

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024****ENGINEERING PHYSICS**

(Common to EEE, ECE, CST, CSE-CS, and CSE-Networks)

Time: 3Hrs

Max Marks: 70

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. Quote any one difference between Fresnel and Fraunhofer Diffraction.	1M	1	1
	ii. What is double refraction.	1M	1	1
	iii. What is Bravais Lattice?	1M	2	1
	iv. Sketch the Miller indices for the plane which is parallel to y and z axes.	1M	2	1
	v. What is a matter wave.	1M	3	1
	vi. Define mean free path of electrons.	1M	3	1
	vii. The Hall coefficient of a semiconductor is $2.56 \times 10^{-4} m^3 C^{-1}$ . Calculate the carrier concentration of the carriers.	1M	4	2
	viii. What is mobility? How mobility is related to conductivity?	1M	4	1
	ix. Give the relation between Polarization $\vec{P}$ and Electric Field $\vec{E}$ .	1M	5	1
	x. What is domain wall?	1M	5	1
Q.2(A)	(i) Explain the formation of Newton's rings and show that the radii of dark rings are proportional to, under root of natural numbers.	9M	1	3
	(ii) The radii of $n^{\text{th}}$ and $(n+5)^{\text{th}}$ dark rings are found to be 6 mm and 8 mm respectively in Newton's rings experiment. Calculate the wavelength of light used, if the radius of curvature of the curved surface is 10 meters.	3M		
<b>OR</b>				
Q.2(B)	Discuss the Fraunhofer diffraction at a single slit. Obtain the condition for primary and secondary maxima using this obtain intensity distribution curve.	12M	1	3
Q.3(A)	The edge of the unit cell of cubic lattice is $a$ . The radius of the atoms that occupy the lattice site is $r$ . Compute: (i) Number of atoms per unit cell, (ii) atomic radius, (iii) the packing fraction for SC and FCC crystal structure.	12M	2	3
	<b>OR</b>			
Q.3(B)	(i) Derive Bragg's law of X-ray diffraction in crystals. Describe the powder method for the analysis of crystal structure.	9M	2	3
	(ii) Calculate the glancing angle at which X-rays with a wavelength of 0.549 nm are reflected in second order from a crystal with interplanar separation of 0.423 nm.	3M		
Q.4(A)	Derive an expression for the normalized wave function and energy of a particle confined in one-dimensional potential box using time independent Schrodinger's wave equation.	12M	3	3

**OR**

Q.4(B)	Derive an expression for the electrical conductivity of a conducting material based on quantum mechanical treatment.	12M	3	3
Q.5(A)	Derive electron and hole concentrations for intrinsic semiconductor. Show that the intrinsic concentration ( $n_i$ ) is independent of Fermi level.	12M	4	3
<b>OR</b>				
Q.5(B)	(i) Explain the term Hall effect. Derive the relation between Hall voltage and Hall coefficient.	9M	4	3
	(ii) Write applications of Hall effect.	3M		
Q.6(A)	By using internal field derive Clausius mosotti equation.	12M	5	3
<b>OR</b>				
Q.6(B)	Explain the origin of magnetic moment in atom. Find the magnetic dipole moment due to orbital and spin motions of an electron?	12M	5	3
*** END***				

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**CHEMISTRY**  
(Common to CSE, CAI, CSD, CSM)

Time: 3Hrs

Max Marks: 70

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 time dependent Schrodinger equation.	1M	1	1
	ii. What is bond order in CO molecule?	1M	1	2
	iii. Mention any two applications of nano materials.	1M	2	2
	iv. List the types of super capacitors.	1M	2	2
	v. Write the Nernst equation.	1M	3	2
	vi. Give the example of primary and secondary battery.	1M	3	1
	vii. Define thermosetting and thermoplastics.	1M	4	1
	viii. Mention the monomers in Nylon-6,6	1M	4	2
	ix. What is the fingerprint region and functional group region in IR spectroscopy.	1M	5	2
	x. State the Beer-Lambert's law.	1M	5	1
Q.2(A)	(a) Derive an expression for the energy of a particle in 1- dimensional box?	8M	1	2
	(b) The difference in energy levels of n=2 and n=1 of a particle in a one-dimensional box is 6 units of energy. In the same unit, what is the difference in energy levels of n=3 and n=2 for the above system?	4M	1	3
<b>OR</b>				
Q.2(B)	(a) Sketch the molecular orbital diagrams of the O <sub>2</sub> and NO molecules and calculate the bond order.	8M	1	3
	(b) Discuss the Pi-molecular orbital ( $\pi$ -MO) theory of 1,3-butadiene.	4M	1	2
Q.3(A)	State and explain BCS theory in superconductors. Write a note on different types of superconductors with a neat sketch.	12M	2	3
<b>OR</b>				
Q.3(B)	(a) Write a note on the classification, advantages, disadvantages and applications of super capacitors?	8M	2	2
	(b) Discuss the properties and applications of carbon nanotubes.	4M	2	2
Q.4(A)	Explain construction, working principle and applications of (a) Lithium-ion batteries (b) metal air batteries	12M	3	3
<b>OR</b>				
Q.4(B)	(a) What is potentiometric titration and explain it with a suitable example.	6M	3	2
	(b) Describe the construction and working principle of hydrogen-Oxygen fuel cell.	6M	3	2
Q.5(A)	Discuss the following reactions and provide the mechanisms: (a) Free radical polymerization (b) Coordination polymerization	12M	4	3

**OR**

Q.5(B)	Explain the synthesis, properties and applications of Teflon and Bakelite.	12M	4	2
Q.6(A)	Explain the principle, instrumentation, and applications of Infrared (IR) spectroscopy.	12M	5	3

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**OR**

Q.6(B)	a) Discuss the principle and instrumentation of high performance liquid chromatography (HPLC).	8M	5	2
	b) Discuss the terms stationary phase, mobile phase in chromatography.	4M	5	2

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**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2023**  
**ENGINEERING CHEMISTRY**  
(Common to CE and ME)

Time: 3Hrs

Max Marks: 70

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 reverse osmosis.	1M	1	2
	ii. Compare different units of hardness.	1M	1	2
	iii. What is an electrochemical cell?	1M	2	1
	iv. State Pilling Bedworth rule	1M	2	2
	v. Name any two alternative fuels.	1M	3	1
	vi. Define thermoplastic with an example.	1M	3	1
	vii. Define flash point of a liquid lubricant.	1M	4	1
	viii. What are refractories? Give any two examples.	1M	4	1
	ix. Define adsorption isotherm.	1M	5	1
	x. Define nanomaterial with an example.	1M	5	1
Q.2(A)	Explain the principle, procedure and calculations involved in estimation of hardness of water by EDTA method.	12M	1	2
<b>OR</b>				
Q.2(B)	Explain Ion-exchange process with a neat sketch. Mention its advantages & disadvantages.	12M	1	3
Q.3(A)	Illustrate the working principle with chemical reactions and applications of lithium-ion battery.	12M	2	3
<b>OR</b>				
Q.3(B)	Briefly describe the factors affecting rate of corrosion	12M	2	2
Q.4(A)	Explain the preparation, properties and applications of Bakelite and Buna S.	12M	3	2
<b>OR</b>				
Q.4(B)	Explain in detail about the analysis of coal by Proximate and Ultimate analysis.	12M	3	2
Q.5(A)	Explain in detail the properties of lubricating oils.	12M	4	2
<b>OR</b>				
Q.5(B)	Illustrate Portland cement manufacturing process in details with a schematic.	12M	4	2
Q.6(A)	(i) Describe precipitation method for the synthesis of nanomaterial.	7M	5	2
	(ii) Mention the applications of nano materials.	5M	5	1
<b>OR</b>				
Q.6(B)	Explain Langmuir adsorption isotherm	12M	5	3

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**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**LINEAR ALGEBRA AND CALCULUS**  
(Common to All)

