 45° to V.P. The point A is 15mm above H.P. and 20mm in front of V.P. Draw the projections of the straight line and determine angles made by Front View and Top View.	20	2	2
Q.3(A)	A regular pentagon of 30mm sides is resting on HP, on one of its sides with its surface 45^0 inclined to Hp. Draw its projections when the side in HP makes 30^0 angle with VP.	20	3	2
	OR			
Q.3(B)	A Square pyramid of base side 40mm and axis 60mm is resting on its base on the HP. Draw its projecions when (a)a side of the base is parallel to the VP (b) a side of the base is inclined at 30^0 to the VP (c) All the sides of the base are equally inclined to the VP	20	3	2
Q.4(A)	A Cube of 50mm edges is resting one of its faces on HP with vertical faces equally inclined to VP. It is cut by a plane 45° inclined to HP and passing through the midpoint of axis. Draw a Sectional Views.	20	4	3
	OR			

Q.4(B)	A square pyramid, base 40 mm side and axis 65 mm long, has its base on the HP and all the edges of the base equally inclined to the VP. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP and bisecting the axis. Draw its development of the remaining portion. Use radial line method.	20	4	2
Q.5(A)	Draw the three Orthographic Views of the given solid. All dimensions are in mm.	20	5	2



OR

Q.5(B)	Draw the isometric View from the given orthographic views of a solid. All dimensions are in mm.	20	5	3



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SET-7

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

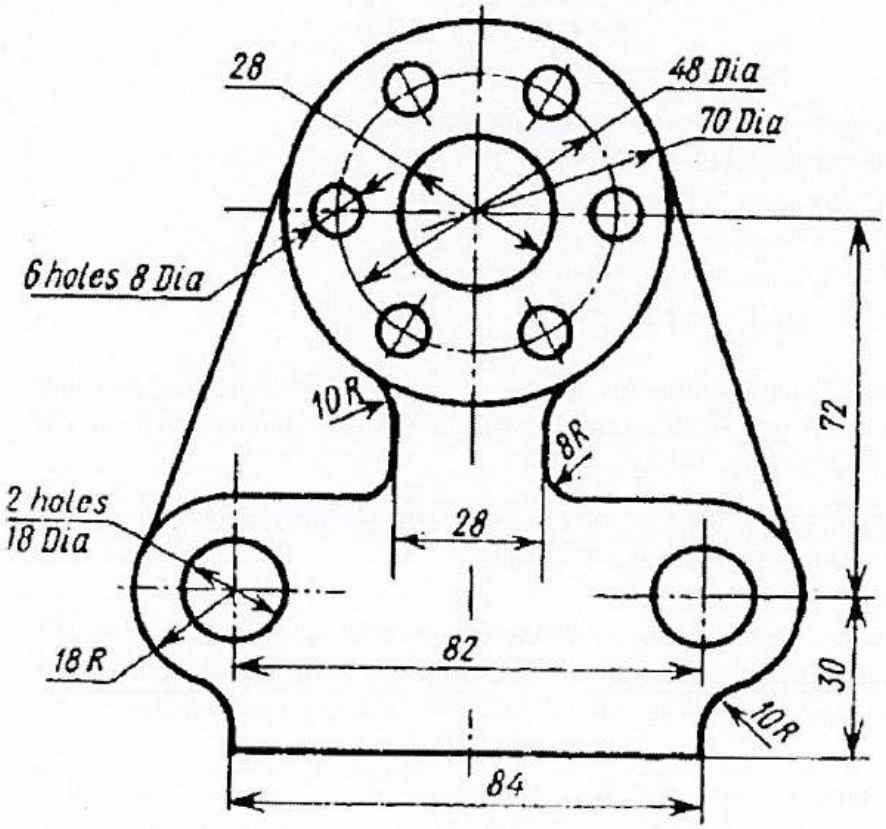
ENGINEERING GRAPHICS

(CSE-AI & ML)

