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

Question Paper Code: 14ENG12T02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – MAY 2018

TECHNICAL REPORT WRITING

(Common to All)

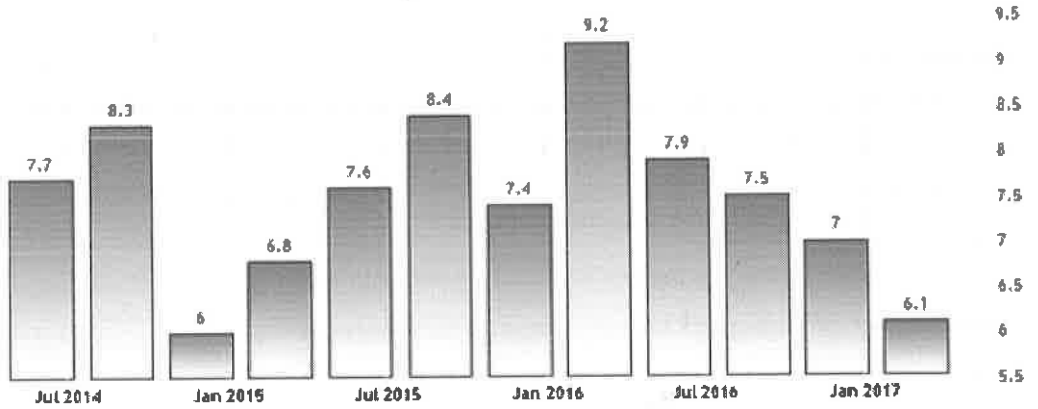
Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	What are the levels of communication?	1M
	ii.	Is poor listening a barrier to effective communication?	1M
	iii.	What is skimming? Explain in one or two sentences.	1M
	iv	What is the importance of proofreading in writing skills?	1M
	v.	Why critical reading is an important prospect?	1M
	vi	Mention the differences between formal and informal communication.	1M
	vii.	How can you get sources of information while preparing a report?	1M
	viii.	What is the importance of data collection in a Technical report?	1M
	ix.	What is the structure of a report?	1M
	x.	Discuss the role of feedback in effective communication process.	1M
Q.2(A)		Discuss on kinesics and proxemics with examples.	10M
		OR	
Q.2(B)		Explain in detail on barriers of communication.	10M
Q.3(A)		Discuss element of style in writing skills with appropriate examples.	10M
		OR	
Q.3(B)		Explain business style of writing in detail.	10M
Q.4(A)		What are the characteristics of a report?	10M
		OR	
Q.4(B)		Assume that HRD Ministry has directed you to prepare a report on the possibilities of setting up central university in your locality. Prepare a report in view of possibilities.	10M
Q.5(A)		You are asked to prepare a questionnaire on the need of new English language laboratory software for I-B.Tech students. Prepare a detailed set of questionnaire on the above task.	10M
		OR	
Q.5(B)		Your college management requested you to prepare a report on providing better employability for all the students. Prepare a detailed report on prerequisites.	10M

Q.6(A) 10M

INDIA GDP ANNUAL GROWTH RATE



The above bar graph shows the annual growth rate of GDP of India. Write a paragraph with at least 150 words.

OR

Q.6(B) The issue of road rage requires serious attention. Day by day, it is becoming a great concern. Call it the negligence of the government or the rashness of the drivers, the underlying fact is that at the end of the day, the common man is the one who suffers the most. The commoner driving a two-wheeler who is hit by a speeding SUV, even though the former was following the traffic rules, has nowhere to go in order to seek redressal for his grievances or his injury. A recent case in point is the accident caused by the speeding luxury car owned by Hema Malini. A family of four driving a modest Alto was hit by the over speeding car driven by the actress's driver. It resulted in the death of the youngest child of the family and several injuries to the other family members. To add insult to injury, Malini posted negative comments on a famous social networking website. 10M

Part of the problem lies with the attitude and mentality of the driver behind the steering wheel. The car is a personal vehicle and one possesses the freedom to drive it independently and at one's own will. But one must understand that the road on which one drives is open to the public. This blurring of the dichotomy between the public and the private leads to reckless behaviour on the roads. Respect for the elderly and pedestrians, so common in countries abroad, is a thing of rarity to be found in our land. A little consideration to road rules and adoption of simple safety measures such as fastening of the seat belt, can go a long way in reducing this menace.

1. **Suggest a suitable title to the passage.**
2. **Why does the common man suffer grievously in instances of road rage?**
3. **What should the driver understand?**
4. **What is the solution to this problem of road rage?**
5. **Why safety measures are important while driving?**

*** END***

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

Question Paper Code: 14PHY12T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – MAY 2018

ENGINEERING PHYSICS

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	A particle undergoes a displacement of $\vec{S} = 2\hat{\imath} + \hat{\jmath} - 6\hat{k}$ m by applying a force of $\vec{F} = 3\hat{\jmath} - 4\hat{k}$ N. What is the amount of work done by the force?	1M
	ii.	What is the weight of a 50 kg rice bag on the Earth?	1M
	iii.	Define conservation of Angular momentum?	1M
	iv	Write the statement of work-energy theorem?	1M
	v.	Find the energy needed to eject a 50 Kg spacecraft from the surface of the earth on which the escape velocity is 11.2 Km/s.	1M
	vi	What is the Kinetic Energy of the pendulum in SHM at the mean position and at extreme position?	1M
	vii.	Waves on strings are always transverse. Why?	1M
	viii.	A bob is suspended with a massless string of length 245cm. Find its time period?	1M
	ix.	What is the path difference equivalent to a phase difference of $\pi/6$?	1M
	x.	Write any two differences between Interference and diffraction?	1M

Q.2(A)	i)	Explain Scalar and Vector products?	4M
	ii)	The position vectors of three vectors are given as $\vec{A} = 2\hat{\imath} + \hat{\jmath} + 4\hat{k}$, $\vec{B} = 3\hat{\imath} - 2\hat{\jmath} + 7\hat{k}$ and $\vec{C} = 5\hat{\imath} + 2\hat{\jmath} - 3\hat{k}$. Find *a)* magnitude of $(\vec{A} + \vec{B} + \vec{C})$, *b)* $\vec{A} \cdot (2\vec{B} \times 3\vec{C})$ and *c)* projection of $(\vec{A} + \vec{B})$ onto $\vec{C}$.	6M

OR

Q.2(B)	i)	Three freight cars of mass M are pulled with force F by a locomotive. Friction is negligible. Find the forces on each car?	4M
	ii)	In a circular motion, the position of the particle is given by $\vec{r} = r(\cos\omega t\ \hat{\imath} + \sin\omega t\ \hat{\jmath})$ Find the velocity of the particle and prove that the direction of velocity is always perpendicular to the direction of the position.	6M

Q.3(A)	i)	Derive fundamental Rocket equation.	5M
	ii)	Find the center of mass of a thin uniform plate in the shape of an equilateral triangle with sides '*a*'.	5M

OR

Q.3(B)	A mass m is shot vertically upward from the surface of the earth with initial speed v_0. Assuming that the only force is gravity, find the minimum value of v_0 for the mass to escape the earth completely.	10M
Q.4(A)	i) State and prove parallel axis theorem of moment of inertia.	7M
	ii) Find the moment of inertia of uniform thin stick of mass M, length l along the axis through the midpoint and perpendicular to the stick?	3M
	OR	
Q.4(B)	i. Show that energy of a simple harmonic oscillator is a constant and is proportional to the square of the amplitude?	5M
	ii. The displacement of a simple harmonic oscillator is given by $x = a\sin(\omega t + \phi)$. If the oscillation started at t=0 from a position x_0 with a velocity v_0, show that amplitude of the oscillation $a = \left(x_0^2 + \frac{v_0^2}{\omega^2}\right)^{1/2}$.	5M
Q.5(A)	i) What are Lissajous figures. On which factors the shape of Lissajous figures depends.	3M
	ii) Construct the Lissajous figures for the motion described by x = 5 cos (ωt) and y = 5 cos(2ωt).	7M
	OR	
Q.5(B)	i) Derive the relation between phase velocity and group velocity?	4M
	ii) The equation of a transverse wave along a string is given by $Y = 0.3 \text{ Sin } \pi (0.5x - 50t)$, where y and x are in centimeters and t is in seconds. Find the wave number, frequency, period, and velocity of the wave. Also find the maximum transverse speed of any particle in the string.	6M
Q.6(A)	i) Explain how the radius of curvature of a given plano-convex lens is determined by forming Newton's rings.	8M
	ii) Find diameter of 10^{th} Newton's ring using source of wavelength 6000 Å and radius of curvature of plano-convex lens 100cm.	2M
	OR	
Q.6(B)	Describe Fraunhofer diffraction due to single slit with a suitable diagram. And obtain the conditions for maxima, minima, and secondary maxima intensities in the diffracted spectrum.	10M

***** END*****

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

Question Paper Code: 14CHE11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – May 2018

ENGINEERING CHEMISTRY

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	What does reduced dissolved oxygen levels in water indicate?	1M
	ii.	Why is liquid chlorine preferred over bleaching powder for chlorination of water?	1M
	iii.	Define Second law of Thermodynamics.	1M
	iv	What is an isobaric process?	1M
	v.	State the principle of infrared spectroscopy.	1M
	vi	Write the monomers of Bakelite.	1M
	vii.	Why does a bicycle kept in sea coast region get corroded faster than one kept away from sea shore?	1M
	viii.	For a cell, $Zn(S)\|ZnSO_4(aq)\|\|CuSO_4(aq)\|Cu(S)$ kept at 25^0C, the EMF is 1.018V. If the single electrode potential of Copper is 0.34 V, what is the single electrode potential of Zinc electrode?	1M
	ix.	Define Saponification number of a lubricant.	1M
	x.	What is an abrasive? Give one example of an abrasive.	1M
Q.2(A)		With a neat diagram, explain the process of ion-exchange for removal of hardness of water.	10M
		OR	
Q.2(B)		i. Outline the principle of reverse osmosis and explain the process with a neat diagram	5M
		ii. 25 mL of standard CaCo3 (0.004M) consumed 20 mL of EDTA for complete neutralization. 25 mL of sample hard water consumed 15 mL of EDTA for neutralization. 25 mL of the same sample hard water after boiling and filtering consumed 5 mL of EDTA. Calculate the temporary, permanent and total hardness of the water sample.	5M
Q.3(A)		i. Derive kinetic rate equation for a pseudo first order reaction.	7M
		ii. Calculate the half- life period for a first order reaction whose rate constant is $1.065 \times 10^{-3} sec^{-1}$.	3M
		OR	
Q.3(B)		i. One mole of an ideal gas at 0 °C expands reversibly under isothermal conditions from 25 atm to 5 atm. Calculate the maximum work done in litre-atm unit.	5M
		ii. A first order reaction is 20% completed in 10 minutes. Calculate (a) specific rate of reaction (b) time taken for 75% completion of the reaction.	5M