Time: 3Hrs

Max Marks: 70

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. For what values of $\lambda$ the following set of equations have no solution $2x + 3y = 5$ ; $x + \lambda y = 10$ .	1M	1	2
	ii. Find inverse of the matrix $A = \begin{bmatrix} 4 & 0 \\ 1 & -2 \end{bmatrix}$ by Gauss-Jordan method.	1M	1	2
	iii. Consider the matrix $A$ of order $3 \times 3$ with eigenvalues 1, 5 and determinant of $A$ is 20. Find the trace of the matrix.	1M	2	2
	iv. Find the eigenvalues of $A^{-1}$ for the matrix $A = \begin{bmatrix} -5 & 2 \\ 2 & -2 \end{bmatrix}$	1M	2	2
	v. State Rolle's theorem.	1M	3	1
	vi. Expand $f(x) = e^x$ by using Maclaurin's series	1M	3	1
	vii. If $u = x^2 - y^2$ , $v = 2xy$ then find $\frac{\partial(u, v)}{\partial(x, y)}$	1M	4	2
	viii. Expand $f(x, y)$ in powers of $x$ and $y$ up to terms of third degree.	1M	4	1
	ix. Evaluate $\int_0^2 \int_0^1 (xy) dy dx$	1M	5	2
	x. Write the equations relating Cartesian and cylindrical coordinate system.	1M	5	1
Q.2(A)	(i). Reduce the following matrix into Echelon form and hence find the rank: $A = \begin{bmatrix} 2 & 3 & 4 & 5 & 6 \\ 3 & 4 & 5 & 6 & 7 \\ 4 & 5 & 6 & 7 & 8 \\ 5 & 6 & 7 & 8 & 9 \\ 6 & 7 & 8 & 9 & 10 \end{bmatrix}$	6M	1	3
	(ii). Solve completely the system of equations $3x + 4y - z - 6w = 0$ ; $2x + 3y + 2z - 3w = 0$ ; $2x + y - 14z - 9w = 0$ ; $x + 3y + 13z + 3w = 0$ by Gauss Elimination method. <p style="text-align: center;"><b>OR</b></p>	6M	1	3
Q.2(B)	Find the solution of $27x + 6y - z = 85$ ; $x + y + 54z = 110$ ; $6x + 15y + 2z = 72$ by Gauss-Seidel iteration method correct to three decimal places	12M	1	3
Q.3(A)	Find the eigenvalues and eigenvectors of the matrix $A = \begin{bmatrix} -2 & 2 & -3 \\ 2 & 1 & -6 \\ -1 & -2 & 0 \end{bmatrix}$ and hence determine the modal matrix and diagonalizable the matrix $A$ .	12M	2	3

	<b>OR</b>			
Q.3(B)	Verify Cayley-Hamilton theorem, find $A^{-1}$ and $A^4$ of $A = \begin{bmatrix} 7 & 2 & -2 \\ -6 & -1 & 2 \\ 6 & 2 & -1 \end{bmatrix}$	12M	2	3
Q.4(A)	(i). If $f(x) = \sin^{-1}(x)$ (if $0 < a < b < 1$ ), Use mean value theorem to prove that $\frac{b-a}{\sqrt{1-a^2}} < \sin^{-1} b - \sin^{-1} a < \frac{b-a}{\sqrt{1-b^2}}$	6M	3	3
	(ii). If $f(x) = \log(1+x), x > 0$ . Using Maclaurin's theorem show that for $0 < \theta < 1$ , $\log(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3(1+\theta x)^3}$ .	6M	3	3
	<b>OR</b>			
Q.4(B)	Prove that $\log(1+e^x) = \log 2 + \frac{x}{2} + \frac{x^2}{8} - \frac{x^4}{192} + \dots$ . Hence deduce $\frac{e^x}{e^x+1} = \frac{1}{2} + \frac{x}{4} - \frac{x^3}{48} + \dots$	12M	3	3
Q.5(A)	(i). If $u = u\left(\frac{y-x}{xy}, \frac{z-x}{xz}\right)$ , show that $x^2 \frac{\partial u}{\partial x} + y^2 \frac{\partial u}{\partial y} + z^2 \frac{\partial u}{\partial z} = 0$	6M	4	3
	(ii). In Spherical coordinates, $x = r \sin \theta \cos \phi$ , $y = r \sin \theta \sin \phi$ , $z = r \cos \theta$ , show that Evaluate $\frac{\partial(x, y, z)}{\partial(r, \theta, \phi)}$	6M	4	3
	<b>OR</b>			
Q.5(B)	Find the volume of the greatest rectangular parallelepiped that can be inscribed in the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$	12M	4	3
Q.6(A)	(i). Evaluate the integral $\int_0^\infty \int_x^\infty \frac{e^{-y}}{y} dy dx$ by changing the order of Integration	6M	5	3
	(ii). Evaluate the integral $\int_0^\infty \int_0^x x e^{-y} dy dx$ by changing the order of Integration	6M	5	3
	<b>OR</b>			
Q.6(B)	(i). Evaluate $\int_0^1 \int_0^{\sqrt{1-y^2}} (x^2 + y^2) dy dx$ by changing into polar coordinates	6M	5	4
	(ii). Changing into spherical coordinates, evaluate $\int_0^1 \int_0^{\sqrt{1-x^2}} \int_0^{\sqrt{1-x^2-y^2}} \frac{1}{\sqrt{1-x^2-y^2-z^2}} dz dy dx$ .	6M	5	4

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**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**

(UGC-AUTONOMOUS)

**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024****BASIC ELECTRICAL AND ELECTRONICS ENGINEERING**

(Common to EEE, ECE, CST, CSE-CS and CSE-Networks)

Time: 3Hrs

Max Marks: 70

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 4 answer either A or B only

**PART-A: BASIC ELECTRICAL ENGINEERING**

Max Marks: 35

Q.No	Question	Marks	CO	BL
Q.1	i. In superposition theorem, when we consider the effect of one Voltage source, all the other Voltage sources are .....	1M	1	1
	a) Shorted b) Opened c) Removed d) Undisturbed			
	ii. State Ohm's law?	1M	1	1
	iii. Define Transformer.	1M	2	1
	iv. For what purpose Wheat stone bridge is used?	1M	2	1
	v. Define two-part tariff.	1M	3	1
Q.2(A)	a) State and explain Kirchoff's laws.	10M	1	2
	b) Define and explain the following terms related to an alternating quantity: (i) Instantaneous value (ii) Peak value (iii) Cycle (iv) Angular frequency (v) Peak to Peak value			
	<b>OR</b>			
Q.2(B)	A coil consists of a resistance of 100 $\Omega$ and an inductance of 200mH. If an alternating voltage, $v$ , given by $v=200\sin 500t$ volts is applied across the coil, calculate (a) the circuit impedance, (b) the current flowing, (c) the potential difference across the resistance, (d) the potential difference across the inductance and (e) the phase angle between voltage and current.	10M	1	3
Q.3(A)	Explain the construction and working of Single-phase transformer with diagram.	10M	2	2
	<b>OR</b>			
Q.3(B)	Explain the construction and working of Moving Iron instrument with the help of neat sketch?	10M	2	2
Q.4(A)	Draw the layout of wind power plant and explain the components associated with the power plant.	10M	3	2
	<b>OR</b>			
Q.4(B)	What is mean by Earthing? Explain any one type of Earthing with diagram.	10M	3	2

\*\*\* END\*\*\*

**PART-B: BASIC ELECTRONICS ENGINEERING****Max Marks: 35**

<b>Q.No</b>	<b>Question</b>	<b>Marks</b>	<b>CO</b>	<b>BL</b>
Q.1	i. Define doping.	1M	1	1
	ii. Draw the VI characteristics of PN Junction diode.	1M	1	1
	iii. Define Rectifier?	1M	2	1
	iv. What is mean by counter?	1M	3	1
	v. Write the truth table for the SR flip-flop.	1M	3	1
Q.2(A)	Explain in detail the operation of a Zener diode with its characteristics.	10M	1	2
<b>OR</b>				
Q.2(B)	With neat sketch, explain the input and output characteristics of Common Base configuration.	10M	1	2
Q.3(A)	Draw the block diagram of public address system and explain each block.	10M	2	2
<b>OR</b>				
Q.3(B)	Discuss in detail the operation of a Bridge rectifier with a neat circuit diagram and relevant waveforms.	10M	2	2
Q.4(A)	Draw the circuit diagram of a D &T type flip-flop and explain its operation with the help of a truth table.	10M	3	2
<b>OR</b>				
Q.4(B)	Verify all the types of logic gates with symbol diagram and truth table briefly.	10M	3	2

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**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024****BASIC CIVIL & MECHANICAL ENGINEERING**

(Common to CE, ME, CSE, CSE-AIML, CSE-AI and CSE-DS)

Time: 3Hrs

Max Marks: 70

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 4 answer either A or B only

