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 – Dec 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 A or B only

Q.1	i.	Fill in the blank with appropriate article. I have finished all ..... books you lent me.	1M
	ii.	Write the noun for the given verb in brackets. (Speak)	1M
	iii.	Use the phrase *make small talk,* in your own sentences	1M
	iv.	Change the following sentence into passive voice. We sing a song	1M
	v.	Make the following sentence more emphatic by using *what*/the thing. This room's got big windows, and I like that.	1M
	vi.	Write one word Substitute for the following sentence. One who believes in fate.	1M
	vii.	Rewrite the following sentences using 'otherwise'. They can't have recognized. They would have waved.	1M
	viii.	Write one example of spoken English.	1M
	ix.	Fill in the blank with suitable preposition. I am thinking ___ starting my own business.	1M
	x.	Use the idiom *once in a blue moon* in your own sentences	1M
Q.2(A)		Write about your opinion about the problem of world population in 300 words.	10M

OR

Q.2(B) Fill in the blanks with appropriate verb forms 10M

i. My sister _____ (speak) fluent Arabic..
ii . She _____(sing) a song every day.
iii. They got _____ (marry) last saturday
iv. The world _____ (end) in 2050.
v. *He _____ (stay) with friends at the moment*
vi. When I _____ (come) in, they _____(play) cards.
vii. I expect lot of people _____ (attend) the lecture.
viii. By next spring, we _____ (live) in Canada
xi. This cake _____ (taste) wonderful.

Q.3(A) Fill the gaps with the Words from the box. 10M

grievance	feel	appreciate	
time	designed	percent	fare
astonishing	time	truth	

Mothers who _____ their children do not _____ them can add another

_____ to the list: half the _____, their offspring are lying to them. A study _____ to reveal the _____ about lying shows that undergraduates lie to their mothers in 46 _____ of their conversations. Still, mums _____ better than total strangers, who are told an _____ percent of the _____.

OR

Q.3(B) i. Write a paragraph using the hints on a seminar that you have attended recently. 5M

registration welcoming introduction presentations tea-break
discussions queries snacks vote of thanks felicitation

ii. Arrange the jumbled sentences in order to construct a coherent paragraph. 5M

i. It was no decorated like the other houses.
ii. Most of the articles were thrown carelessly around.
iii. A thief entered a house quietly.
iv. He looked at them excitedly because they were expensive.
v. He quickly tied them up in a bundle

Q.4(A) i. Rewrite the following sentences using 'must/might/can't' whichever is appropriate 5M

i. Perhaps they're at home.
ii. I'm sure they are a home.
iii. I'm sure they're not at home
iv. I am unable to lift the box.
v. It's possible that she's been prosecuted.

ii. Rewrite the following sentences using certain to/likely to /unlikely to whichever is appropriate 5M

i. Unless you join in advance you've got very little chance of getting admission.
ii. I'm quite sure he'll be given the party ticket.
iii. Don't worry. You probably won't be fined.
iv. We fear there'll be a heavy rush at the temple.
v. If we carry umbrella, we probably won't have any problem.

OR

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

a) Rajesh wants to take coaching for competitive exams.
He enquires his friends to help him in finding best coaching centre for competitive exams.
b) Prakash came to know that his friend got state first rank. He congratulates his friend.

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

i) Either you could go, nor you could wait ii) They sell second-hands book.
iii) He is very good in maths iv) He wastes all his money in the lottery
v) This is a centre for excellence vi) one should love his country
vii) He play cricket viii) She has come yesterday
ix) I see him on the day before yesterday x) He worked here since six months.

OR

Q.5(B) We need to protect our environment. Justify the statement in 300 words. 10M

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

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I Semester (R14) Supplementary End Semester Examinations – Dec 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 rank of the matrix, $A=\begin{bmatrix}1&0&0\\-1&1&0\\-1&1&7\end{bmatrix}$	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 for Linear Transformation $L:R^3\to R^3$ given by $L([x,y,z])=[-6x+4y-z,-2x+3y-5z,3x-y+7z]$ with respect to the standard ordered bases for R^3	1M
	iv	Find the Eigenvalues of the matrix $\begin{bmatrix}1&0\\-1&13\end{bmatrix}$	1M
	v.	Find the principal root of $(-i)^{(1/2)}$	1M
	vi	State the Cauchy-Riemann equations in polar coordinates	1M
	vii.	Find the value of log (i)	1M
	viii.	Evaluate $\int_c \frac{z^2}{(z-3)}dz$ around a circle c: |z|=1	1M
	ix.	Find the residue at $z=0$ of the function $f(z)=\frac{1}{z-z^2}$	1M
	x.	State Liouville's theorem	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 matrix from *B*-Coordinates to *C*-Coordinates, where $B=(2x^2+3x-1,8x^2+x+1,x^2+6)$ and $C=(x^2+3x+1,3x^2+4x+1,10x^2+17x+5)$ 10M