Q.4(A)	Give a comparative account of TLC and Paper chromatography. Bring out their utility.	10M
	OR	
Q.4(B)	Mention the monomers of Nylon 6,6 and discuss its preparation, properties and applications.	10M
Q.5(A)	Explain the chemistry of working of a Ni-Cd battery. Why is better in performance at sub-zero temperatures compared to lead-acid battery?	10M
	OR	
Q.5(B)	With reference to the metal, discuss the different factors influence its rate of corrosion.	10M
Q.6(A)	What are solid lubricants? Explain the mechanism of working of solid lubricants.	8M
	OR	
Q.6(B)	Describe the synthesis of nanomaterial using sol-gel process. Highlight how nanomaterials are used as photocatalysts in dye degradation taking TiO_2 as example.	10M

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14MAT12T02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – MAY 2018

LINEAR ALGEBRA AND COMPLEX ANALYSIS

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	Find the inverse of a matrix, $A=\begin{bmatrix}-2 & 0 & 0\\ 0 & 3 & 0\\ 0 & 0 & 5\end{bmatrix}$	1M
	ii.	Determine whether the given set of vectors $\{[1,-2,-1],[-3,-1,-2],[0,0,0]\}$ is Linearly Independent (or) not	1M
	iii.	Find the matrix of linear transformation $L:P_3\to R^3$ given by $L(ax^3+bx^2+cx+d)=[a+d,2b,a-c]$ with respect to the standard bases for P_3 and for R^3.	1M
	iv	Find the eigenvalues of the matrix $A=\begin{bmatrix}7 & 1\\ 0 & -3\end{bmatrix}$	1M
	v.	Find the principal argument, $Arg\ Z$ when $Z=-1-i$.	1M
	vi	Write the function $f(z)=z+\frac{1}{z}$ if $z\neq 0$ in the form $f(z)=u(r,\theta)+iv(r,\theta)$	1M
	vii.	Find the value of log (i).	1M
	viii.	State Cauchy Integral formula.	1M
	ix.	Find the residue at $z=0$ of the function $f(z)=\frac{1}{z+z^2}$	1M
	x.	State Fundamental theorem of algebra.	1M
Q.2(A)		Use Gauss-Jordan method, to find the minimal positive integer values for the variables that will balance the chemical equation $aAgNO_3+bH_2O\to cAg+dO_2+eHNO_3$	10M
		OR	
Q.2(B)		Find the transition matrices from B to C and from C to S for P_2 given by B $=\{-x^2+4x+2,2x^2-x-1,-x^2+2x+1\}$; C $=\{x^2-2x-3,2x^2-1,x^2+x+1\}$ and standard basis S = $(x^2,x,1)$ for P_2.	10M

Q.3(A) 10M

Let $L: R^3 \to R^4$ given by $L\begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 4 & -2 & 8 \\ 7 & 1 & 5 \\ -2 & -1 & 0 \\ 3 & -2 & 7 \end{bmatrix}\begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}$. Find a basis for *ker*(L) and a basis for *range*(L). Verify that dim(*ker*(L)) + dim(*range*(L)) = dim (R^3)

OR

Q.3(B) 10M

Find the eigenvalues and eigenvectors for the matrix $A = \begin{bmatrix} -4 & 8 & -12 \\ 6 & -6 & 12 \\ 6 & -8 & 14 \end{bmatrix}$

Q.4(A) 5M

i. Show that the limit of a function $f(z) = \frac{\overline{z}}{z}$ as z tends to 0 does not exists.

ii. Find whether the function $f(z) = e^y e^{ix}$ is analytic or not. 5M

OR

Q.4(B) Derive the Cauchy-Riemann equations for polar coordinates and verify the Cauchy-Riemann equation in polar coordinates for the function $f(z) = \log z \ (z \neq 0)$. 10M

Q.5(A) Find all roots of the equation (i) $\cos z = 2$ (ii) $\sinh z = i$ 10M

OR

Q.5(B) Find the value of the integral of $g(z) = \frac{1}{z^2+4}$ around the positively oriented circle $c: |z-i| = 2$ 10M

Q.6(A) Evaluate the integral of each of these functions around the circle $|z| = 3$ in the positive sense, i. $f(z) = \frac{\exp(2z)}{(z-1)^2}$ ii. $f(z) = \frac{z^2+2z+1}{z^2-2z}$ 10M

OR

Q.6(B) Give two Laurent series expansions in powers of z for the function $f(z) = \frac{1}{(z-1)(z-2)}$ and specify the regions in which those expansions are valid. 10M

*** END***

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

Question Paper Code: 14CSU12T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – May 2018

COMPUTER PROGRAMMING

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	What is an operator?	1M
	ii.	What is the difference between break and continue statement?	1M
	iii.	Write a statement to find the bigger of two numbers using conditional operator	1M

	iv.	What is the output of the program
		#include<stdio.h>
		void main()
		{
		int a=10,c;
		c=++a;
		printf("%d %d",a,c);
		}
			1M

	v.	What is the purpose of static storage class?	1M
	vi.	What is the difference between array and structure?	1M
	vii.	Who can access protected members?	1M
	viii.	What is the difference between C and C++?	1M
	ix.	What is the difference between stack and linked list?	1M
	x.	Define Queue?	1M
Q.2(A)		Write about looping statements in C with an appropriate example.	10M
		OR	
Q.2(B)		i) Write a c program to reverse digits of a given number.	5M
		ii) Write about data types in C with an example.	5M
Q.3(A)		What is sorting? Explain the steps involved in sorting an array of 10 elements using any sorting technique.	10M
		OR	
Q.3(B)		i) What is a pointer? What are the advantages of pointers?	5M
		ii) Write a c program for swapping of two numbers using pointers.	5M
Q.4(A)		i) Explain any five string handling functions with example.	5M
		ii) Write a C program to compare two strings without using strcmp().	5M
		OR	
Q.4(B)		i) Define Structure? How to initialize the elements into a structure with example?	5M
		ii) Write a C Program to copy the contents of one file to other file.	5M

Q.5(A)	i)What is inheritance? Explain different types of inheritance with suitable examples. ii) Analyze the use of public, private and protected access controls in C++.	5M 5M
	OR	
Q.5(B)	What is a constructor? Explain different forms of constructors with examples.	10M
Q.6(A)	What is a singly linked list? Write a program to insert a node in front, rear and in a particular position and print the list.	10M
	OR	
Q.6(B)	i) What is queue? Explain the operations on queue. ii) Write a program to implement Queue operations using arrays.	5M 5M

*** END***

Hall Ticket No: | | | | | | | | | | | Question Paper Code:14EEE12T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations – June 2018

BASIC ELECTRICAL & ELECTRONICS ENGINEERING

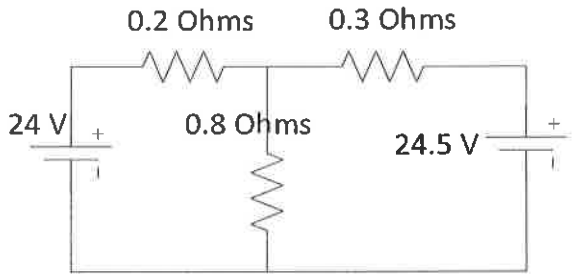
(Common to All Branches)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

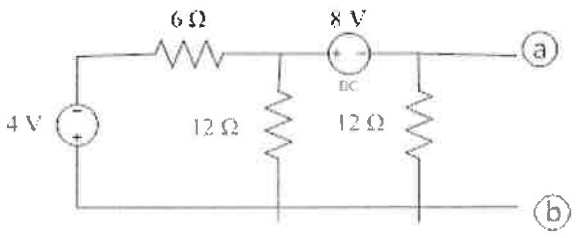
Q.1	i.	Two resistors of resistance values 2Ω and 4 Ω are connected in parallel across a voltage source 10V, calculate current delivered by source.	1M
	ii.	State Superposition principle?	1M
	iii.	Draw the phasor diagram of voltage and current in a pure capacitor?	1M
	iv	Write the formula for RMS value of a sinusoidal wave form?	1M
	v.	Define Faraday's law of electromagnetic induction?	1M
	vi	What is an Ideal transformer?	1M
	vii.	Define armature reaction?	1M
	viii.	Define Slip of an induction motor?	1M
	ix.	What is avalanche break down?	1M
	x.	Define rectifier? What is a full wave rectifier?	1M

Q.2(A) Using the mesh analysis, find the voltages across each resistor shown in figure. 10M



OR

Q.2(B) Find the voltage across terminals a and b using source transformation? 10M



Q.3(A)	A coil of resistance 8Ω and inductance 0.5 H is connected in series with a capacitor of 125 μF across a 230 V, 50 Hz supply. Calculate (a) the inductive reactance, (b) capacitive reactance, (c) impedance, (d) current and (e) Magnitudes of voltage across inductor and capacitor.	10M
	OR	
Q.3(B)	Derive the relationship between phase and line voltage as well as current of a star connected three-phase system. Also write the formulae for three-phase power.	10M
Q.4(A)	Explain construction & working principle of a single-phase transformer.	10M
	OR	
Q.4(B)	A 30 kVA, 2400/120-V, 50-Hz transformer has a high voltage winding resistance of 0.1 Ω and a leakage reactance of 0.22 Ω. The low voltage winding resistance is 0.035 Ω and the leakage reactance is 0.012 Ω. Find the equivalent winding resistance, reactance and impedance referred to the (a) high voltage side and (b) the low-voltage side.	10M
Q.5(A)	Explain the construction of DC machines with neat diagram?	10M
	OR	
Q.5(B)	Explain in details about the speed control of DC motors.	10M
Q.6(A)	Write in detail about the operation of half -wave rectifier, with a neat diagram.	10M
	OR	
Q.6(B)	For Common-Emitter bipolar junction transistor configuration, analyse the input and output characteristics.	10M

***** END*****

Set - 1

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations –May 2018

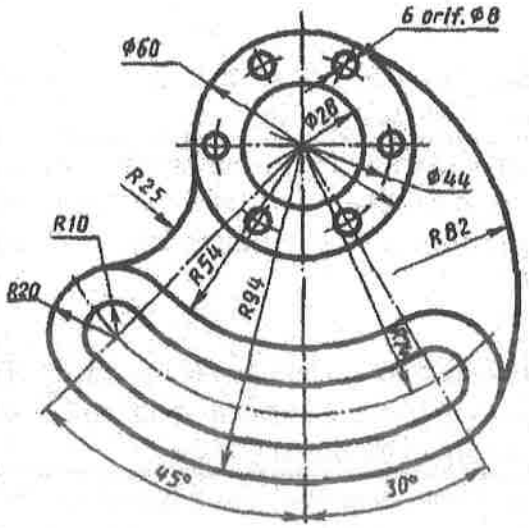
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

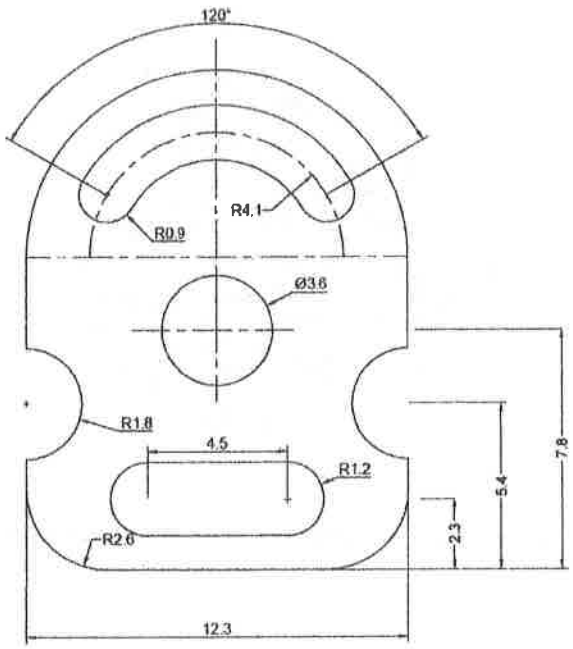
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the given figure using AutoCAD commands and dimension it. 12M



OR

Q.1(B) Draw the given figure using AutoCAD commands and dimension it. 12M



B is behind the V.P. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45^0 with xy. Find the distance of the point B form the V.P.