**PART-A: BASIC CIVIL ENGINEERING**

Max Marks: 35

Q.No	Question	Marks	CO	BL																		
Q.1	i. Write down the composition of cement.	1M	1	1																		
	ii. State the principles of surveying	1M	1	1																		
	iii. Difference between plane and geodetic surveying.	1M	2	1																		
	iv. The whole circle bearing of line AB is $116^{\circ}30'$ . Calculate the reduced bearing of the line AB	1M	2	2																		
	v. What are the roles of transportation engineering?	1M	3	1																		
Q.2(A)	Explain the various disciplines of Civil Engineering and their scope in detail.	10M	1	3																		
<b>OR</b>																						
Q.2(B)	What are the different types of cement and explain in detail?	10M	1	2																		
Q.3(A)	The Following fore and back bearings were observed in traversing with a compass in place where local attraction was suspected. Find the corrected FB and BB lies using included angles. Find the Interior angles.	10M	2	3																		
<table border="1" style="margin: 10px auto;"><thead><tr><th>Lines</th><th>F.B.</th><th>B.B.</th></tr></thead><tbody><tr><td>AB</td><td><math>160^{\circ}30'</math></td><td><math>340^{\circ}</math></td></tr><tr><td>BC</td><td><math>68^{\circ}</math></td><td><math>242^{\circ}</math></td></tr><tr><td>CD</td><td><math>332^{\circ}</math></td><td><math>164^{\circ}</math></td></tr><tr><td>DE</td><td><math>281^{\circ}</math></td><td><math>102^{\circ}30'</math></td></tr><tr><td>EA</td><td><math>210^{\circ}30'</math></td><td><math>29^{\circ}</math></td></tr></tbody></table>					Lines	F.B.	B.B.	AB	$160^{\circ}30'$	$340^{\circ}$	BC	$68^{\circ}$	$242^{\circ}$	CD	$332^{\circ}$	$164^{\circ}$	DE	$281^{\circ}$	$102^{\circ}30'$	EA	$210^{\circ}30'$	$29^{\circ}$
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<b>OR</b>																						
Q.3(B)	The following readings were taken with 4m staff by Auto level. Given by BM = 100 m. The instrument is shifted after 4th and 7th readings. 1.538, 2.020, 2.302, 1.638, 1.315, 2.220, 2.416, 1.012, 2.642, 1.125, 2.126, 1.902. Prepare a page of level book and calculate RL of all the points. Use Rise and Fall Method.	10M	2	3																		
Q.4(A)	Classify the pavements and explain in detail?	10M	3	2																		
<b>OR</b>																						
Q.4(B)	Explain about the quality and Specification of drinking water?	10M	3	2																		

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**PART-B: BASIC MECHANICAL ENGINEERING****Max Marks: 35**

<b>Q.No</b>	<b>Question</b>	<b>Marks</b>	<b>CO</b>	<b>BL</b>
Q.1	i. Define composite materials and give examples	1M	1	1
	ii. List the applications of smart materials.	1M	1	1
	iii. What is smart manufacturing?	1M	2	1
	iv. Distinguish between SI and CI engines?	1M	2	2
	v. State the laws of robotics.	1M	3	1
Q.2(A)	Explain the role of mechanical engineering in energy and manufacturing sectors.	10M	1	3
<b>OR</b>				
Q.2(B)	Classify and explain different types of ferrous and non-ferrous metals.	10M	1	2
Q.3(A)	Briefly describe the principle, advantages and disadvantages of the following process (i) Casting, (ii) Forging	10M	2	3
<b>OR</b>				
Q.3(B)	Discuss the working of four stroke IC engine. Compare the four stroke engine and two stroke engine.	10M	2	3
Q.4(A)	With the help of neat sketch, explain the principle of steam power plant. List its advantages and limitations	10M	3	3
<b>OR</b>				
Q.4(B)	Explain the different types of gear drive and belt drives.	10M	3	2

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**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)

**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**COMMUNICATIVE ENGLISH**

(Common to CE, ME, CSE, CSE-AIML, CSE-AI and CSE-DS)

Time: 3Hrs

Max Marks: 70

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 skimming	1M	1	1
	ii. Write the structure of the following statement: <b>She sings beautifully.</b>	1M	1	3
	iii. Fill in the blanks using connectives <b>He prefers to read a book _____ watch a film</b> a) After b) rather than c) then	1M	2	2
	iv. What are the types of water bodies and plant life that are talked about in the poem <b>The Brook</b> ?	1M	2	
	v. Fill in the blank with correct forms of the verb given in bracket. <b>Suraj _____ (love) going to parties with his friends.</b>	1M	3	2
	vi. Fill in the blanks with either <b>be or have</b> in a form that agrees with the subject. <b>The police .....arrested the culprit</b>	1M	3	2
	vii. Change the following sentence into indirect speech: <b>"The birds are flying away", Kavitha said.</b>	1M	4	3
	viii. Convert the sentence from active to passive voice <b>Has Rita read the books?</b>	1M	4	3
	ix. Correct the errors in given sentence <b>I live in Bangalore for ten years.</b>	1M	5	
	x. Rewrite the following jumbled sentence in the correct order. <b>He old songs loved.</b>	1M	5	2
Q.2(A)	How do Jim's and Della's actions symbolise the strength of their love for each other?	12M	1	4
<b>OR</b>				
Q.2(B)	Write WH questions for the bold words in the following sentences.	12M	1	3
	i. They went to <b>a party</b>			
	ii. My <b>left leg</b> hurts			
	iii. I think <b>mangoes</b> are the tastiest fruits			
	iv. Anil broke <b>the glass</b>			
	v. The students are <b>going to library</b>			
	vi. The train comes at <b>3.30</b> in the afternoon			
	vii. My brother is <b>six feet</b> tall			
	viii. <b>The students</b> are in the seminar hall			
	ix. <b>Delhi</b> is the capital of India			
	x. I am reading <b>a novel</b> now			
	xi. My mother goes to shop <b>every day</b>			
	xii. I reached college <b>by 9'o clock</b>			

Q.3(A)	Interpret the lines “ <b>For men may come and men may go, but I go on forever</b> ” from the poem <b>The Brook</b> .	12M	2	5
<b>OR</b>				
Q.3(B)	(i) Write a descriptive paragraph on “My city at night” of about 100 words. (ii) Write a descriptive paragraph on “My unforgettable journey” of about 100 words.	12M	2	5
Q.4(A)	In what way has Musk proved to be a visionary leader of cutting-edge technology? Discuss with relevant examples.	12M	3	2
<b>OR</b>				
Q.4(B)	Correct the following sentences 1.Mr Durga Prasad teach us English. 2.Those boys has had breakfast. What about you? 3.Does Amrutha eats sweets? 4.I was not going to abroad next year. 5.I am going to left the class. Will you join me? 6.Avinash has not clean the table. 7.Aravind has come to the class yesterday. 8.Did you all went to pub last week? 9.How have you been do? 10.150 kilometres are not a great distance. 11. No one know the answer. 12.Everyone have finished the work.	12M	3	3
Q.5(A)	Describe how the children found an exciting way to play with their new non-violent toys.	12M	4	3
<b>OR</b>				
Q.5(B)	Draft a letter to the Vice-Chancellor of your university complaining about the poor paper quality and print of the textbooks prescribed to you.	12M	4	5
Q.6(A)	Reflect on the ways in which you can incorporate intrapersonal communication in your own life. Describe them.	12M	5	4
<b>OR</b>				
Q.6(B)	Write an essay on “climate change and its impact”	12M	5	3

**\*\*\* END\*\*\***

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**INTRODUCTION TO PROGRAMMING**  
(Common to All)

Time: 3Hrs

Max Marks: 70

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. Is "C is a structured language"?	1M	1	2
	ii. List out primitive data types.	1M	1	1
	iii. Write the differences between break and continue	1M	2	2
	iv. Write the syntax of do-While	1M	2	2
	v. What are the string operations?	1M	3	1
	vi. Define an array.	1M	3	1
	vii. Write the applications of structures.	1M	4	2
	viii. What is a pointer?	1M	4	1
	ix. Define function prototype.	1M	5	1
	x. Compare a text file with binary file	1M	5	2
Q.2(A)	Discuss in detail about History of Computers and ALU.	12M	1	2
<b>OR</b>				
Q.2(B)	Draw a flowchart and write an algorithm for displaying the sum of even numbers in the range of 1 to n. accept 'n' from user	12M	1	3
Q.3(A)	Elaborate the functioning of the following with an example: (a) If. if-else (b) Break and continue statement	12M	2	3
<b>OR</b>				
Q.3(B)	Write a 'C' program to find whether the given string is palindrome or not.	12M	2	3
Q.4(A)	Explain the following standard string functions with example to support each type. (i). strcmp() (ii). strcpy() (iii). strrev() (iv). strlen()	12M	3	2
<b>OR</b>				
Q.4(B)	How to access single array and two dimensional array elements? Explain with examples	12M	3	3
Q.5(A)	Explain dynamic memory allocation and related functions with example.	12M	4	2
<b>OR</b>				
Q.5(B)	How to use pointers to declare and manipulate the single and multi-dimension arrays? Illustrate with examples	12M	4	3
Q.6(A)	Define recursion. Write a program to find factorial of a number using recursive function.	12M	5	3
<b>OR</b>				
Q.6(B)	What is a file? List the different file opening modes in C? Develop a C program to count no of lines, words and characters in a file.	12M	5	4

\*\*\* END\*\*\*





Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**ENGINEERING GRAPHICS**  
(Common to EEE, and ECE)