Q.3(A) Let $L:R^3\to R^3$ given by $L\left(\begin{bmatrix}x_1\\x_2\\x_3\end{bmatrix}\right)=\begin{bmatrix}1&-1&5\\-2&3&-13\\3&-3&15\end{bmatrix}\begin{bmatrix}x_1\\x_2\\x_3\end{bmatrix}$. Find a basis for *ker*(L) and a basis for *Range*(L). Verify that dim(*ker*(L)) + dim(*Range*(L)) = dim(R^3) 10M

OR

Q.3(B) Find eigenvalues and eigenvectors of a matrix, $A=\begin{bmatrix} 1 & 1 & 1 \\ 0 & 2 & 1 \\ -4 & 4 & 3 \end{bmatrix}$ 10M

Q.4(A) Determine whether $f(z)=\cosh x\cos y+i\sinh x\sin y$ is analytic or not. If analytic, find $f'(z)$. 10M

OR

Q.4(B) Verify Cauchy-Riemann equations at $z=(0,0)$ for the function 10M

$$f(z)=\begin{cases}\dfrac{\overline{z}^2}{z}, when\ z\neq 0\\ 0,\quad when\ z=0\end{cases}$$

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

OR

Q.5(B) Evaluate $\int_c \dfrac{e^z}{(z-1)(z-4)}dz$ where c the positively oriented circle c: |z|= 1.5. 10M

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

OR

Q.6(B) Evaluate the integral $\int_o^\infty \dfrac{x^2dx}{(x^2+1)(x^2+4)}$ 10M

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14PHY12T01

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – DEC 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.	If ***A*** = (3,5,-7) and ***B*** = (2,7,1) Find the angle between them.	1M
	ii.	State Newton's second law of motion?	1M
	iii.	State work-energy theorem?	1M
	iv	What is the kinetic energy of a body of mass 5kg moving with velocity 2m/s.	1M
	v.	What is the escape velocity?	1M
	vi	What are the characteristics of Simple harmonic motion?	1M
	vii.	What are the velocities of the simple pendulum of mass m in SHM at the extreme position and mean positions?	1M
	viii.	What are beats?	1M
	ix.	What is path difference equivalent to a phase difference of $\pi/2$?	1M
	x.	What is grating element?	1M
Q.2(A)	i.	State dot product of vectors.	2M
	ii.	If $\vec{A} = \hat{\imath} + 2\hat{\jmath} + \hat{k}, \vec{B} = 2\hat{\imath} + 3\hat{\jmath} + \hat{k}$ and $\vec{C} = 2\hat{\imath} - \hat{\jmath} + 2\hat{k}$ Find a) $\left\|\vec{A} + \vec{B} + \vec{C}\right\|$ and b) $2\vec{A} \cdot (\vec{B} \times \vec{C})$	8M
		OR	
Q.2(B)	i.	The position of a particle is given by r = A ($e^{\alpha t}$ i - $e^{-\alpha t}$ j),where a is a constant. Find the velocity, acceleration and sketch the trajectory?	8M
	ii.	Write an expression for acceleration in polar coordinates?	2M
Q.3(A)	i.	Derive fundamental Rocket equation.	6M
	ii.	By using Rocket equation, find the final velocity of Rocket in free space.	4M
		OR	
Q.3(B)		Consider the one dimensional elastic collision of two balls of masses m_1 and m_2, with $m_2=3m_1$. Suppose that balls have equal and opposite velocities v before the collision; find their velocities after collision?	10M
Q.4(A)	i.	What is moment of inertia?	2M
	ii.	State and prove parallel axis theorem of moment of inertia?	8M
		OR	
Q.4(B)		Show that energy of a simple harmonic oscillator is a constant and is proportional to the square of the amplitude?	10M