OR

Q.2(B) A line AB 80mm long is inclined at an angle of 30^0 to H.P and 45^0 to V.P. The point A is 20mm above H.P and 30mm infront of V.P. Draw its Projections. 12M

Q.3(A) A rectangular lamina with longer edge 50mm and smaller edge 30mm is resting on one of its smaller edges on the HP. It is inclined with the HP in such a way that its TV appears as a square with maximum dimensions. Draw projections if the smaller edge makes inclinations of 60^0 with the VP 12M

OR

Q.3(B) A hexagonal prism with side of base 30mm and axis 80mm long is resting with an edge of its base on H.P, such that the rectangular face containing that edge is inclined at 40^0 to HP. Draw the projections of the prism when its axis is parallel to V.P. 12M

Q.4(A) A pentagonal pyramid of base side 30 mm and axis length 60mm is resting on H.P on its base with one of its base side parallel to VP. It is cut by a plane inclined at 30° to H.P and perpendicular to VP and is bisecting the axis. Draw its front view, sectional top view 12M

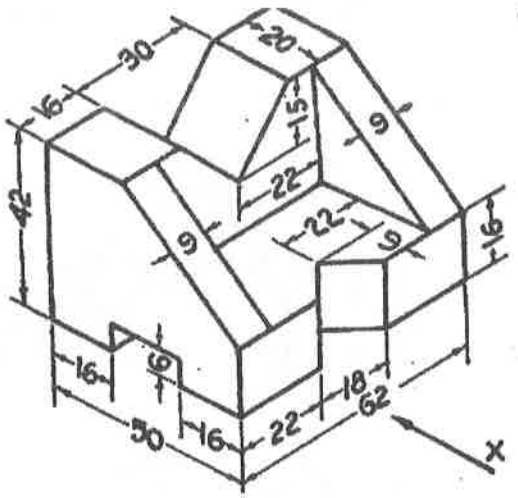
OR

Q.4(B) A cone of base diameter 40mm and axis 60mm is resting on with its base on the H.P. Draw the development of its lateral surface. 12M

Q.5(A) A vertical square prism of base 60 mm side, is penetrated by a horizontal square prism of base 40 mm side so that their axes intersect. The axis of the horizontal prism is parallel to V.P and the faces of both the prisms are equally inclined to V.P. Draw the projections of the solids, showing the lines of intersection. 12M

OR

Q.5(B) 12M



Draw the front view, top view and side view of the above figure

*** END***

Set - 3

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations –May 2018

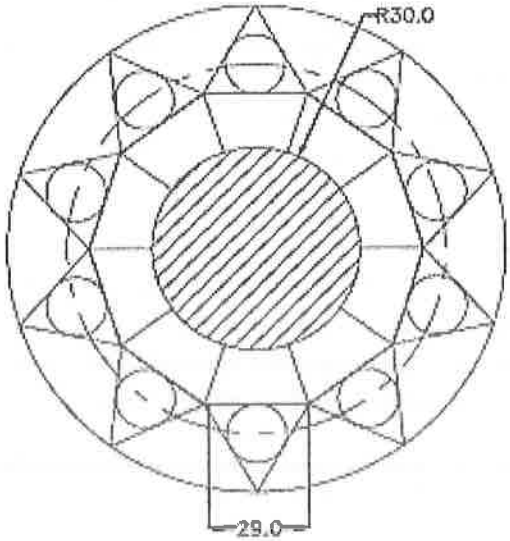
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

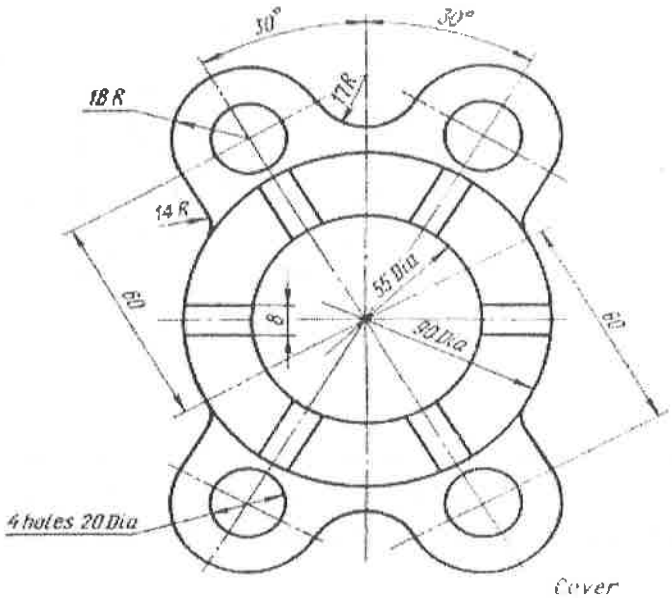
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the below figure using Auto CAD commands 12M



OR

Q.1(B) 12M



Draw the above figure using Auto CAD commands

Q.2(A) Draw the projections of the following points on the same reference line xy, and keeping the distance between the projectors is 25mm apart. 12M

1) Point P, 20mm above the H.P. and 15mm in front of the V.P.
2) Point Q, 20mm below the H.P. and 40mm behind the V.P.
3) Point R, 20mm below the H.P. and 35mm in front of the V.P.
4) Point S, 25 mm above the H.P. and 10mm behind the V.P.

OR

Q.2(B) A line PQ of 90mm long has its end P at 20mm above H.P. and 25mm in front of V.P. Its front view and top view measure 75mm and 80mm respectively. Draw the projections of the line and determine its inclinations with H.P. and V.P. 12M

Q.3(A) A Square plane ABCD of size 50mm is perpendicular to the V.P. and inclined to the H.P. at 60^0. One of its side is perpendicular to the V.P. Draw the projections. 12M

OR

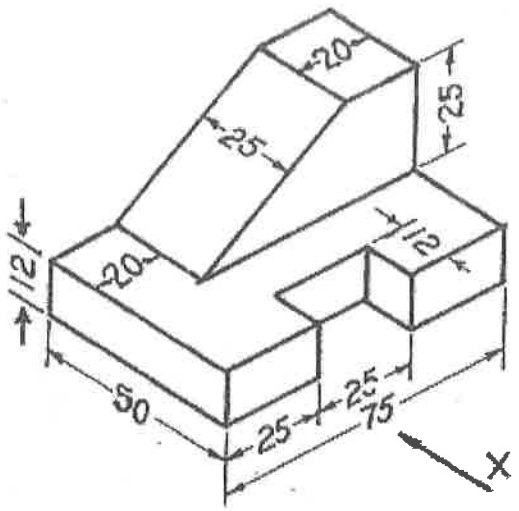
Q.3(B) A pentagonal pyramid side of base 25 mm and axis 60 mm base is resting on the HP. one of its sides is perpendicular to VP. One of its slant edges on H.P, such that its axis is parallel to V.P. Draw its projection. 12M

Q.4(A) 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 V.P and inclined at 45^0 to H.P passing through the top of the generator and cuts all other generators. Draw its development of its lateral surface. 12M

OR

Q.4(B) A pentagonal prism of base side 30mm and height 70 mm resting on its base on H.P with the rectangular face parallel to V.P. It is cut by a section plane inclined at 45 degrees to the H.P and passing though the mid point of the axis. Draw the development of the lateral surface of the truncated prism. 12M

Q.5(A) Draw the front view, top view and side view of the above figure. 12M



OR

Q.5(B) A horizontal cylinder of diameter 30mm penetrates into a vertical cylinder of diameter 40mm the axes of the cylinders intersect at right angles. Draw the curves of intersection when the axes of the horizontal cylinder is parallel to the V.P. 12M

*** END***

Set - 4

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular & Supplementary End Semester Examinations –May 2018

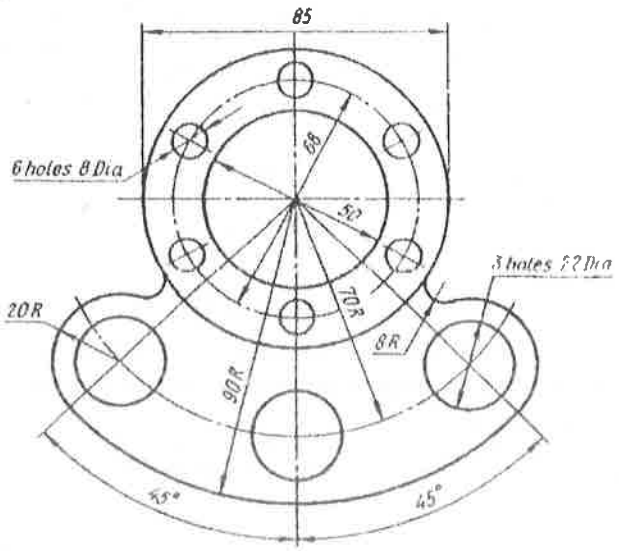
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

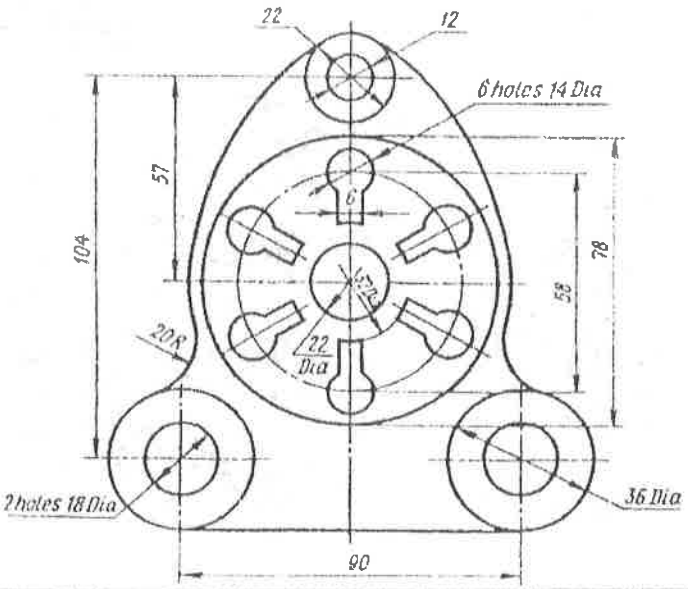
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the below figure using Auto CAD commands 12M