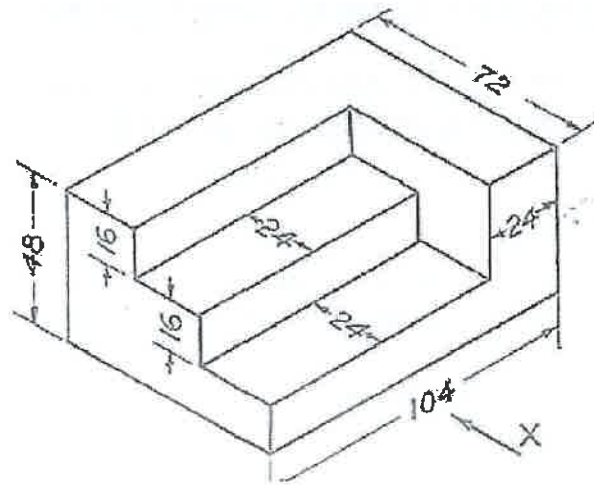
Time: 3Hrs

Max Marks: 70

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**

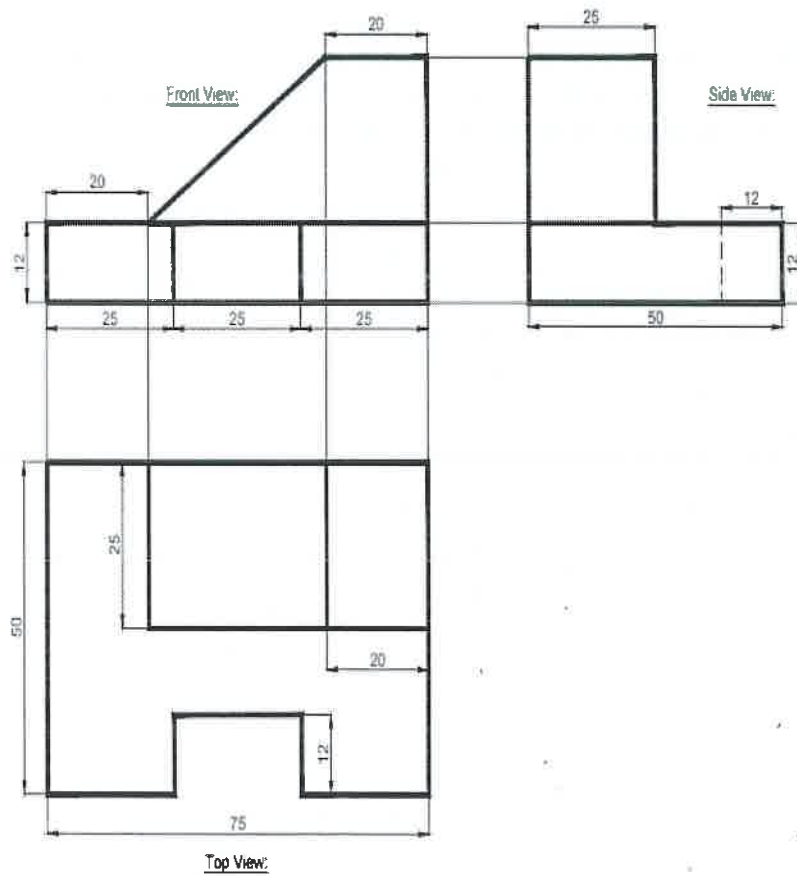
Q.No	Question	Marks	CO	BL
Q.1(A)	Draw the involute of regular pentagon of 30 mm side. Also, draw a tangent and normal to the curve at a point 100 mm from Centre of the pentagon.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw an ellipse with the distance of the focus from the directrix at 30mm for 2/3 (Eccentricity method). Also draw tangent and normal 50 mm from directrix.	14M	1	3
Q.2(A)	(i)A point M is 15mm above H.P, 10mm in front of V.P and 15mm in front of P.P. Draw front view, top view and left side view of the point. (ii)A line AB 90mm long is inclined at 45° to HP and its Top view makes an angle of 60° to V.P. The end A is in H.P and 12mm in front of V.P. Draw its Front view and find its True inclination with V.P	7 M	2	3
<b>OR</b>				
Q.2(B)	Draw the projections of a circle of 50mm diameter resting in the HP and a point A on the circumference. The plane is inclined at 45° to the HP and the top view of the diameter AB making an angle of 30° with the VP.	14M	2	3
Q.3(A)	A pentagonal prism side of base 30mm and height of 60mm resting on HP on one of its corners with a longer edge containing that corner is inclined at 45° to HP and 30° to VP. Draw projection of prism.	14 M	3	3
<b>OR</b>				
Q.3(B)	A cube of 50 mm long edges is so placed on HP on one corner that a body diagonal is Parallel to HP and perpendicular to VP. Draw it's projections.	14M	3	3
Q.4(A)	A Pentagonal prism of base edge 40mm side and axis 80 mm has its base horizontal and an edge of the base parallel to V.P. A horizontal section plane cuts it at a distance of 35mm above the base. Draw its front view and sectional top view and true shape of the section.	14M	4	3
<b>OR</b>				
Q.4(B)	A cone, 50 mm base diameter and 70 mm axis is standing on its base on HP. It cut by a section plane 45° inclined to HP through base end of end generator. Draw development of surfaces of remaining solid.	14M	4	3

Q.5(A) Draw Front view ,Topview and left sideview for the given isometric view. 14M 5 3



OR

Q.5(B) Draw the isometric view of given orthographic Projection. 14M 5 3



\*\*\* END\*\*\*

Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**ENGINEERING GRAPHICS**  
(Common to EEE and ECE)

Time: 3Hrs

Max Marks: 70

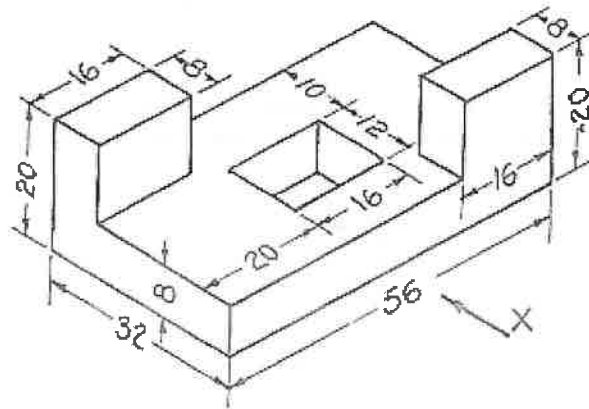
Attempt all the questions. All parts of the question must be answered in one place only.  
In Q.no 1 to 5 answer either A or B only

Q.No	Question	Marks	CO	BL
Q.1(A)	Construct an ellipse with the distance between the focus and directrix as 50 mm and eccentricity as $2/3$ . Also draw tangent and normal at a point 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw a parabola with the distance of the focus from the directrix at 60mm (Eccentricity method), and also draw a normal and tangent through a point 50mm from the directrix.	14M	1	3
Q.2(A)	i) Draw the projections of the following points on the same reference line by keeping the distance between projectors as 40mm. Also name the quadrants in which the given points lies. 1. A – 30mm below HP and 50mm behind VP 2. B – 40mm above HP and 60mm behind VP 3. C – Point is in HP and 20mm behind VP 4. D – 40mm below HP and 30mm in front of VP	14 M	2	3
<b>OR</b>				
Q.2(B)	A rectangle 30mm X 50mm sides is resting on HP on one small side which is $30^\circ$ inclined to VP, while the surface of the plane makes $45^\circ$ inclination with HP. Draw its Projections.	14M	2	3
Q.3(A)	A hexagonal prism, having a base with a 30mm side and an 70mm long axis, rests on one of its base edges in the H.P such that the axis is inclined at $30^\circ$ to the HP and $45^\circ$ to the VP. Draw its projections?	14M	3	3
<b>OR</b>				
Q.3(B)	Draw the projection of a cylinder of base diameter 60mm and height 80mm, which is resting on a point of its base on HP with its axis inclined $30^\circ$ to HP and TV of axis makes an angle of $60^\circ$ to the VP.	14M	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 $60^\circ$ with the HP. Draw the sectional top views, front view and the true shape of the sectional Top view.	14M	4	3