Q.5(A)	i. What are Lissajous figures?	2M
	ii. Two vibrations at right angles to one another are described by the equations are given $x = 4\cos(wt)$ and $y = 4\cos(wt)$. Construct the Lissajous figure of the combined motion.	8M
	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)	Explain Newton's ring experiment to find the expression of radius of curvature of plano convex lens with necessary theory.	10M
	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) Supplementary End Semester Examinations – Dec 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.	Write the structure of EDTA	1M
	ii.	What is the main advantage of reverse osmosis method?	1M
	iii.	Define Second law of thermodynamics	1M
	iv	What is Rate of reaction?	1M
	v.	Write any two applications of Paper chromatography.	1M
	vi	Write the monomers of Polyurethane rubber.	1M
	vii.	Write any two differences between primary and secondary batteries.	1M
	viii.	Write the influence of pH on corrosion.	1M
	ix.	Write any two applications of solid lubricants	1M
	x.	What is the function of the gypsum in cement.	1M
Q.2(A)	Explain the estimation of alkalinity of water.		10M
	OR		
Q.2(B)	Describe the Ion-exchange process for softening of water.		10M
Q.3(A)	(i) what are state functions (ii) What is heat capacity? (iii) Write the relations of molar heat capacity at constant volume and pressure.		10M
	OR		
Q.3(B)	What is Order of a reaction? Derive rate order for the first order reaction.		10M
Q.4(A)	What are nucleophilic substitution reactions? Explain the mechanism of SN1 reaction with suitable example.		10M
	OR		
Q.4(B)	Write the preparation, properties and applications of Buna-S rubber.		10M
Q.5(A)	Explain in detail about Ni-Cd battery.		10M
	OR		
Q.5(B)	Explain any two corrosion control methods.		10M
Q.6(A)	Write any four important properties of refractories.		10M
	OR		
Q.6(B)	Explain pour point and saponification number of liquid lubricants.		10M

*** END***

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

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

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

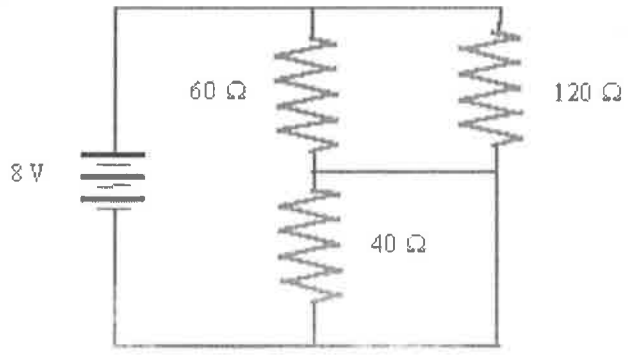
BASIC ELECTRICAL & ELECTRONICS ENGINEERING

(Common to All)

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

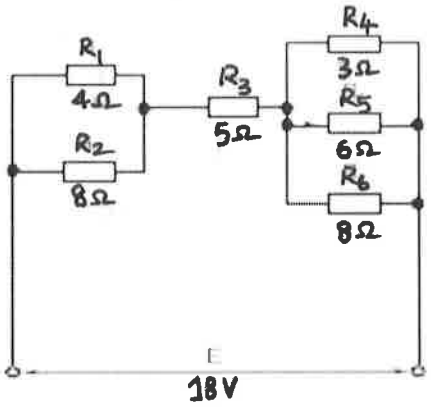
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 2 to 6 answer either Part-A or B only

Q.1	i.	An electromagnet of resistance 12.4 Ω required a current of 1.5 A to operate it. Find the required voltage.	1M
	ii.	State the superposition theorem	1M
	iii.	What is form factor?	1M
	iv	A three-phase star-connected balanced load draws 4 kW from a 400 V, 50 Hz, three-phase supply. If the line current is 9 A, what is the power factor of the load?	1M
	v.	What happens when a current carrying conductor is placed freely in a magnetic field?	1M
	vi	The transformation ratio (N2/N1) of a single-phase step-up transformer is equal to 10. If its primary voltage is 200 V, find its secondary voltage.	1M
	vii.	Define armature reaction.	1M
	viii.	List out the speed control methods of dc motor.	1M
	ix.	Draw the V-I characteristics of a junction diode.	1M
	x.	What are the biasing conditions for the BJT to be in cutoff region?	1M
Q.2(A)		Find the equivalent resistance and current flowing through each elements of the circuit shown below.	10M



OR

Q.2(B) For the circuit of figure shown below, calculate (a) the current drawn from the source, (b) the potential drop across 3 Ω resistors, (c) the current through 6 Ω resistor, and (d) the power dissipated by the 5 Ω resistor. 10M