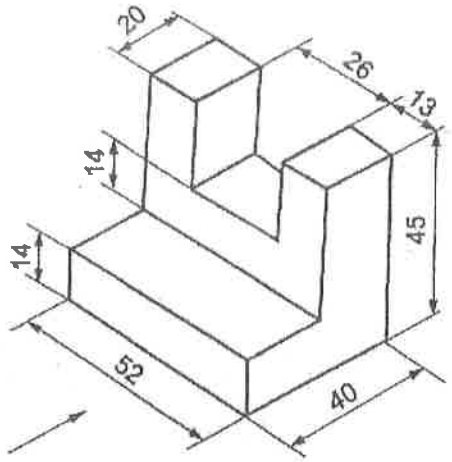


OR

Q.1(B) Draw the below figure using Auto CAD commands 12M



Q.2(A)	Two points A and B are in the H.P. The point A is 30mm in front of V.P and B is behind the V.P. The distance between their projectors is 70mm and line joining their top views makes an angle of 40^0 with xy. Find the distance of the point B from the V.P.	12M
	OR	
Q.2(B)	A line AB 80mm long is inclined at an angle of 30^0 to H.P and 45^0 to V.P. The point A is 20mm above H.P and 30mm infront of V.P. Draw its Projections.	12M
Q.3(A)	Draw the projections of a regular hexagon of 25mm side having one of its sides in the H.P and inclined at 60^0 to V.P and its surface making an angle of 45^0 with H.P.	12M
	OR	
Q.3(B)	A pentagonal pyramid side of base 25 mm and axis 60 mm base is resting on the HP. one of its sides is perpendicular to VP. One of its slant edges on H.P, such that its axis is parallel to V.P. Draw its projection	12M
Q.4(A)	A Hexagonal prism of base side 30mm and height 60 mm resting on its base on H.P with its rectangular face parallel to V.P. It is cut by a section plane inclined at 30 degrees to the H.P and bisecting the axis. Draw the development of its lateral surface.	12M
	OR	
Q.4(B)	A cylinder of base diameter 40 mm and height 80 mm rests on its base on HP. It is cut by section plane perpendicular to VP and inclined at 45° to HP and passing through the axis at a distance 40 mm from base. Draw the front view and sectional top view and true shape.	12M
Q.5(A)	Draw the front view, top view and side view of the below figure.	12M



OR

Q.5(B)	A cone having diameter 70mm and height 80mm resting on its base on the ground is completely penetrated by a cylinder having diameter 40mm and length 80mm. The axis of the cylinder is parallel to the HP and VP and intersects the axis of the cone at a point 25mm above the base. Draw the projections of the solids showing the curves of intersection.	12M

*** END***

Set - 5

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular& Supplementary End Semester Examinations –May 2018

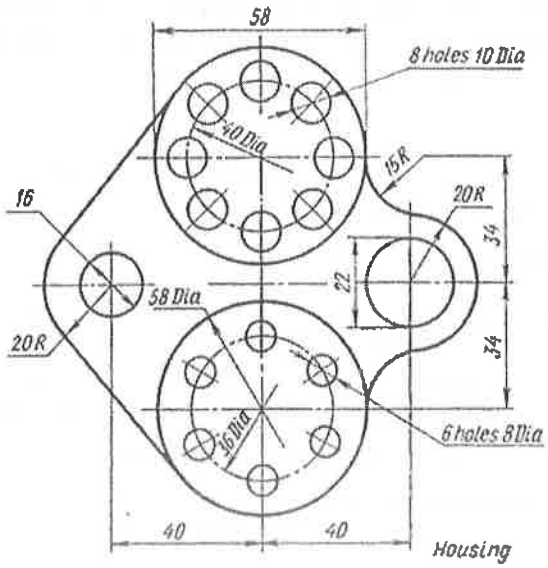
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 1 to 5 answer either Part-A or B only

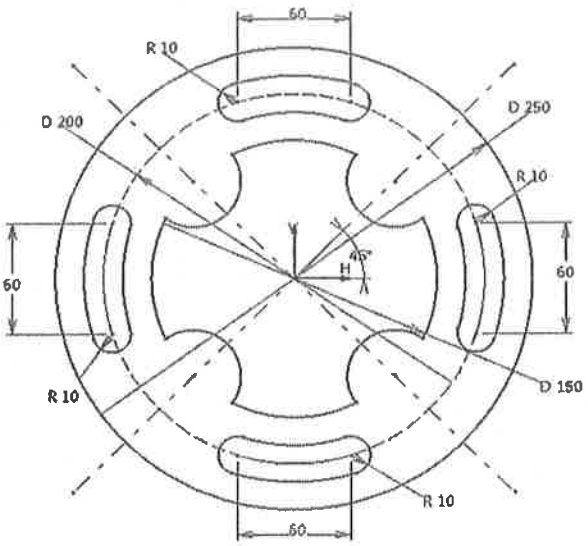
Q.1(A) 12M



Draw the above figure using AutoCAD Commands

OR

Q.1(B) 12M



Draw the above figure using AutoCAD Commands

Q.2(A) Draw the projections of the following points on the same reference line keeping the projectors 25 mm apart 12M

(i) Point A - 40 mm above H.P and 25 mm in front of V.P
(ii) Point B - In H.P and 20 mm behind V.P
(iii) Point C - 25 mm below H.P and 25 mm behind V.P
(iv) Point D - In both H.P and V.P

OR

Q.2(B)	A line PQ of 80mm long has its end P at 20mm above H.P. and 25mm in front of V.P. Its front view and top view measure 65mm and 70mm respectively. Draw the projections of the line and determine its inclinations with H.P. and V.P.	12M
Q.3(A)	An equilateral triangle of 40 sides has its plane parallel to HP and 30 away from it. Draw the projections when one of its sides is (a) perpendicular to VP (b) parallel to VP (c) at an angle of 45° to VP	12M

OR

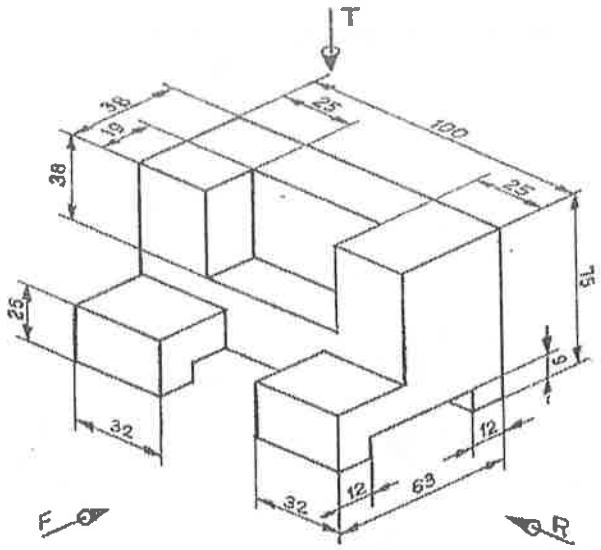
Q.3(B)	A Pentagonal Prism of base edge 30 mm and axis 60mm rests on an edge of its base in the H.P. Its axis is parallel to V.P and inclined at 45^0 to H.P. Draw its projections.	12M
Q.4(A)	A cube of side 50 long is resting on the ground with a vertical surface inclined at 30^0 to V.P. It is cut by a section plane ⊥r to V.P and inclined at 30^0 to H.P and passing through a point on the axis, 38 above the ground. Draw the sectional top view and true shape of the section.	12M

OR

Q.4(B)	A square pyramid of side of base 30 and axis 50 long is resting on its base on H.P with an edge of the base parallel to V.P. A section plane, perpendicular to V.P and inclined at 45^0 to H.P bisects the axis. Draw the development of the lateral surface of the cut pyramid.	12M
Q.5(A)	A Vertical square prism base 50mm side, is completely penetrated by a horizontal square prism, base 35mm side, so that their axes intersect. The axis of the horizontal prism is parallel to the V.P., while the faces of the two prisms are equally inclined to the V.P. Draw the projections of the solids, showing lines of intersection. (Assume suitable lengths for the prisms).	12M

OR

Q.5(B) 12M



Draw the front view, Top View and both side views from the above figure

*** END***

Set - 6

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular& Supplementary End Semester Examinations –May 2018

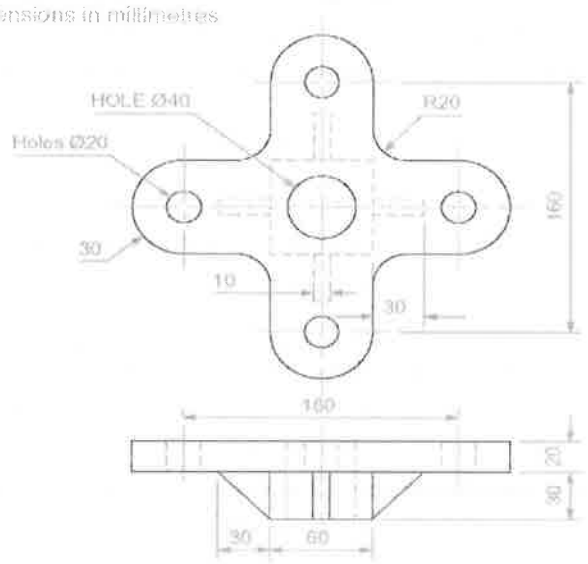
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 1 to 5 answer either Part-A or B only

Q.1(A) 12M

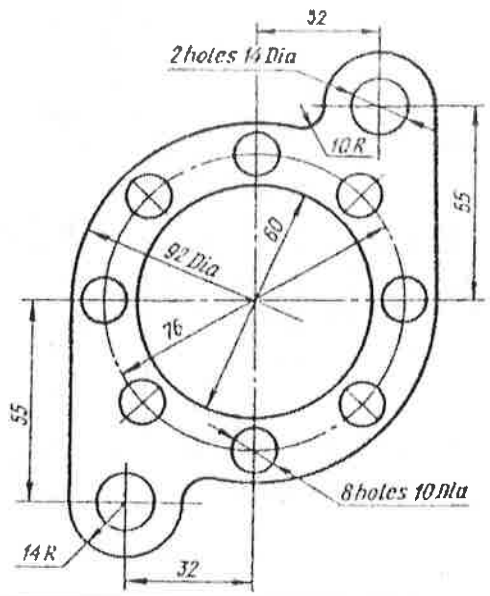


Draw the above figure using AutoCAD Commands

OR

Q.1(B) 12M

Draw the above figure using AutoCAD Commands



Q.2(A) Draw the projections of a 75mm long line in the following positions 12M

i. Perpendicular to H.P, 20mm infront of V.P, and its one end 15mm above H.P

ii. Perpendicular to H.P in V.P, and its one end is in H.P

OR

Q.2(B)	Two points A and B are on H.P, the point A being 30 mm in front of V.P, while B is 45 mm behind V.P. The line joining their top makes an angle of 45^0 with xy. Find the horizontal distance between two points.	12M
Q.3(A)	A square plane ABCD of side 30 has its plane parallel to HP and 20 away from it. Draw its projections of the plane, when two of its sides are (1) parallel to VP and (2) inclined at 30° to VP	12M

OR

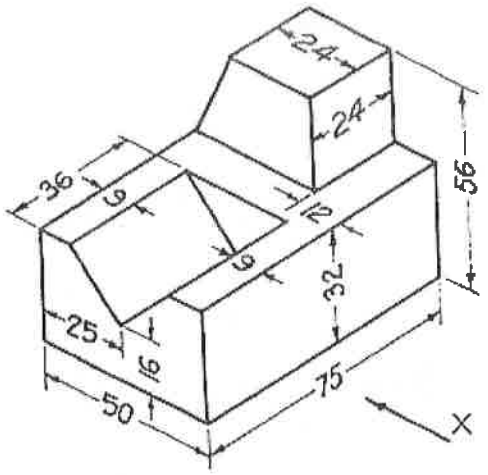
Q.3(B)	A hexagonal prism with side of base 30 and axis 55 long is resting on one of its corner of its base on HP. Draw the projections of prism when axis is making 30° to HP and parallel to VP	12M
Q.4(A)	A hexagonal pyramid base 30 and axis 75 long is resting on H.P, with two edges parallel to V.P. It is cut by a section plane ⊥r to V.P and inclined at 55^0 to H.P and passing through the axis, 30 above the base. Draw the projections and the true shape of the section.	12M

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 V.P and inclined at 45^0 to H.P passing through the top of the generator and cuts all other generators. Draw its development of its lateral surface.	12M
Q.5(A)	A vertical cylinder, 50mm in diameter and 70 mm in length, is resting on its base, with its axis perpendicular to the HP. It is completely penetrated by another horizontal cylinder 45 mm in diameter and 80 mm in length. The axis of the horizontal cylinder is parallel to the VP and the wo axes bisect each other. Draw the projections showing the curves of intersection.	