**OR**

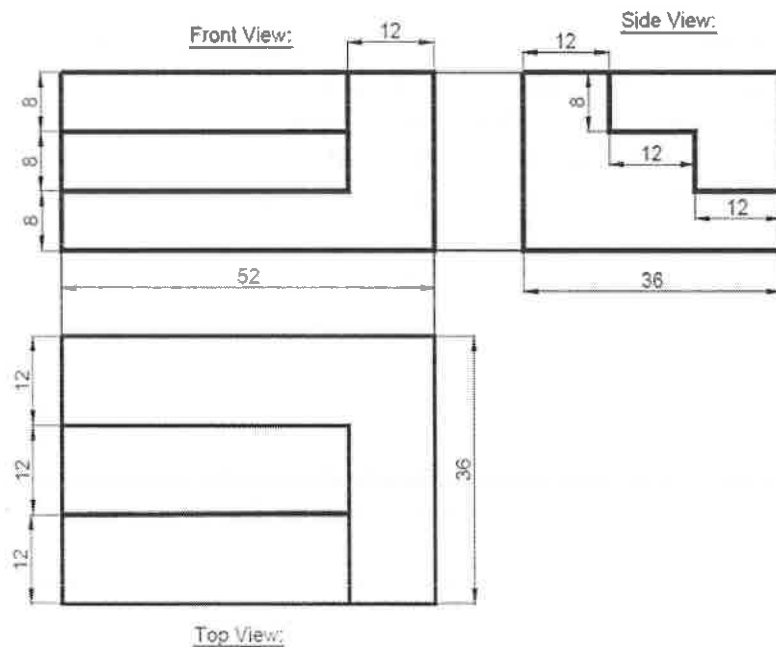
Q.4(B) A Cylinder of base 50mm and axis 60mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to VP and inclined at  $45^\circ$  to HP passing through the top of the generator and cuts all other generators. Draw the development of surface. 14M 4 3

Q.5(A) Draw Front view ,Topview and left sideview for the given isometric view. 14M 5 3



OR

Q.5(B) Draw the isometric view of given orthographic Projection. 14M 5 3



\*\*\* END\*\*\*

Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)

**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**

**ENGINEERING GRAPHICS**

(Electronics & Communication Engineering)

**Time: 3Hrs**

**Max Marks: 70**

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)	Construct a parabola with the distance of the focus from the directrix at 50 mm. Also draw tangent and normal to the curve at a distance of 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw a cycloid of a circle of diameter of 60mm for one revolution. Also, draw a normal and tangent to the curve at a point 40mm above the baseline.	14M	1	3
Q.2(A)	(i) A point A is on HP and 40mm in front of VP. Another point B is on VP and below HP. The line joining their front view makes an angle of 45° with XY. While the joining their top views makes an angle of 30°. Find the distance of the point B from HP.	7M	2	3
	(ii) Draw the projections of the following points on the same ground line, keeping the distance between the projectors is 50mm, Name the quadrants in which they lie.	7M		
	<ol style="list-style-type: none"> <li>1. Point A, 25 mm in front of V.P. and 25 mm above the H.P.</li> <li>2. Point B, 15mm below the H.P. and 20mm behind the V.P.</li> <li>3. Point C, 10mm above the H.P. and 15mm behind the V.P.</li> </ol>			
<b>OR</b>				
Q.2(B)	A Regular Pentagon of 30mm sides is resting on HP on one of its sides with its surface with its surface 45° inclined to HP. Draw its projections when the side in HP makes 30° angle with VP.	14M	2	3
Q.3(A)	A circular cone, 40 mm base diameter and 60 mm long axis is resting on HP, on one point of base circle such that its axis makes 45° inclinations with HP and 40° inclinations with VP. Draw its projections.	14M	3	3
<b>OR</b>				
Q.3(B)	A cone 40mm diameter and 50mm axis is resting on one of its generator on HP which makes 30° inclinations with VP. Draw its projections?	14M	3	3
Q.4(A)	A square prism side of base 40mm and axis 70mm long Its base is resting on HP and its face is equally inclined to VP. It is cut by section plane which is perpendicular to VP and inclined 45° to HP and passing through a point 25mm from the top of the axis of the prism. Draw front view, sectional top view and true shape of the square prism.	14M	4	3
<b>OR</b>				
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.	14M	4	3

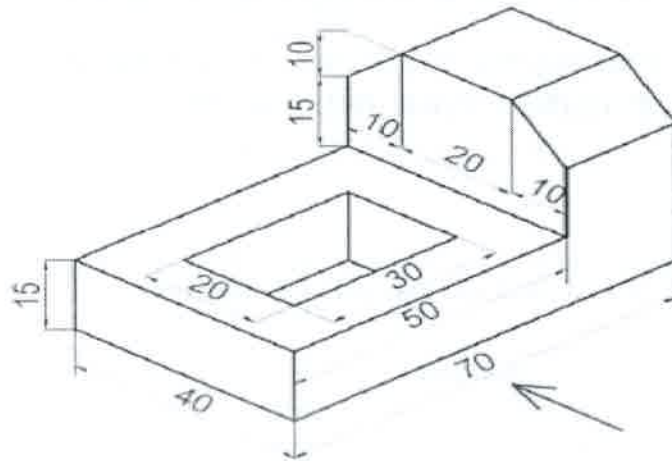
Q.5(A)

Draw Front view ,Topview and sideview for the given isometric view.

14M

5

3



**OR**

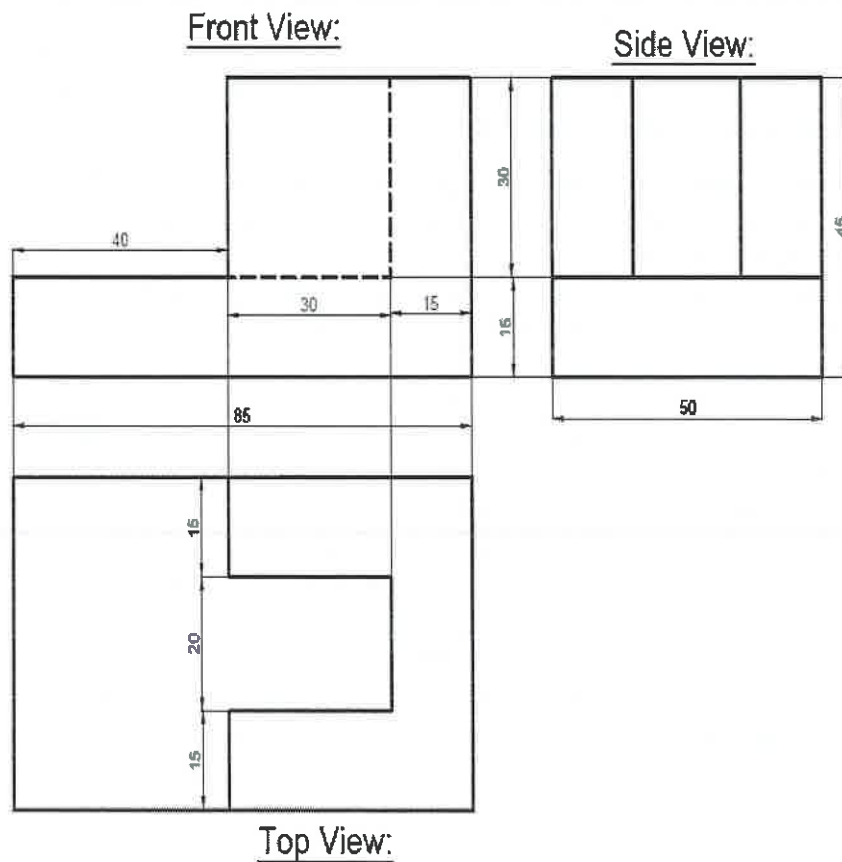
Q.5(B)

Draw the isometric view of given orthographic Projection.

14M

5

3



**\*\*\* END\*\*\***

Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**ENGINEERING GRAPHICS**  
(Electronics & Communication Engineering)