Time: 3Hrs **Max Marks: 100**

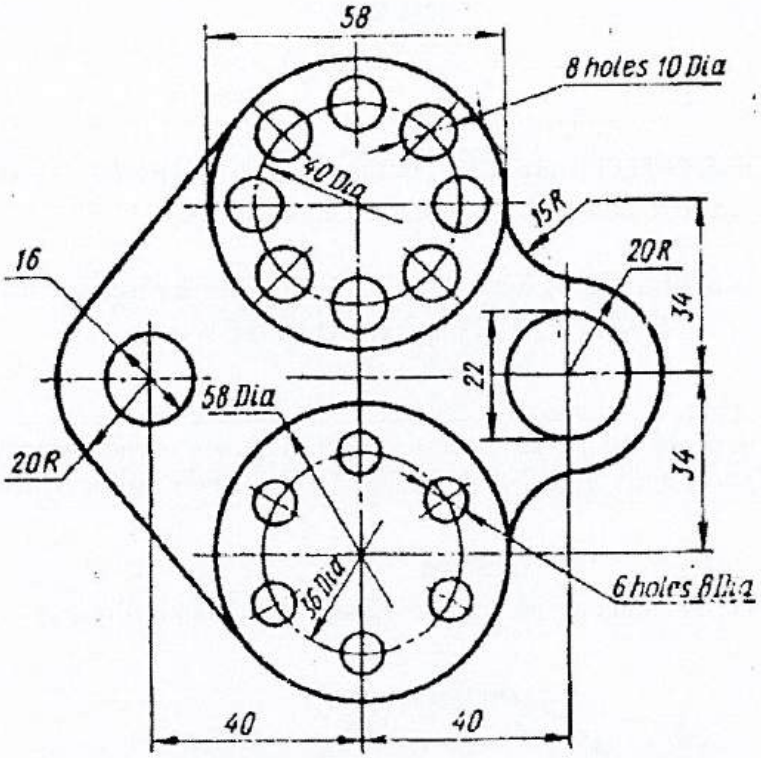
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the simple diagram and consider all the dimensions are in millimeter	20	1	3



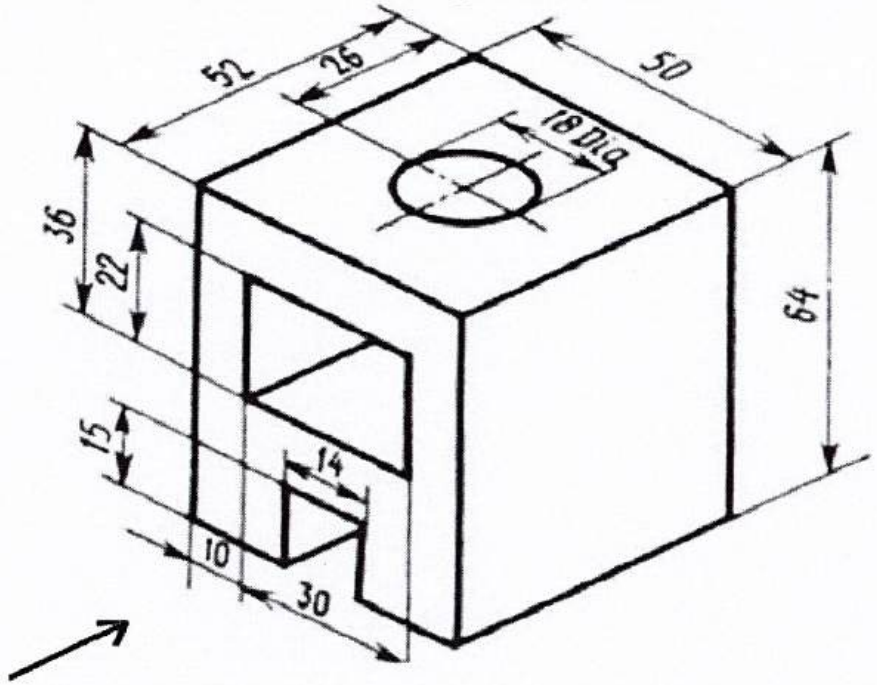
OR

Q.1(B)	Draw the below diagram and consider all the dimensions are in millimeter	20	1	3