OR

Q.5(B) 12M



Draw the Front View, Top view and Both side views from the above figure

*** **END*****

Set - 7

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Regular& Supplementary End Semester Examinations –May 2018

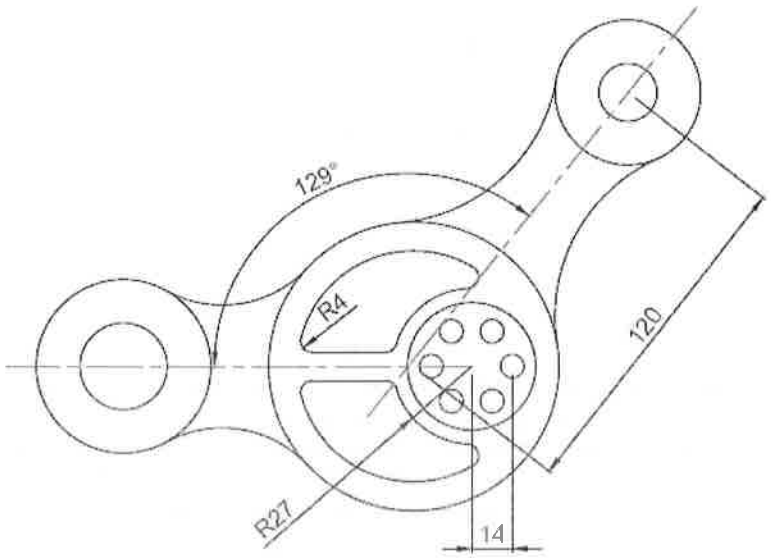
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 1 to 5 answer either Part-A or B only

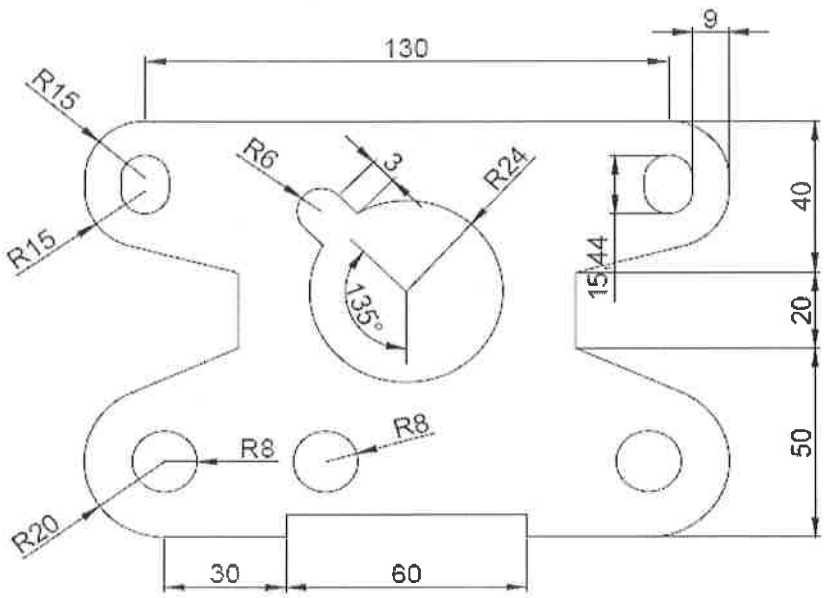
Q.1(A) 12M



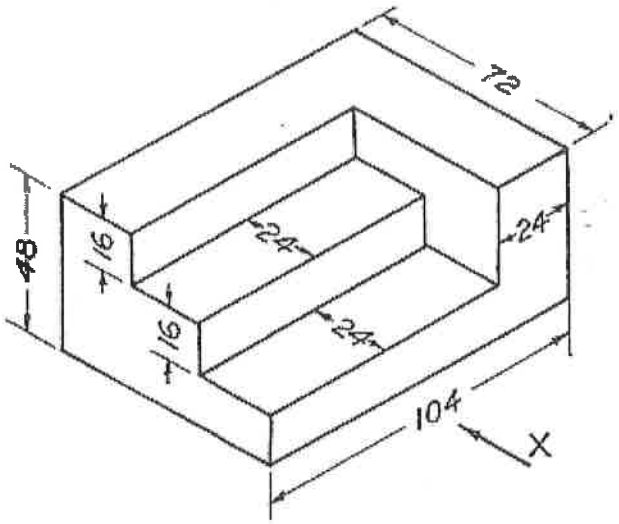
Draw the above figure using AutoCAD Commands

OR

Q.1(B) 12M



Draw the above figure using AutoCAD Commands

Q.2(A)	A point P is 15 mm above H.P and 20 mm in front of V.P. Another point Q is 25 mm behind V.P and 40 mm below H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views.	12M
	OR	
Q.2(B)	A line CD of length 70 has its end C 25 above H.P and 20 in front of V.P and its end D 70 above H.P. and 40 in front of V.P. Draw its projections and determine traces. Determine its inclination with the two planes.	12M
Q.3(A)	Draw the projections of a circle of 50mm diameter resting in the H.P and a point A on the circumference. Its plane is inclined at 45^0 to the HP and the top view of the diameter AB making an angle of 30^0 with the VP.	6X2= 12M
	OR	
Q.3(B)	A Hexagonal Pyramid of Base side 30mm and axis 60mm is lying on a slant edge on the H.P with the axis parallel to V.P. Draw its projections.	12M
Q.4(A)	A Square pyramid base 40mm side and axis 65mm 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 45^0 to the H.P. and bisecting the axis. Draw its front view and the sectional top view.	12M
	OR	
Q.4(B)	A cone of base diameter 50mm and axis 60mm resting on its base on H.P. A section plane perpendicular to V.P and inclined at 45^0 to H.P bisects the axis of the cone. Draw the development of its lateral surface.	12M
Q.5(A)	A vertical square prism of base 50 side, is penetrated by a horizontal square prism of base 35 side such that, the axes are 6 mm apart. The axis of the horizontal prism is parallel to V.P and the faces of both the prisms are equally inclined to V.P. Draw the projections of the two prisms, showing the lines of intersection.	12M
	OR	
Q.5(B)	 Draw the Isometric view of the figure shown above.	12M

*** END***

Set 8

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year II Semester (R14) Regular & Supplementary End Semester Examinations –May 2018

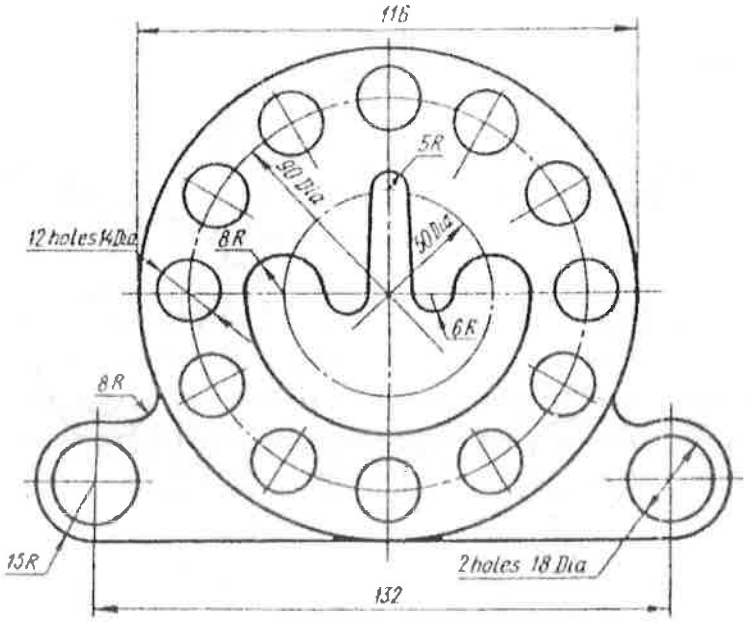
Engineering Graphics

(Common to ALL)

Time: 3Hrs **Max Marks: 60**

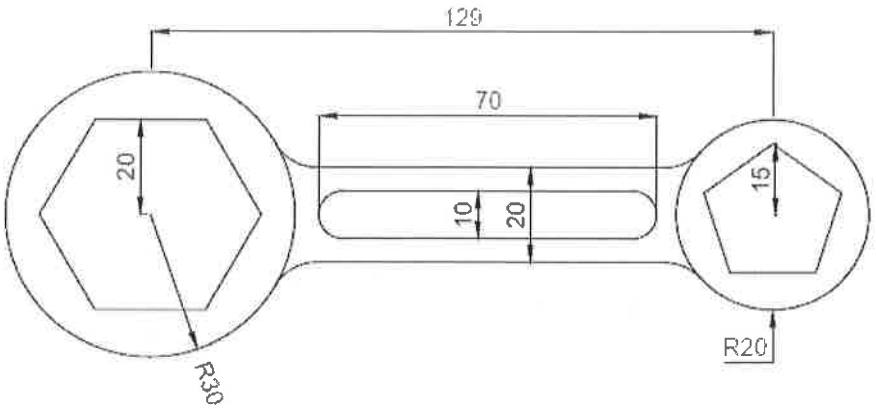
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the figure given below using AutoCAD Commands 12M