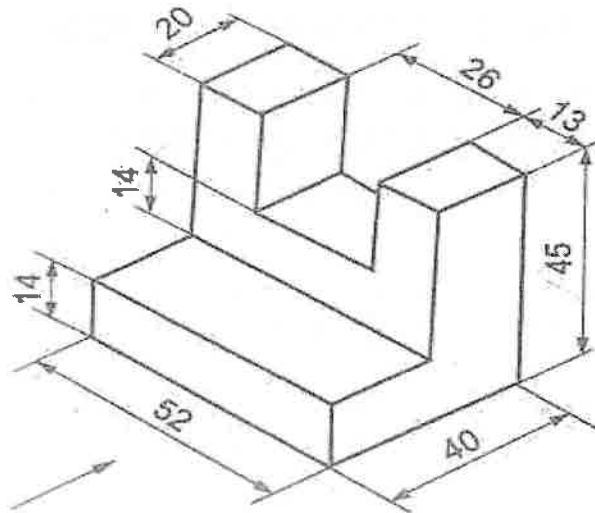
**Time: 3Hrs** **Max Marks: 70**

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 a hyperbola with the distance of the focus from the directrix at 60mm and e=3/2 (Eccentricity method). Also draw tangent and normal 50 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw the involute of regular Hexagon 30 mm side. Also, draw a tangent and normal to the curve at a point 100 mm from Centre of the Hexagon.	14M	1	3
Q.2(A)	(i) Draw the projections of the following points on the same reference line by keeping the distance between projectors as 40mm. 1. A – 30mm below HP and 50mm behind VP 2. B – 40mm above HP and 60mm behind VP 3. C – Point is in HP and 20mm behind VP 4. D – 40mm below HP and 30mm in front of VP	7 M	2	3
	(ii) A line AB 80mm long is inclined at an angle of 30° to H.P and 45° to V.P. The point A is 20mm above H.P and 30mm Infront of V.P. Draw its Projections.	7M	2	3
<b>OR</b>				
Q.2(B)	Draw the projections of a regular hexagon of 30 mm side, having one of its sides in HP and inclined at 60° to VP. The surface of the hexagon is making an angle of 45° with HP.	14M	2	3
Q.3(A)	A cylinder 40 mm diameter and 50 mm axis is resting on one point of a base circle on VP while its axis makes 45° with VP and FV of the axis 35° with HP. Draw its projections.	14M	3	3
<b>OR</b>				
Q.3(B)	A hexagonal prism, having a base with a 30mm side and an 80mm long axis, rests on one of its base edges in the H.P such that the axis is inclined at 30° to the HP and 45° to the VP. Draw its projections?	14M	3	3
Q.4(A)	A Cylinder of 50 mm diameter and 70mm long is resting on one of its bases on HP. It is cut by a section plane, inclined at 60° with HP and passing through a point on the axis at 15mm from the top. Draw the front view, sectional top view, sectional side view and true shape of the section.	14M	4	3
<b>OR</b>				
Q.4(B)	A Square pyramid base 30mm side and axis 50mm has, its base on the H.P, and all the edges of the base equally inclined to the V.P. It is cut by a section plane, perpendicular to the V.P, inclined at 45° to the H.P. and bisecting the axis. Draw the development of the remaining surface.	14M	4	3

Q.5(A) Draw Front view ,Topview and sideview for the given isometric view.

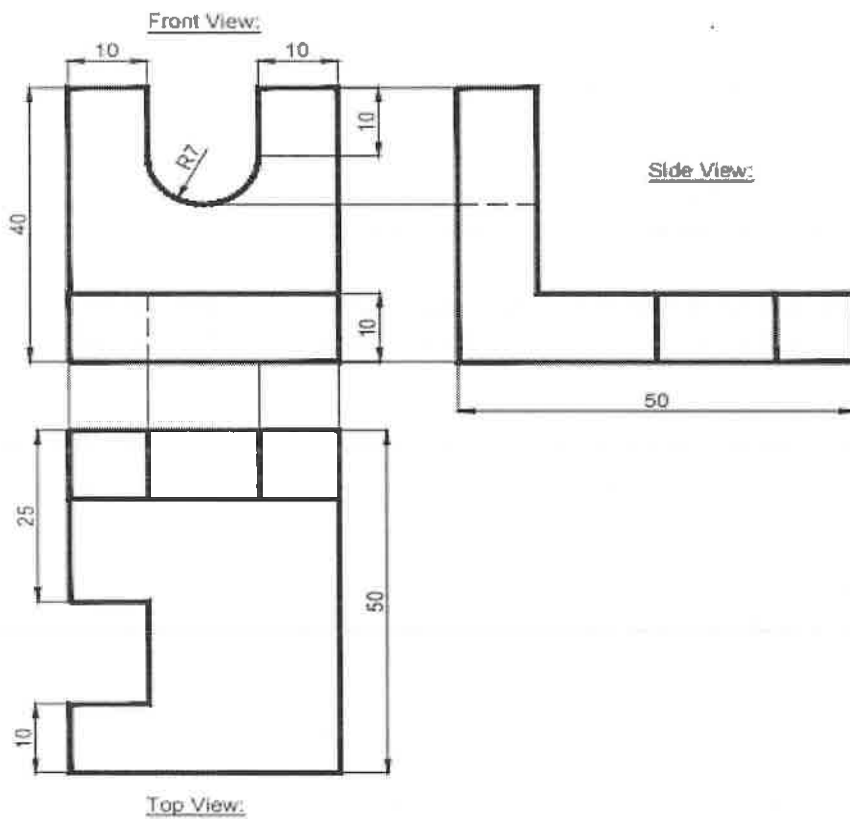
14M 5 3



OR

Q.5(B) Draw the isometric view of given orthographic Projection.

14M 5 3



\*\*\* END\*\*\*



Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024****ENGINEERING GRAPHICS**

(Computer Science &amp; Technology)

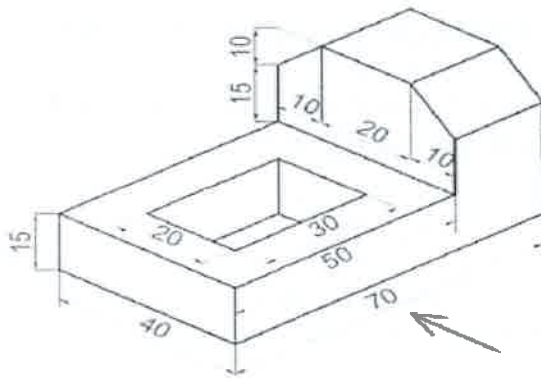
**Time: 3Hrs****Max Marks: 70**

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

Q.No	Question	Marks	CO	BL
Q.1(A)	Construct an ellipse with the distance between the focus and directrix as 50 mm and eccentricity as $2/3$ . Also draw tangent and normal at a point 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw the involute of regular Hexagon 30 mm side. Also, draw a tangent and normal to the curve at a point 100 mm from Centre of the Hexagon.	14M	1	3
Q.2(A)	A line AB 90 mm long is inclined at an angle of $30^\circ$ to H.P and $45^\circ$ to V.P. The point A is 40 mm above H.P and 35 mm in front of V.P. Draw its Projections.	14M	2	3
<b>OR</b>				
Q.2(B)	Draw the projections of a circle of 50mm diameter resting in the HP and a point A on the circumference. The plane is inclined at $45^\circ$ to the HP and the top view of the diameter AB making an angle of $30^\circ$ with the VP.	14M	2	3
Q.3(A)	A circular cone, 40 mm base diameter and 60 mm long axis is resting on HP, on one point of base circle such that its axis makes $45^\circ$ inclinations with HP and $40^\circ$ inclinations with VP. Draw it's projections.	14M	3	3
<b>OR</b>				
Q.3(B)	A cube of 50 mm long edges is so placed on HP on one corner that a body diagonal is Parallel to HP and perpendicular to VP. Draw it's projections.	14M	3	3
Q.4(A)	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 $45^\circ$ to the HP and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section.	14M	4	3
<b>OR</b>				
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 $45^\circ$ to HP passing through the top of the generator and cuts all other generators. Draw the development of surface.	14M	4	3

Q.5(A) Draw Front view ,Topview and sideview for the given isometric view.

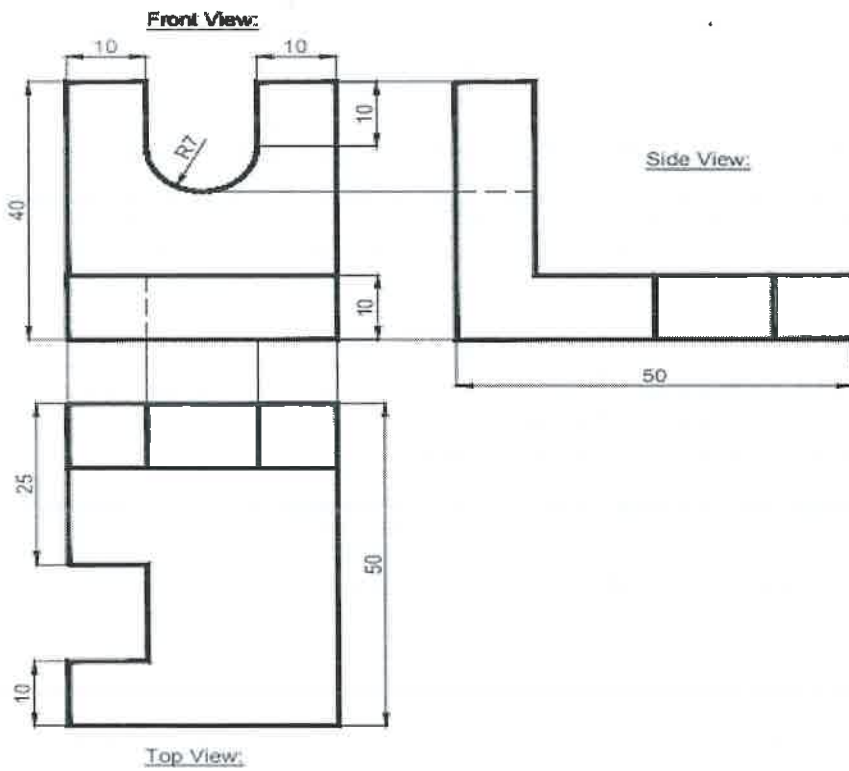
14M 5 3



**OR**

Q.5(B) Draw the isometric view of given orthographic Projection.