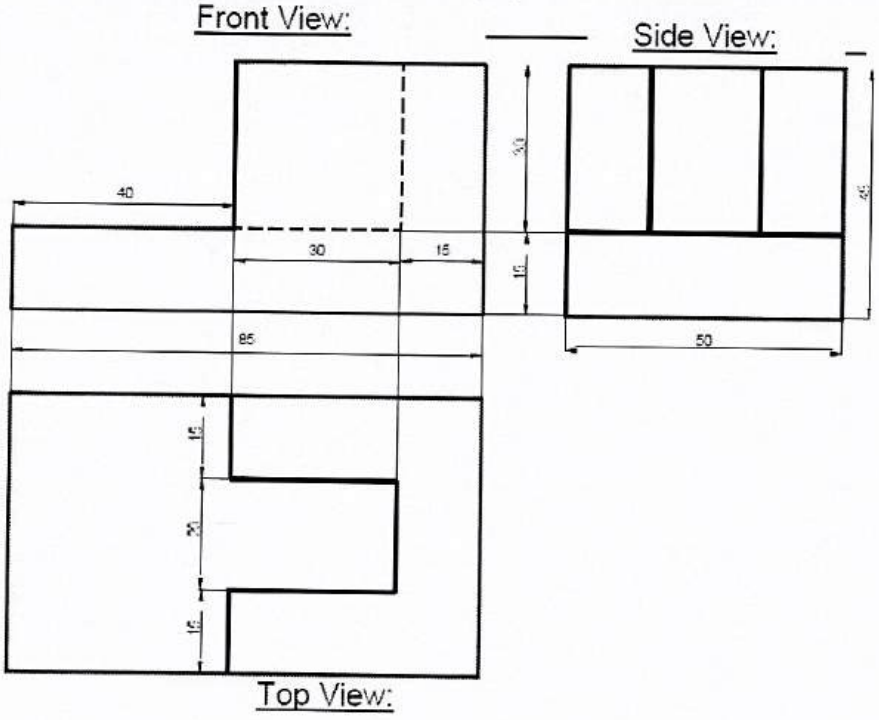
Q.2(A)	**Draw the orthographic projections of the following points?** (a) Point P is 40 mm above H.P and 50 mm in front of VP (b) Point Q is 35 mm above H.P and 45 mm behind VP (c) Point R is 45 mm below H.P and 50 mm behind VP (d) Point S is 45 mm below H.P and 50 mm in front of VP (e) Point T is in H.P and 40 mm behind VP	20	2	3
	OR			
Q.2(B)	The top view of a 75mm long line AB measures 65mm, while its front view measures 50mm. Its one end A is in HP and 12mm in front of VP. Draw the projections of AB and determine its inclination with HP and VP	20	2	3
Q.3(A)	A pentagonal Plane with a 30mm side has an edge on the HP, the surface of the plane is inclined at 45^0 to the HP. Draw its projections.	20	3	3
	OR			
Q.3(B)	A Square pyramid of base side 40mm and axis 60mm is resting on its base on the HP. Draw its projecions when (a)a side of the base is parallel to the VP (b) a side of the base is inclined at 30^0 to the VP (c) All the sides of the base are equally inclined to the VP	20	3	3
Q.4(A)	A Cube of 50mm edges is resting one of its faces on HP with vertical faces equally inclined to VP. It is cut by a plane 45° inclined to HP and passing through the midpoint of axis. Draw a Sectional Views.	20	4	3
	OR			
Q.4(B)	A hexagonal prism of side of base 30 mm and axis 70 mm long is resting on its base on H.P. such that a rectangular face is parallel to V.P. It is cut by a section plane perpendicular to V.P. and inclined at 30^0 to H.P. The section plane is passing through the axis at a height of 40mm from the base. Draw the development of the lateral surface of the cut prism, Use parallel line method.	20	4	3

Q.5(A) Draw the three Orthographic Views of the given solid. 20 5 3



OR

Q.5(B) Draw the isometric View from the given orthographic views of a solid 20 5 3



END

SET-8

Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 25BAMECEC01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(Deemed to be University under Section 3 of UGC Act, 1956)

B.Tech. I Year I Semester (R25) Regular End Semester Examinations - January 2026

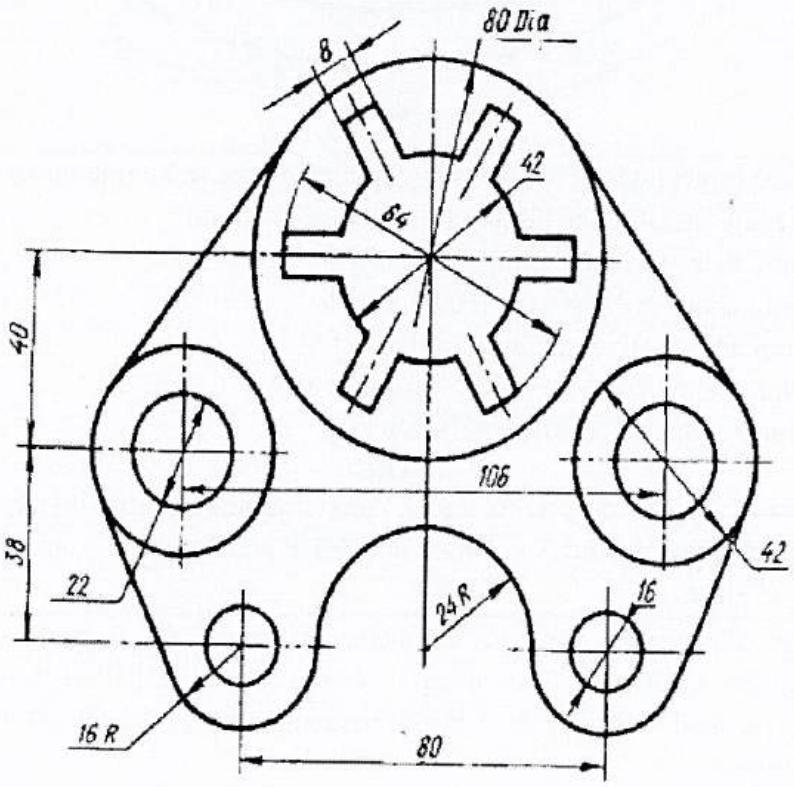
ENGINEERING GRAPHICS

(CSE-AI & ML)