OR

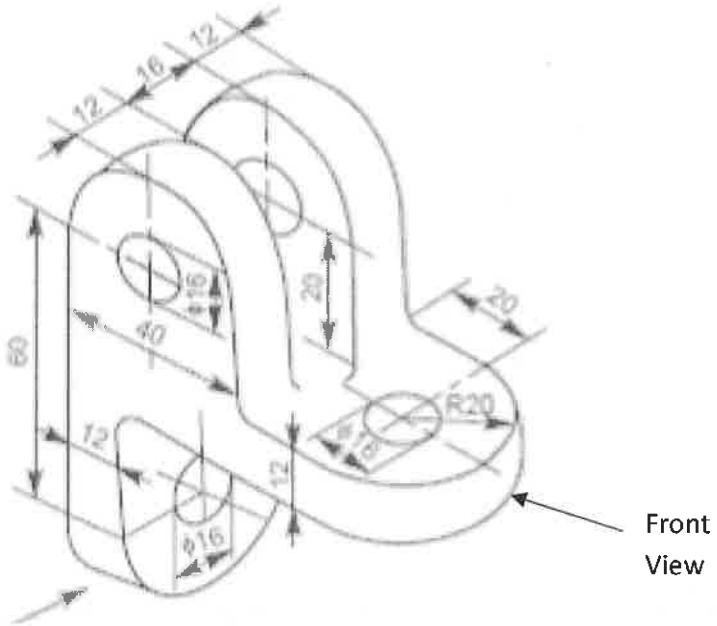
Q.1(B) Draw the figure given below using AutoCAD Commands 12M



Q.2(A) A line PQ of 90mm long has its end P at 20mm above H.P. and 25mm in front of V.P. Its front view and top view measure 75mm and 80mm respectively. Draw the projections of the line and determine its inclinations with H.P. and V.P. 12M

OR

Q.2(B)	Two points C and D are in the H.P. The point C is 15mm in front of V.P and D is behind the V.P. the distance between their projectors is 40mm and line joining their top views makes an angle of 40^0 with xy. Find the distance of the point C from the V.P.	12M
Q.3(A)	An equilateral triangle plate of negligible thickness having 40mm edge length is resting on one of its side on HP. The surface makes an inclination of 30^0 to HP and resting side makes an inclination of 60^0 to VP. Draw the projection of the plate.	12M
	OR	
Q.3(B)	A pentagonal pyramid of base side 30mm and axis 60mm has an edge of base parallel to H.P. Its axis is pa rallel to V.P and inclined at 45^0 to H.P. Draw its projections when the apex lies in the H.P.	12M
Q.4(A)	A pentagonal prism of base side 30mm and height 60 mm resting on its base on H.P with the rectangular face parallel to V.P. It is cut by a section plane inclined at 30 degrees to the H.P and passing though the mid point of the axis. Draw the development of the lateral surface of the truncated prism.	12M
	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 V.P and inclined at 45^0 to H.P bisecting the axis. Draw its development of its lateral surface.	12M
Q.5(A)	A cylinder of base diameter 50 mm and axis 75 mm long is standing on its base on the HP. It is completely penetrated by a horizontal cylinder of 45 mm diameter and axis 80 mm long, such that their axes intersect at right angles and at 40 mm above the base. Draw the curves of intersection of the solids at their interfaces.	12M
	OR	
Q.5(B)	Draw the front view, top view and side view for the figure shown.	12M



*** END***

Set - 9

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

Question Paper Code: **14ME11T01**

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (Regular& Supplementary End Semester Examinations –May 2018

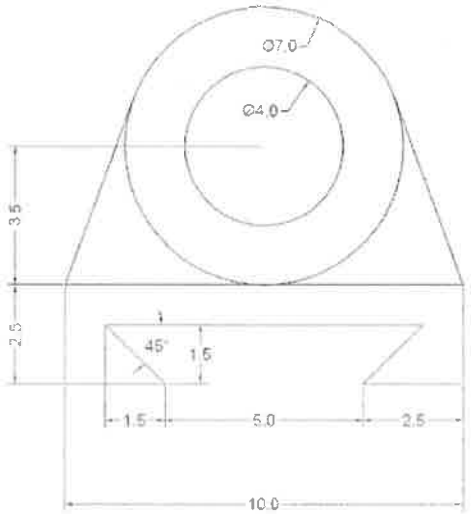
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

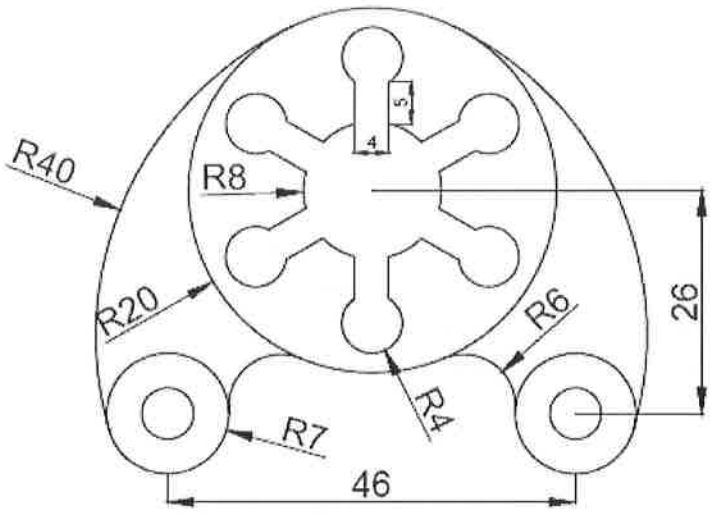
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the above figure using Auto CAD commands 12M



OR

Q.1(B) Draw the above figure using Auto CAD commands 12M



Q.2(A) i. A point G is 10mm above H.P, 15mm in front of V.P and 12mm in front of P.P. Draw front view, top view and left side view of the point. 6M

ii. A point H is 15mm below H.P, 10mm behind V.P and 10mm in front of P.P. Draw front view, top view and left side view of the point. 6M

OR

Q.2(B) A line AB measuring 70mm has its end A 20mm above H.P and 15mm infront of V.P and the other end B is 60mm infront of V.P and 50mm above H.P. Draw the projections of the line and find the inclinations of the line. 12M

Q.3(A) A Hexagonal Pyramid of base edge 30 mm and height 60mm has a triangular face on the ground and the axis is parallel to V.P. Draw its projections. 12M

OR

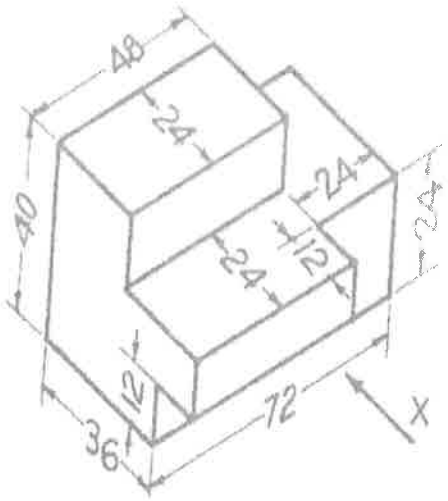
Q.3(B) Draw the projections of a circle of 50mm diameter resting in the H.P and a point A on the circumference. Its plane is inclined at 45^0 to the HP and the top view of the diameter AB making an angle of 30^0 with the VP. 12M

Q.4(A) A Pentagonal pyramid base 30mm side and axis 65mm has its base horizontal and a the base parallel to V.P. A horizontal section plane cuts it at a distance of 25mm base. Draw its front view and sectional top view. 12M

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 bisecting the axis of the solid. Draw the development of the lateral surface of the cut prism 12M

Q.5(A) Draw the front view, top view and side view of the above figure 12M



OR

Q.5(B) A Vertical square prism base 50mm side, is completely penetrated by a horizontal square prism, base 35mm side, so that their axes intersect. The axis of the horizontal prism is parallel to the V.P., while the faces of the two prisms are equally inclined to the V.P. Draw the projections of the solids, showing lines of intersection. (Assume suitable lengths for the prisms). 12M

***** END*****

Set - 10

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I Semester (R14) Regular& Supplementary End Semester Examinations –May 2018

Engineering Graphics

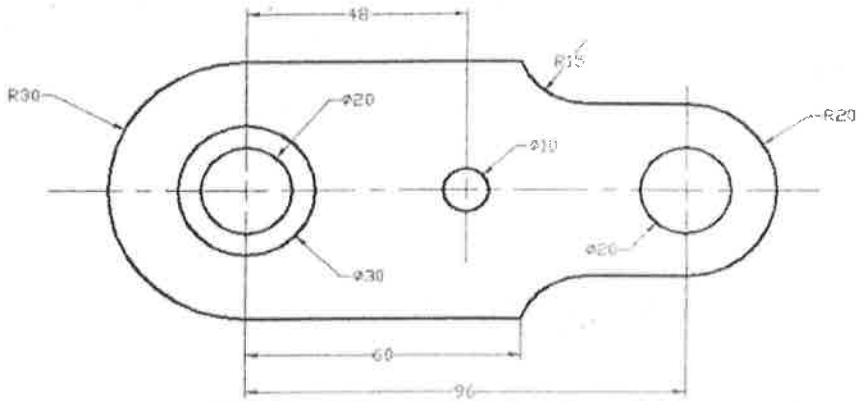
(Common to All)

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.

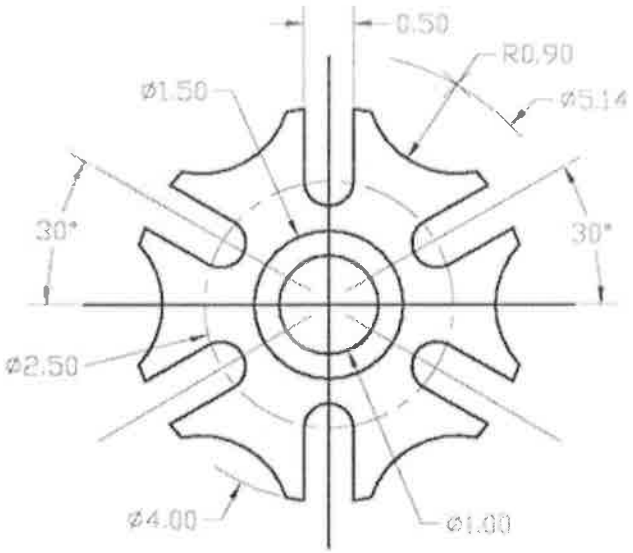
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) 12M



OR

Q.1(B) 12M

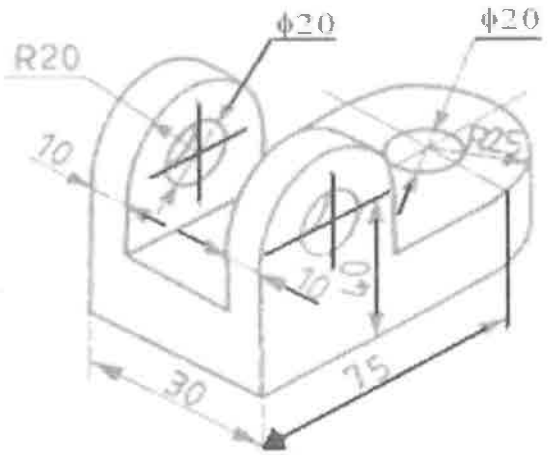


Q.2(A) Draw the projections of the following points on the same ground line, keeping the projectors 20mm apart. 12M

a. Point A, in the V.P. and 60mm above the H.P.
b. Point B, 45mm below the H.P. and 45mm behind the V.P.
c. Point C, 25mm above the H.P. and 0mm behind the V.P.
d. Point D, 40mm below the H.P. and 45mm in front of the V.P.