Q.3(A) In a series R-L-C circuit, R = 4 Ω, X_C = 6 Ω, X_L = 8 Ω. A voltage V is applied across the combination such that the series current is 2 A and it lags the system voltage by 20^0.Assuming the system frequency to be 50Hz, find the voltage drops across each element. 10M

OR

Q.3(B) Three identical coils, each of resistance 5 Ω and inductance 10 mH are connected (a) in star and (b) in delta to a 400V, 50Hz, 3-phase supply. Determine the total power dissipated in each case. 10M

Q.4(A) An iron ring of mean diameter 9 cm is uniformly wound with 1800 turns of wire. When a current of 0.3 A is passed through the coil a flux density of 0.3 T is set up in the iron. Find (i) the magnetizing force and (ii) the relative permeability of the iron under these conditions. 10M

OR

Q.4(B) Explain the ideal transformer operation with necessary diagrams and derive EMF equation. 10M

Q.5(A) Prove that the emf equation of dc machine is $E_g = \left(\frac{\phi Z N P}{60 A}\right)$ 10M

OR

Q.5(B) Explain the principle of working of Induction motor with necessary diagrams 10M

Q.6(A) Draw the Clipper half wave rectifier and full wave rectifier and explain them with necessary equations in detail. 10M

OR

Q.6(B) Can BJT be used for amplification of signal? If so explain along with biasing techniques. 10M

***** END*****

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 14ENG12T02

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – Dec 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 is skimming?	1M
	ii.	What are the elements of writing?	1M
	iii.	Write about the use of questionnaire in one sentence.	1M
	iv	Specify the role of topic sentence.	1M
	v.	Define haptics.	1M
	vi	Define grapevine communication.	1M
	vii.	Define critical writing.	1M
	viii.	Mention one importance of intensive reading.	1M
	ix.	What is the disadvantage of know it-all attitude?	1M
	x.	Define a report.	1M

Q.2(A) Explain the process of communication. 10M

OR

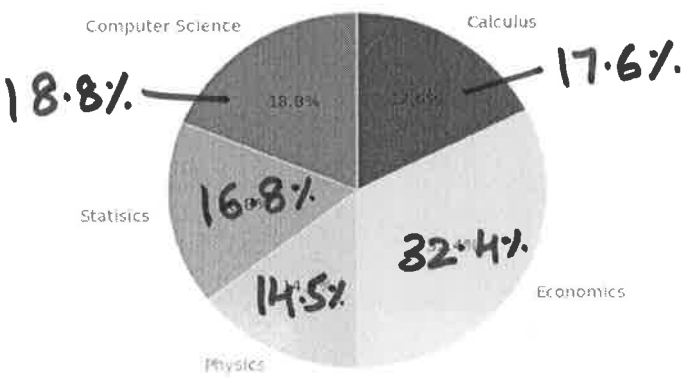
Q.2(B) Distinguish formal and informal communication networks. 10M

Q.3(A) Explain the guidelines of telephone conversation. 10M

OR

Q.3(B) The Pie diagram below gives information on course attendance of different subjects. Summarize the information by selecting and reporting the main features, and make comparisons where relevant. Write at least 150 words. 10M

Course Attendance



Q.4(A)	Make a paragraph by using the hints: SMS – short messaging service—quick and convenient-audio, photograph, video- limits text messages to 160 characters –usage of text message short cuts- usage of emoticons for feelings.	10M
	OR	
Q.4(B)	Make a paragraph by using the hints: effective communication – advantages – platform for professional success-lack of communication – failure to express – overcome some barriers – planning – preparation – practice – presentation – become an effective communicator .	10M
Q.5(A)	The District Collector is concerned about the construction of a fly over to control heavy traffic. The Chairperson, city Corporation, has asked to submit a report investigating the causes and suggesting measures to facilitate the construction.	10M
	OR	
Q.5(B)	Students use mobiles while driving. Prepare a report on the impact of usage of mobile phones. Assume yourself as the convener of the discipline committee in a professional college. Submit the report to the chairman of the institution.	10M
Q.6(A)	Prepare a questionnaire to be sent to the Convener of an Annual day function, which will elicit the information on the activities in your college	10M
	OR	
Q.6(B)	The Principal of a college is intensely concerned about the loss of listening habits among the students. As a student's representative, you have been asked to collect the data from the students. Prepare a questionnaire to elicit the relevant information.	10M