Time: 3Hrs **Max Marks: 100**

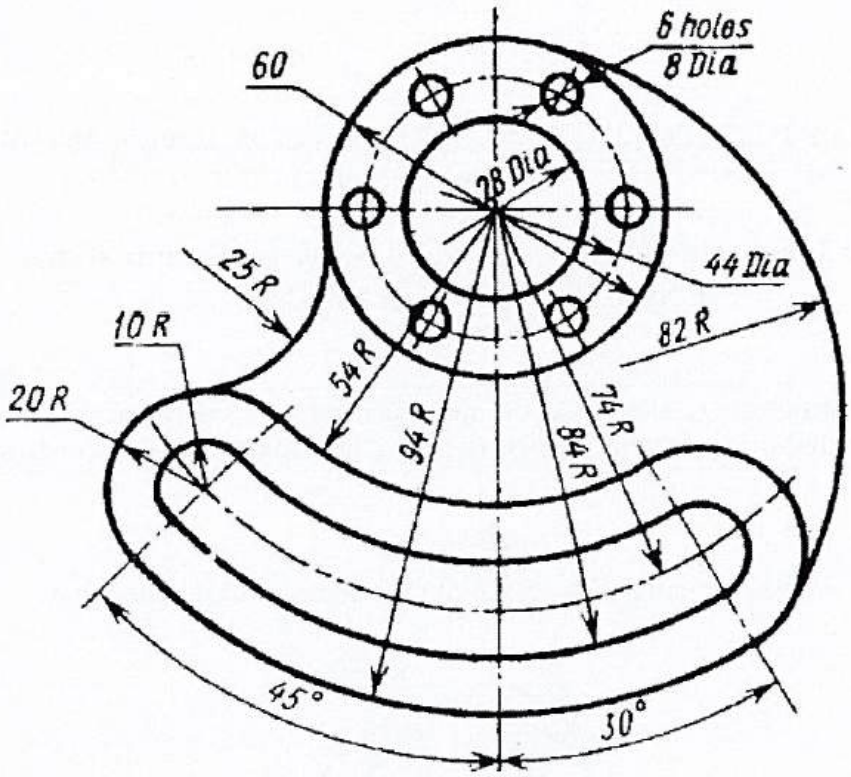
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either A or B only

Q.No.	Question	Marks	CO	BL
Q.1(A)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	3



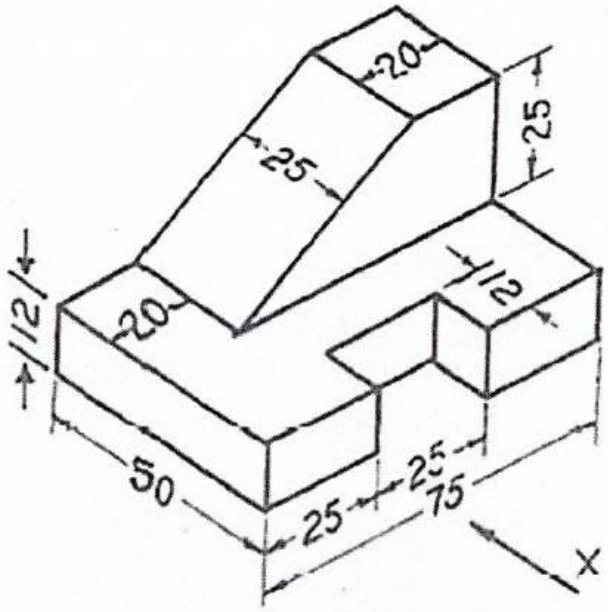
OR

Q.1(B)	Draw the simple diagram and consider all the dimensions are millimeter	20	1	3