OR

Q.2(B)	Draw the projections of a 75mm long line in the following positions i. Perpendicular to H.P, 20mm infront of V.P, and its one end 15mm above H.P ii. Perpendicular to V.P, 25mm above H.P, and its one end is in V.P iii. Perpendicular to H.P in V.P, and its one end is in H.P	12M
Q.3(A)	A Pentagonal Prism of base edge 30 mm and axis 60mm rests on an edge of its base in the H.P. Its axis is parallel to V.P and inclined at 45^0 to H.P. Draw its projections.	12M
	OR	
Q.3(B)	A plate with an elliptical shape (major axis = 200mm and miner axis = 150mm) is resting on its peripheral point on HP in such way that it appears as a circle of maximum dimension in the TV. Draw the projection of plate. Find the surface inclination with the HP on the diameter the circle.	12M
Q.4(A)	A cone base 75mm diameter and axis 80mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P., inclined at 45^0 to the H.P. and cutting the axis at a point 35mm from the apex. Draw its front view and the sectional top view.	12M
	OR	
Q.4(B)	A pentagonal prism of base side 30mm and height 70 mm resting on its base on H.P with the rectangular face parallel to V.P. It is cut by a section plane inclined at 45 degrees to the H.P and passing though the mid point of the axis. Draw the development of the lateral surface of the truncated prism	12M
Q.5(A)	Draw the front view, top view and side view of the below figure.	12M



OR

Q.5(B)	A vertical square prism, base 50mm side and height 90mm has a face inclined at 30^0 to the VP. It is completely penetrated by another square prism, base 40mm side and 100mm long, faces of which are equally inclined to the VP. The axes of the two prisms are parallel to the VP and bisect each other at right angles. Draw the projections showing lines of the inter section.	12M

*** END***

Set - 11

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations –June 2018

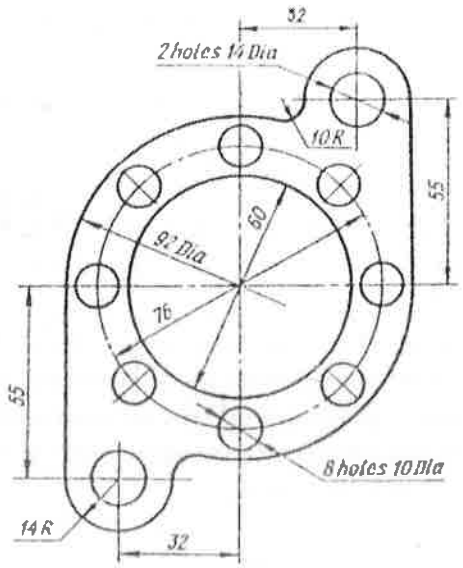
Engineering Graphics

(Common to All)

Time: 3Hrs **Max Marks: 60**

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

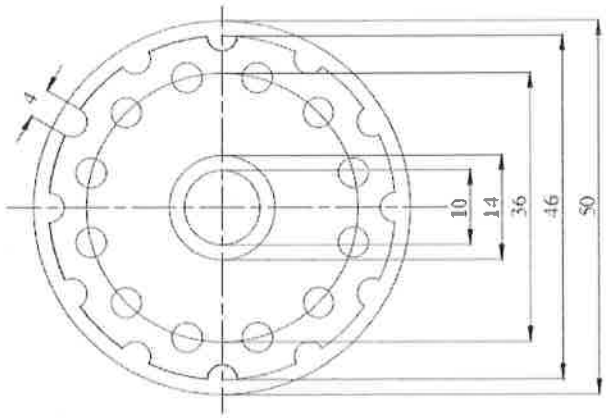
Q.1(A) 12M



Draw the above figure using Auto CAD commands

OR

Q.1(B) 12M



Draw the above figure using Auto CAD commands

Q.2(A) A point A is 20mm above H.P and 30mm in front of V.P. Another point B is 30mm behind V.P and 40mm below H.P. draw the projections of A and B keeping the distance between the projections equal to 60mm. Draw straight lines, joining (i) the top views and (ii) the front views. 12M

OR

Q.2(B)	Draw the projections of a 75mm long line in the following positions i) Perpendicular to H.P, 20mm infront of V.P, and its one end 15mm above H.P ii) Perpendicular to V.P, 25mm above H.P, and its one end is in V.P	12M
Q.3(A)	A pentagonal plate of 45mm side has a circular hole of 40mm diameter in its center. The plane stands on one of its sides on the H.P. with its plane perpendicular to V.P. and 45^0 inclined to H.P. Draw its projections.	12M

OR

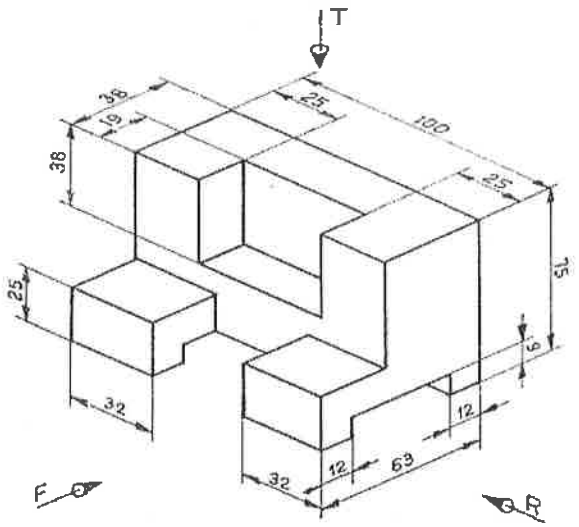
Q.3(B)	A Hexagonal pyramid of base side 30mm and axis 60mm has an edge of its base on the ground. Its axis is inclined at 30^0 to the ground and parallel to V.P. Draw its projections.	12M
Q.4(A)	A Pentagonal pyramid base 30mm side and axis 65mm has its base horizontal and an edge of the base parallel to V.P. A horizontal section plane cuts it at a distance of 25mm above the base. Draw its front view and sectional top view.	12M

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 V.P and inclined at 45^0 to H.P passing through the top of the generator and cuts all other generators. Draw its development of its lateral surface.	12M
Q.5(A)	A vertical square prism, base 50mm side and height 90mm has a face inclined at 30^0 to the VP. It is completely penetrated by another square prism, base 40mm side and 100mm long, faces of which are equally inclined to the VP. The axes of the two prisms are parallel to the VP and bisect each other at right angles. Draw the projections showing lines of the inter section.	12M

OR

Q.5(B) 12M



Draw the front view, top view and side view of the above figure.

*** END***

Set - 12

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

Question Paper Code: 14ME11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations –June 2018

Engineering Graphics

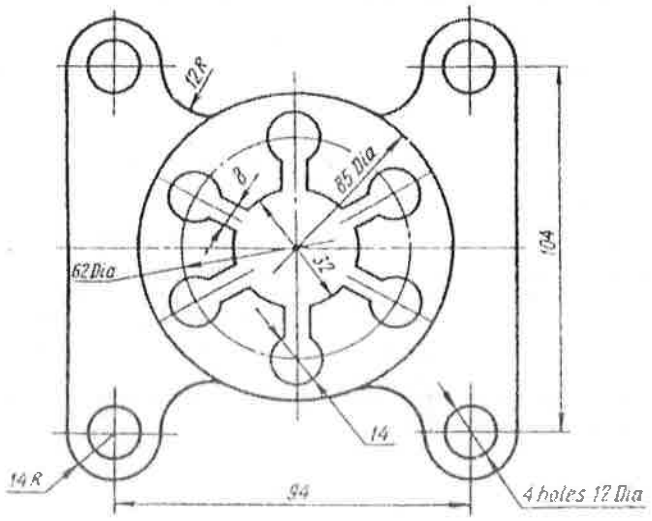
(Common to All)

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.

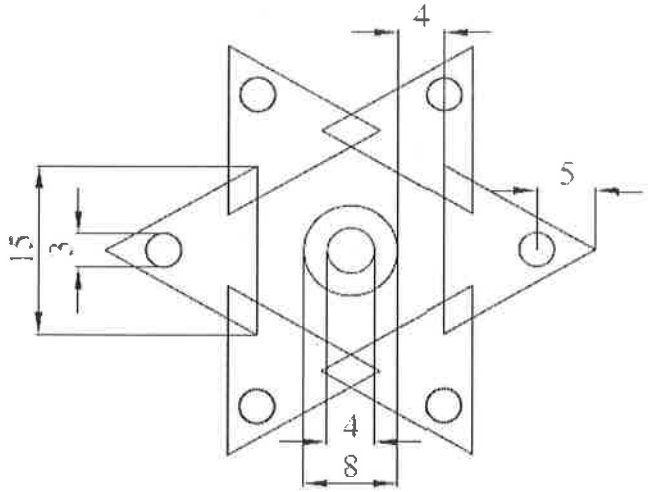
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A) Draw the figure shown using AutoCAD Commands 12M



OR

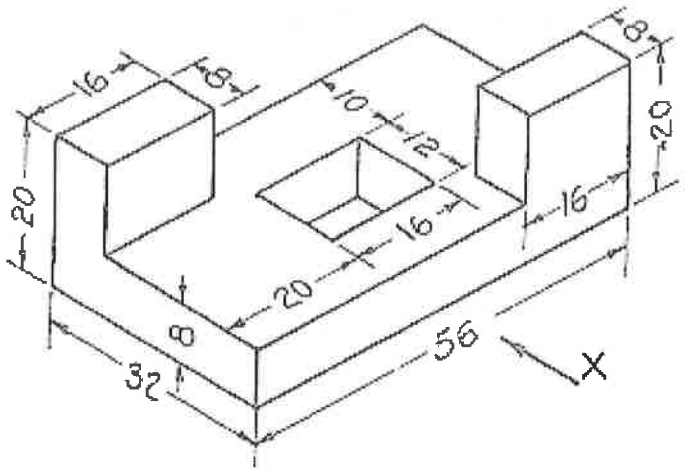
Q.1(B) Draw the figure shown using AutoCAD Commands 12M



Q.2(A) A line CD of 80mm long has its end C at 20mm above H.P. and 15mm in front of V.P. Its front view and top view measures 50mm and 60mm respectively. Draw the projections of the line and determine its inclinations with H.P. and V.P. 12M

OR

Q.2(B)	Draw the projections of the following points on the same ground line, keeping the projectors 20mm apart. a) Point C, in the V.P. and 40mm above the H.P. b) Point D, 25mm below the H.P. and 25mm behind the V.P. c). Point E, 15mm above the H.P. and 50mm behind the V.P. d) Point F, 40mm below the H.P. and 25mm in front of the V.P.	12M
Q.3(A)	A square ABCD of 50mm side has its corner A in the H.P. its diagonal AC is inclined at 300 to the H.P and the diagonal BD inclined at 450 to the VP and parallel to H.P. Draw its projections.	12M
	OR	
Q.3(B)	A Pentagonal Prism of base edge 30 mm and axis 60mm rests on an edge of its base in the H.P. Its axis is parallel to V.P and inclined at 45^0 to H.P. Draw its projections.	12M
Q.4(A)	A cone diameter of base 50mm and axis 60mm long is resting on its base on HP. A section plane perpendicular to VP and parallel to HP cuts the axis at a height of 40mm from the base. Draw the sectional Top view and front view.	12M
	OR	
Q.4(B)	A pentagonal prism of base side 30mm and height 70 mm resting on its base on H.P with the rectangular face parallel to V.P. It is cut by a section plane inclined at 45 degrees to the H.P and passing though the mid point of the axis. Draw the development of the lateral surface of the truncated prism.	12M
Q.5(A)	A Vertical cylinder of 80mm diameter is completely penetrated by another cylinder of 60mm diameter, their axes bisecting each other at right angles. Draw their projections showing curves of penetration, assuming the axis of penetrating cylinder to be parallel to the V.P.	12M
	OR	
Q.5(B)	Draw the front view, top view and side view for the figure shown below.	12M