*** 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 – Dec 2018

ADVANCED CALCULUS

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.	Change the polar curve $r = 2\sin\theta$ into Cartesian form	1M
	ii.	Find the directrix of the conic $r = 3/(6+\cos\theta)$	1M
	iii	Verify the mixed derivative theorem $f(x,y) = y\sin(x)$	1M
	iv	Explain the second derivative test for local extreme values.	1M
	v.	Write the relation of Cartesian to Cylindrical Coordinates.	1M
	vi	Find the gradient field of $g(x,y,z) = x^2 + y^2 + z^2$	1M
	vii.	Evaluate $\int_C F.dr$, where $F(x,y,z) = zi + xyj - y^2k$ along the curve C given by $r(t) = t^3i + t^2j + tk, \quad 0 \le t \le 1$	1M
	viii.	State Greens' theorem	1M
	ix.	Test whether 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
	x.	State the p-series test	1M
Q.2(A)		Sketch the curve $r = a\sin 2\theta$	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. Determine $\frac{\partial^2 f}{\partial x^2}, \frac{\partial^2 f}{\partial y \partial x}, \frac{\partial^2 f}{\partial y^2}$ and $\frac{\partial^2 f}{\partial x \partial y}$, if $f(x,y) = x\cos y + ye^x$	5 M
		ii. Find $\frac{\partial w}{\partial u}$ and $\frac{\partial w}{\partial v}$ if $w = xy + yz + zx, \; x = u+v, \; y = u-v, \; z = uv$	5 M
		OR	
Q.3(B)		Find the minimum value of the function $f(x,y,z) = x^2 + y^2 + z^2$ subject to the constraint $x + 2y + 3z = 6$	10M
Q.4(A)		Change the Cartesian integral into polar integral and hence evaluate $\int_{-a}^{a} \int_{-\sqrt{a^2-x^2}}^{\sqrt{a^2-x^2}} dydx$	10M
		OR	
Q.4(B)		Find the volume of $F(x,y,z) = xyz$ throughout the cubical region *D* bounded by the coordinate planes and the planes $x = 2$, $y = 2$ and $z = 2$ in the first octant.	10M

Q.5(A) Show that $F=\left(e^{x}\cos y+yz\right)i+\left(xz-e^{x}\sin y\right)j+\left(xy+z\right)k$ is conservative over its natural domain and find a potential function for it. 10M

OR

Q.5(B) Verify the Green's Theorem for the vector field $F(x,y)=(x-y)i+xj$ and the region R bounded by the unit circle C: $r(t)=(\cos t)i+(\sin t)j,\quad 0\le t\le 2\pi$ 10M

Q.6(A) For what values of x the series $\sum_{n=1}^{\infty}(-1)^{n-1}\frac{x^{2n-1}}{2n-1}$ converges. 10M

OR

Q.6(B) Find the Taylor series generated by $f(x)=\cos x$ at $x=\pi/4$. 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) Supplementary End Semester Examinations – Dec 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 Expression?	1M
	ii.	What is the difference between call-by-value and call-by-reference?	1M
	iii.	Define an array?	1M

	iv	What is the memory size of the following structure?
		struct student
		{
		char name[20];
		int age;
		float marks;
		};
			1M

	v.	Write the syntax for strcpy () function?	1M
	vi	What is the purpose of ftell()function?	1M
	vii.	List down OOP principles?	1M
	viii.	List the access specifiers in C++?	1M
	ix.	List applications of stacks?	1M
	x.	What is the difference between array and stack?	1M
Q.2(A)	ii)	Write about the primary data types in C?	5M
	ii)	What is variable? What are the rules for creating variables?	5M
		OR	
Q.2(B)	i)	What are control statements? Explain?	5M
	ii)	Write a c program to find the sum of individual digits of a given number?	5M
Q.3(A)	i)	Write a program to compute the sum of diagonal elements in 3x3 matrix?	5M
	ii)	Write a program to search an element in an array using linear search?	5M
		OR	
Q.3(B)	i)	Explain storage classes in C with suitable examples?	5M
	ii)	What is recursion? Write a program to find the factorial of a given number?	5M
Q.4(A)		What are the different String Handling functions available in C? Explain with Example?	10M
		OR	
Q.4(B)		What is a structure? Write syntax for defining a structure and declaring a structure variable and compare arrays & structures?	10M

Q.5(A)	i) What are the uses of constructors and destructors in C++? Explain with suitable program?	5M
	ii) What are the types of Templates in C++? Give syntax for Function template. Explain with example program?	5M
	OR	
Q.5(B)	i) Define class and object. Write a C++ program to create a class Rectangle and compute area of the rectangle?	5M
	ii) What is a constructor? Explain different forms of constructors with examples?	5M
Q.6(A)	What is a singly linked list? Write a program to insert 4 elements in the list, display, reverse the elements?	10M
	OR	
Q.6(B)	i) What is stack? Explain the operations of stack?	5M
	ii) Write a program to implement stack operations using Linked List?	5M