14M 5 3



**\*\*\* END\*\*\***

Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)  
**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**ENGINEERING GRAPHICS**  
(Computer Science & Technology)

Time: 3Hrs

Max Marks: 70

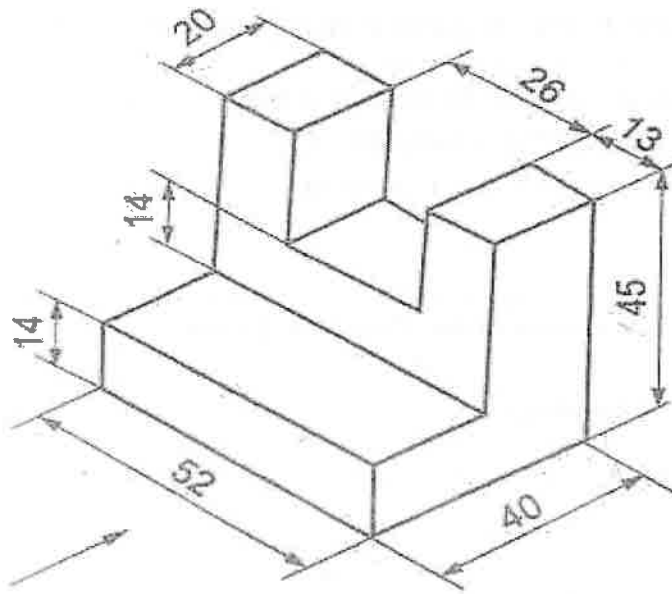
Attempt all the questions. All parts of the question must be answered in one place only.  
**In Q.no 1 to 5 answer either Part-A or B only**

Q.No	Question	Marks	CO	BL
Q.1(A)	Construct a parabola with the distance of the focus from the directrix at 50 mm. Also draw tangent and normal to the curve at a distance of 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw an involute of a circle of 50mm diameter. Also, draw a tangent and normal to the curve at a point 90 mm from Centre of the circle.	14M	1	3
Q.2(A)	(i) A point A is on HP and 40mm in front of VP. Another point B is on VP and below HP. The line joining their front view makes an angle of 45° with XY. While the joining their top views makes an angle of 30°. Find the distance of the point B from HP.	7M	2	3
	(ii) Draw the projections of the following points on the same ground line, keeping the distance between the projectors is 50mm, Name the quadrants in which they lie.	7M		
	1. Point A, 25 mm in front of V.P. and 25 mm above the H.P.			
	2. Point B, 15mm below the H.P. and 20mm behind the V.P.			
	3. Point C, 10mm above the H.P. and 15mm behind the V.P.			
<b>OR</b>				
Q.2(B)	A Rectangle 30mm and 50mm sides is resting on HP on one small side which is 30° inclined to VP, while the surface of the plane makes 45° inclination with HP. Draw its Projections.	14M	2	3
Q.3(A)	A cylinder 40 mm diameter and 50 mm axis is resting on one point of a base circle on VP while its axis makes 45° with VP and FV of the axis 35° with HP. Draw its projections.	14M	3	3
<b>OR</b>				
Q.3(B)	A hexagonal prism, having a base with a 30mm side and an 80mm long axis, rests on one of its base edges in the H.P such that the axis is inclined at 30° to the HP and 45° to the VP. Draw its projections?	14M	3	3
Q.4(A)	A Pentagonal prism of base edge 40 mm side and axis 80 mm has its base horizontal and an edge of the base parallel to V.P. A horizontal section plane cuts it at a distance of 35 mm above the base. Draw its front view and sectional top view and true shape of the section.	14M	4	3
<b>OR</b>				
Q.4(B)	A square pyramid base 40 mm side and 65 mm long axis, has its base on the HP and all the edges of the base equally inclined to VP. It is cut by a section plane perpendicular to VP and inclined 45° to HP and bisecting the axis. Draw the development of remaining solid of the pyramid.	14M	4	3

Q.5(A) Draw Front view ,Topview and sideview for the given isometric view.

14M

5 3

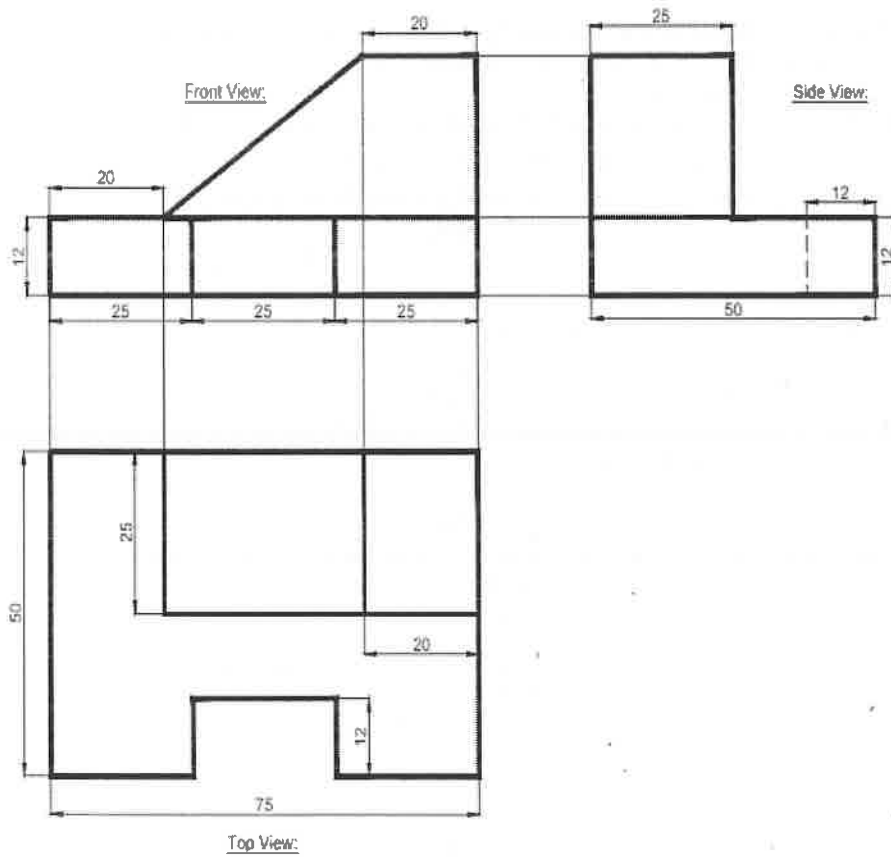


OR

Q.5(B) Draw the isometric view of given orthographic Projection.

14M

5 3



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Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)

**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**

**ENGINEERING GRAPHICS**

(Common to CSE-CS and CSE-Networks)

**Time: 3Hrs**

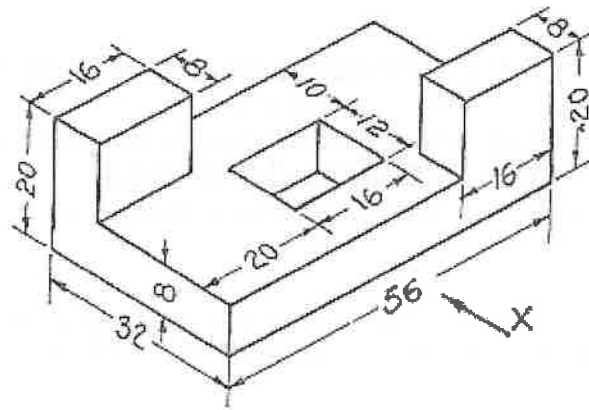
**Max Marks: 70**

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

Q.No	Question	Marks	CO	BL
Q.1(A)	Construct a parabola with the distance of the focus from the directrix at 50 mm. Also draw tangent and normal to the curve at a distance of 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw an involute of a circle of 50mm diameter. Also, draw a tangent and normal to the curve at a point 90 mm from Centre of the circle.	14M	1	3
Q.2(A)	(i) Draw the projections of the following points on the same reference line by keeping the distance between projectors as 40mm. A – 20mm below HP and 50mm behind VP B – 30mm above HP and 60mm behind VP C – Point is in HP and 20mm behind VP D – 30mm below HP and 30mm in front of VP  (ii) A line AB 80mm long is inclined at an angle of 30° to H.P and 45° to V.P. The point A is 20mm above H.P and 30mm Infront of V.P. Draw its Projections.	7M	2	3
<b>OR</b>				
Q.2(B)	A Regular Pentagon of 25mm sides is resting on HP on one of its sides with its surface with its surface 45°inclined to HP. Draw its projections when the side in HP makes 30° angle with VP.	14M	2	3
Q.3(A)	A hexagonal prism, having a base with a 25mm side and an 70mm long axis, rests on one of its base edges in the H.P such that the axis is inclined at 45° to the HP and 30° to the VP. Draw its projections?	14M	3	3
<b>OR</b>				
Q.3(B)	A cone 40 mm diameter and 50 mm axis is resting on one of its generator on HP which makes 30°inclinations with VP. Draw its projections?	14M	3	3
Q.4(A)	A Hexagonal prism of 25mm sides and 60mm 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, the true shape of the sectional Top view and Sectional Side view.	14M	4	3
<b>OR</b>				
Q.4(B)	A Cylinder of 40 mm diameter and 70mm long is resting on one of its bases on HP. It is cut by a section plane, inclined at 45° with HP and passing through a point on the axis at 20mm from the top. Draw the front view, sectional top view, draw the development of lateral surface.	14M	4	3

Q.5(A) Draw front view, top view and side view for the given isometric view.