***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14ENG11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – June 2018

FUNCTIONAL ENGLISH

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	Write the noun for the given verb in brackets. (motivate)	1M
	ii.	Rewrite the following sentences using 'Though'. The student came late. He was permitted to write the exam.	1M
	iii.	Change the following sentence into passive form. He kicked the ball	1M
	iv	Rewrite the following sentences using *'Who'*. A girl was injured in the accident. She is now in hospital.	1M
	v.	Choose the appropriate article for the following sentence. I eat_____ banana every day.	1M
	vi	Rewrite the sentence by using an appropriate form of can/cannot/needn't. We are able to see the lake from our bedroom.	1M
	vii.	Write one word substitute for the following sentence. A person who is self-centered	1M
	viii.	Use the idiom *'kick the bucket'* in your own sentences.	1M
	ix.	Students should develop communication skills. State one reason.	1M
	x.	Fill in the blank with a suitable preposition. They went to college _____ foot.	1M
Q.2(A)		What are the measures to be taken to control unemployment?	10M
		OR	
Q.2(B)		**Fill in the blanks with appropriate verb forms.**	10M

a. Tanya .....(speak) German very well.
b. Julie ..... (not/drink)the tea very often.
c. Please do not make so much noise. I .....(try) to work.
d. Let's go out. It ..... (not/rain) now.
e. Jenny was waiting for me when I .....(arrive).
f. It .....(stop) working for a while, but now it is raining again.
g. I ..... (see) tom yesterday, but I .....(not/see) him today .
h. Raju usually _____(behave) very well but today he----------
-(behave)very badly.

Q.3(A) **i. Fill the gaps with words underneath in an appropriate form- Active or Passive.** 5M

cause	make	damage	invite	show

a. Many accidents ..... by dangerous driving.
b. Cheese ..... from milk.
c. The roof of the building .....in a storm a few days ago.
d. You.....to the wedding. Why didn't you go?
e. Cinema is a place where films.....

ii. Arrange the jumbled sentences to form a meaningful paragraph. 5M

a. These help consumers select energy-efficient models and thus help households save electricity and reduce utility bills.
b. Emerging technology plays a major role in solving this problem.
c. In the typical household, refrigeration and air conditioning account for the lion's share of electricity consumption.
d. Households account for a major share of the electricity consumed.
e. Electricity is becoming dearer these days.

OR

Q.3(B) **Use the hints below and develop into a story.** 10M

High level executive in a top automobile company-Mumbai- dilemma- loved his job-absolutely hated his boss-decided to visit a head hunter-a specialist in finding jobs---asked the head-hunter to look for job for his boss-boss received phone call---accepted new job –result of the teamwork of executive and head-hunter-executive occupied the chair of his ex-boss

---

Q.4(A) **i. Complete the following sentences using myself/yourself/himself/*herself/themselves*** 5M

a. Steve .....to the other guests at the party. (introduce)
b. Bill fell down some steps, but fortunately he didn't .....(hurt)
c. It isn't Sues' fault. She really should not..... (blame)
d. Please try and understand how I feel..... In my position.(put)
e. The children had a great time at the beach. They really..... (enjoy)

ii. Complete the following sentences using although/in spite of/because to whichever is appropriate. 5M

a. .....it rained a lot, we enjoyed our holiday.
b. .....all our careful plans, a lot of things went wrong.
c. ..... We had planned everything carefully, a lot of things went wrong
d. I went home early.....I was feeling unwell
e. I went to work the next day.....I was still feeling unwell.

OR

Q.4(B) **Write suitable dialogues for the following situations.** 10M

a) Conversation about your weekend plans with your friend.
b) Conversation that takes place in restaurant between you and a server.

Q.5(A) **Correct the following sentences.** 10M 10M

a. I went to college by walk.
b. This is the centre for excellence.
c. She congratulated me for my success.
d. Ashok or Pratap should invest their money in business.
e. None of the two boys was present there.
f. Shanghai is bigger than any city of the world.
g. Every one of the boys were present.
h. Why he has gone to Madras?
i. He has been suffering from fever since four days.
j. I have come yesterday.

OR

Q.5(B) Write about the impact of smart phones on youth in 300 words. 10M

Q.6(A) **Read the following passage and answer the questions given below.** 10M

An estimated 158 million children aged 5-14 are engaged in child labour – one in six children in the world. Millions of children are engaged in hazardous situations or conditions, such as working in mines, working with chemicals and pesticides in agriculture or working with dangerous machinery. They are everywhere but invisible, toiling as domestic servants in homes, labouring behind the walls of workshops, hidden from view in plantations. In sub-Saharan Africa around one in three children are engaged in child labour, representing 69 million children. In south Asia, another 44 million are engaged in child labour. The latest national estimates for this indicator are reported in table 9 (child protection) of UNICEF's annual publication 'The state of the world's children'. Children living in the poorest households and rural areas are most likely to be engaged in child labour. Those burdened with household chores are overwhelmingly girls. Millions of girls who work as domestic servants are especially vulnerable to exploitation and abuse. Labour often interferes with children's education. Ensuring that all children go to school and that their education is of good quality are keys to prevent child labour.

Questions

1. The appropriate title for this passage is
   a. children b. labour c. education d.child labour

2. In sub-Sahara Africa around..... children are engaged in child labour.
   a. one in three b. one in six c. 44 million d. 158 million

3. In South Asia another..... are engaged in child labour
   a. one in three b. one in six c. 44 million d. 158 million

4. Labour often interferes with children's.....
   a. labour b. education c. workshops d. machinery

5. ..... who work as domestic servants are especially vulnerable to exploitation and abuse.
   a. children b. millions of girls c. servants d. labour

OR

Q.6(B) Discuss in detail the importance of functional English in 300 words. 10M

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14CHE11T02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – June 2018

ENVIRONMENTAL SCIENCE

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	What are important components of environment?	1M
	ii.	Define salinity	1M
	iii.	Define food chain.	1M
	iv	What are producers?	1M
	v.	What are endangered species?	1M
	vi	What is genetic biodiversity?	1M
	vii.	What is Green house effect?	1M
	viii.	Define soil pollution.	1M
	ix.	Define Ozone layer depletion.	1M
	x.	What is sustainable development?	1M

Q.2(A)	Define environment. Explain scope and importance of environment.	10M
	OR	
Q.2(B)	Explain renewable energy sources with suitable examples.	10M
Q.3(A)	(i) Explain the structure and functions of an ecosystem	5M
	(ii) Write note on Food webs	5M
	OR	
Q.3(B)	Explain characteristic features, structure and functions of grassland ecosystem.	10M
Q.4(A)	Explain major threats to biodiversity.	10M
	OR	
Q.4(B)	Explain conservation of Biodiversity.	10M
Q.5(A)	What is marine pollution? Explain the causes, effects and control measures of marine poll	10M
	OR	
Q.5(B)	Discuss about Floods and Earth quakes.	10M
Q.6(A)	Explain (a) Global warming	10M
	(bi) Population explosion	
	OR	
Q.6(B)	Write notes on (a) Rain water harvesting	10M
	(b) watershed management	

*** END***

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

Question Paper Code: 14MAT11T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – May 2018

Advanced Calculus

(Common to All)

Time: 3Hrs **Max Marks: 60**

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 Part-A or B only

Q.1	i.	Evaluate $\lim_{x\to 1}\frac{x^2-1}{x-1}$.	1M
	ii.	Write Sandwich theorem for function of a single variable.	1M
	iii.	Find the acceleration of the vector $r(t)=6t^3i-2t^3j-3t^3k$	1M
	iv	For polar coordinates $x=r\cos\theta, y=r\sin\theta$, then find $\frac{\partial(x,y)}{\partial(r,\theta)}$	1M
	v.	Evaluate $\int_0^2\int_0^1 xy\,dy\,dx$	1M
	vi	Evaluate $\int_0^1\int_0^x e^{x+y}\,dy\,dx$	1M
	vii.	State Gauss divergence theorem.	1M
	viii.	Find the Curl F of $F=zi+xj+yk$	1M
	ix.	Define the Alternating series test for convergence.	1M
	x.	The series $1+\left(\frac{2}{5}\right)+\left(\frac{2}{5}\right)^2+\left(\frac{2}{5}\right)^3+\ldots\ldots$ Converges or Diverges	1M
Q.2(A)		Graph the curve r=a(1+cosθ)	10M
		OR	
Q.2(B)		Find T, N and K for the plane curve $r(t)=(\cos t+t\sin t)i+(\sin t-t\cos t)j$	10M
Q.3(A)		i) Find the directional derivative of $f=xy+yz+xz$ in the dirction of the vector $\bar{i}+2\bar{j}+2\bar{k}$ at the point (1,2,0).	5M
		ii) Verify that $w_{xy}=w_{yx}$ where $w=x\sin y+y\sin x+xy$.	5M
		OR	
Q.3(B)		Find the local maxima and local minima for the function $f(x,y)=x^4+y^4-2x^2+4xy-2y^2(x>0,y>0)$	10M

Q.4(A) Evaluate $\iint (x^2+y^2)dxdy$ over the area bounded by the ellipse $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$ 10M

OR

Q.4(B) Evaluate by changing the order of integration $\int_0^1 \int_0^{\sqrt{1-x^2}} y^2 dxdy$ 10M

Q.5(A) i)find the work done in moving a particle in the force field $\bar{F}=(3x^2)\,\bar{i}+(2xz-y)\,\bar{j}+z\bar{k}$ along the straight line from (0,0,0) to (2,1,3). 5M

ii)Evaluate $\int_c \bar{F}.d\bar{r}$ where $\bar{F}=(x-3y)\,\bar{i}+(y-2x)\,\bar{j}$ and C is the closed curve in the xy- pl 5M

OR

Q.5(B) Verify stoke's theorem for $\bar{F}=y^3\bar{i}+x^3\bar{j}$ in the rejoin $x^2+y^2\le 1, z=0$. 10M

Q.6(A) i) Test the convergence of the following series $\sum_{n=1}^{\infty}\frac{1.3.5....(2n+1)}{2.5.8....(3n+2)}$. 5M

ii) Test the convergence of the series $\frac{1}{1.2.3}+\frac{3}{2.3.4}+\frac{5}{3.4.5}+.....$ 5M

OR

Q.6(B) Test the series absolute convergence or conditional convergence of the following series 10M

$\sum\left(\frac{(-1)^n}{n^2}\right)$

***** END*****