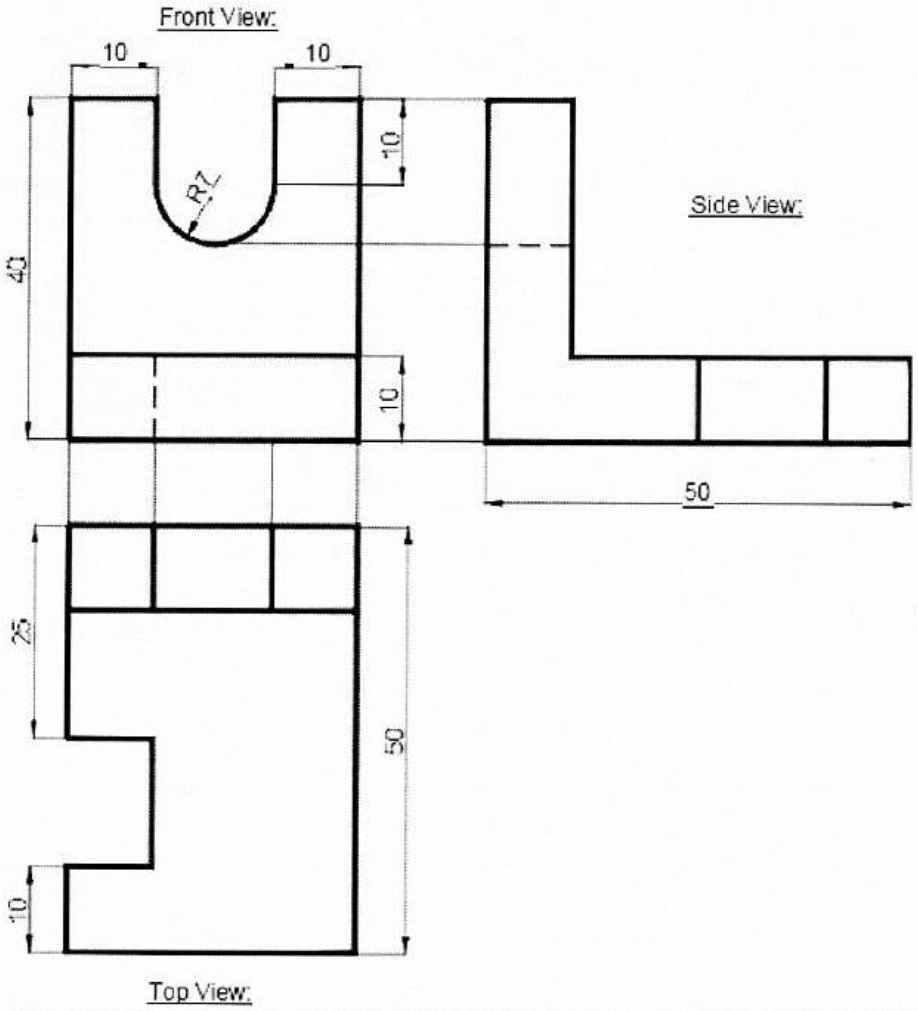
Q.2(A)	(1) Draw the projections of the following points on the same reference line by keeping the distance between projectors as 40mm. a) E – 30mm below HP and 50mm behind VP b) F – 40mm above HP and 60mm behind VP c) G – 50mm above HP and 60mm in front of VP d) H – 40mm below HP and 30mm in front of VP e) F - 25mm behind VP and 40mm below HP.	20	2	3
	OR			
Q.2(B)	Front View of line AB 50° inclined to XY and measures 55mm, its top view 60° inclined XY. End A is 10mm above HP and 15mm in front of VP. Find TL, θ, φ.	20	2	3
Q.3(A)	A circular plane with a 60mm diameter is resting on a point its circumference on the VP. The center is 40mm above the HP, and the surface is inclined at 45^0 to the VP and perpendicular to the HP. Draw its projections?	20	3	3
	OR			
Q.3(B)	A Cylinder of base diameter 50 mm and axis 70 mm has a generator in the V.P and inclined at 45^0 to the H.P. Draw its projections.	20	3	3
Q.4(A)	A Hexagonal prism of 30mm sides and 80mm long is resting on HP on its base with two of its lateral faces parallel to VP. The prism is sectioned by an inclined section plane that passes through the midpoint of the axis and makes 60° with the HP. Draw the sectional top views and the true shape of the section of the section plane is perpendicular to VP.	20	4	3
	OR			
Q.4(B)	A Pentagonal Prism 30mm base side & 60mm axis is standing on HP on its base whose one side is perpendicular to VP. It is cut by a section plane 45° inclined to HP, through mid-point of axis. Draw the Development of surface of remaining Solid. Use parallel line method.	20	4	3

Q.5(A) Draw the three Orthographic Views of the given solid. 20 5 3



OR

Q.5(B) Draw the isometric View from the given orthographic views of a solid 20 5 3



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