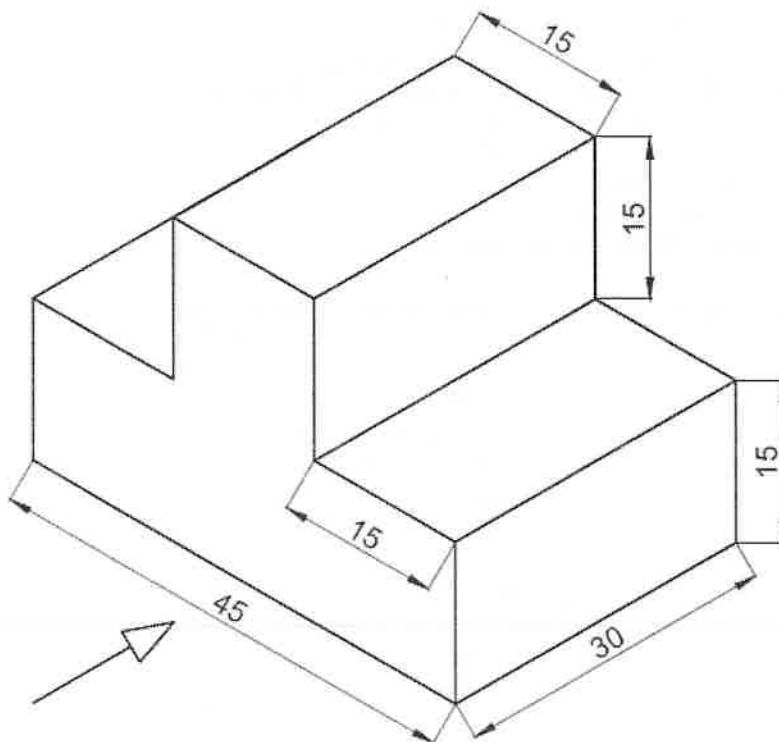
14M 5 3



OR

Q.5(B) Draw front view, top view and side view for the given isometric view.

14M 5 4



\*\*\* END\*\*\*

Hall Ticket No: 

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Question Paper Code: 23ME101

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE**  
(UGC-AUTONOMOUS)

**B.Tech I Year I Semester (R23) Regular End Semester Examinations, February- 2024**  
**ENGINEERING GRAPHICS**

(Common to CSE-CS and CSE-Networks)

**Time: 3Hrs**

**Max Marks: 70**

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

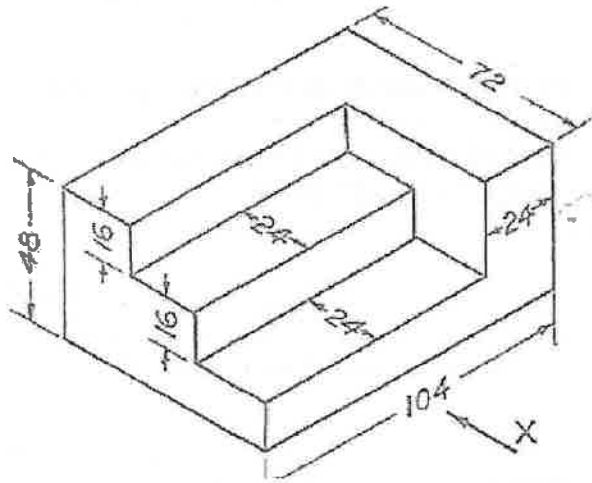
Q.No	Question	Marks	CO	BL
Q.1(A)	Construct an ellipse with the distance between the focus and directrix as 50 mm and eccentricity as 2/3. Also draw tangent and normal at a point 40 mm from directrix.	14M	1	3
<b>OR</b>				
Q.1(B)	Draw a cycloid of a circle of diameter of 50mm for one revolution. Also, draw a normal and tangent to the curve at a point 30mm above the baseline.	14M	1	3
Q.2(A)	(i) A point M is 15mm above H.P, 10mm in front of V.P and 15mm in front of P.P. Draw front view, top view and left side view of the point.	7 M	2	3
	(ii) A line AB 90mm long is inclined at 45° to HP and its Top view makes an angle of 60° to V.P. The end A is in H.P and 12mm in front of V.P. Draw its Front view and find its True inclination with V.P	7M		
<b>OR</b>				
Q.2(B)	Draw the projections of a regular hexagon of 25 mm side, having one of its sides in HP and inclined at 30° to VP. The surface of the hexagon is making an angle of 45° with HP.	14M	2	3
Q.3(A)	A cylinder 40 mm diameter and 60 mm axis is resting on one point of a base circle on VP while its axis makes 45° with VP and FV of the axis 35° with HP. Draw its projections.	14M	3	3
<b>OR</b>				
Q.3(B)	A pentagonal prism side of base 30mm and height of 60mm resting on HP on one of its corners with a longer edge containing that corner is inclined at 45° to HP and 30° to VP. Draw projection of prism.	14M	3	3
Q.4(A)	A Pentagonal prism of base edge 40 mm side and axis 80 mm has its base horizontal and an edge of the base parallel to V.P. A horizontal section plane cuts it at a distance of 35 mm above the base. Draw its front view and sectional top view and true shape of the section.	14M	4	3
<b>OR</b>				
Q.4(B)	A cone, 50 mm base diameter and 70 mm axis is standing on its base on HP. It cut by a section plane 45° inclined to HP through base end of end generator. Draw development of surfaces of remaining solid.	14M	4	3

Q.5(A) Draw Front view ,Top view and side view for the given isometric view.

14M

5

3



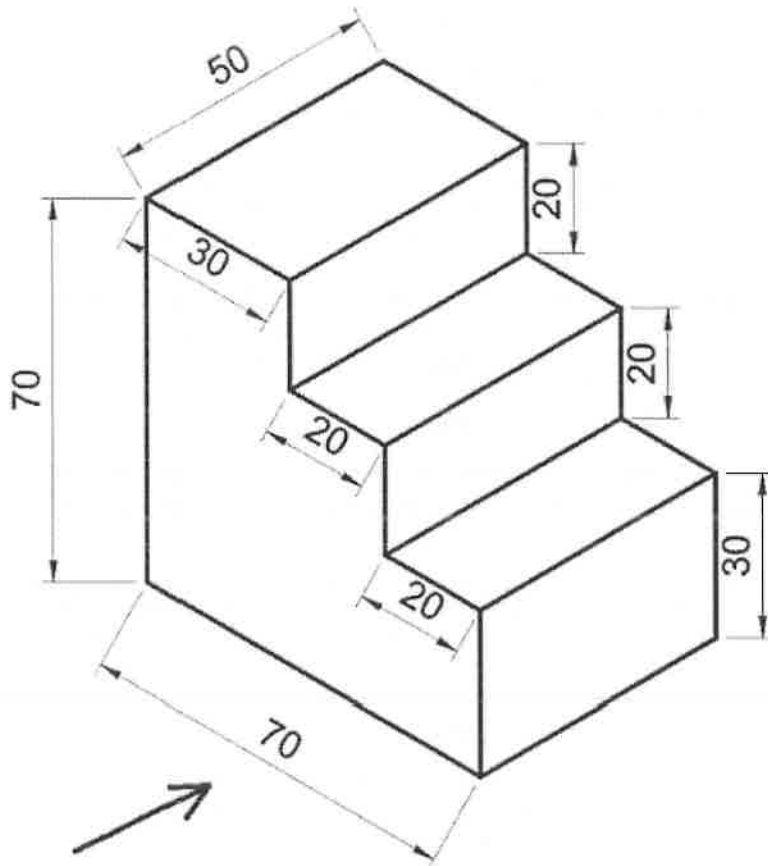
OR

Q.5(B) Draw Front view ,Top view and side view for the given isometric view.

14M

5

4



\*\*\* END\*\*\*