***** 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 – Dec 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.	Define environmental science	1M
	ii.	Define carrying capacity	1M
	iii.	Define overgrazing?	1M
	iv	What is ecological pyramid	1M
	v.	What are hot spots of biodiversity?	1M
	vi	Distinguish between In-situ and Ex-Situ conservation?	1M
	vii.	Define soil pollution?	1M
	viii.	What is Green house effect?	1M
	ix.	What is population explosion?	1M
	x.	What is acid rain?	1M
Q.2(A)		Compare and contrast modern and Traditional Agriculture systems?	10M
		OR	
Q.2(B)		Environmental science is a multidisciplinary? Explain?	10M
Q.3(A)		Explain structure, functions and components of forest ecosystem	10M
		OR	
Q.3(B)	i.	What are geo-biochemical cycles?	5M
	ii.	Write an account of Hydrological cycle?	5M
Q.4(A)		Write an essay on values of Biodiversity?	10M
		OR	
Q.4(B)		Explain why India is a Mega diversity nation?	5M
Q.5(A)		Write an essay on causes, effects and control methods of Noise pollution?	10M
		OR	
Q.5(B)		Explain solid waste management by a) Incineration b) Composting	10M
Q.6(A)		Write in detail about Global warming and Green House Gases?	10M
		OR	
Q.6(B)		What is rain water harvesting? Explain two methods of rain water harvesting?	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) Supplementary End Semester Examinations –Dec 2018

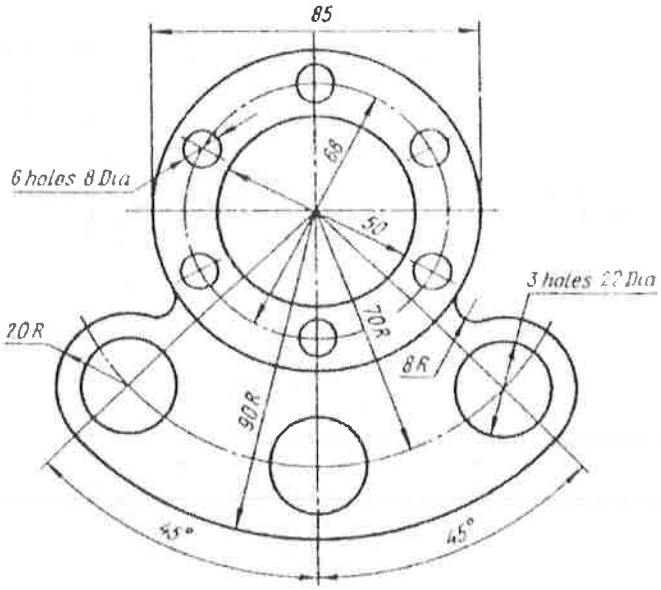
Engineering Graphics

(Common to ALL)

: 3Hrs **Max Marks: 60**

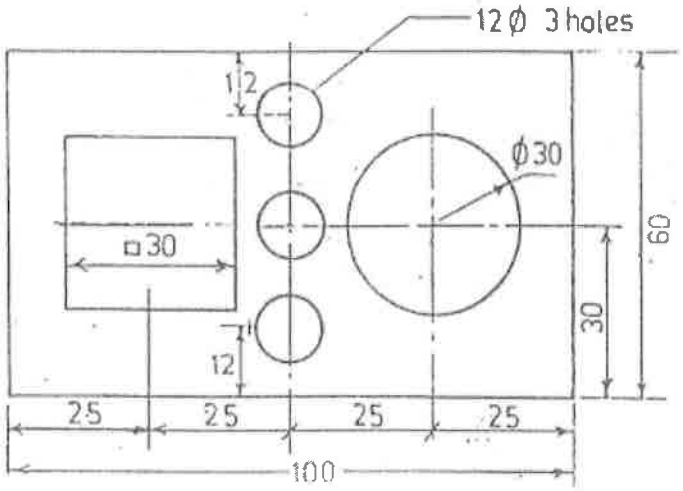
Attempt all the questions. All parts of the question must be answered in one place only.
All parts of Q.no 1 are compulsory. In Q.no 1 to 5 answer either Part-A or B only

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

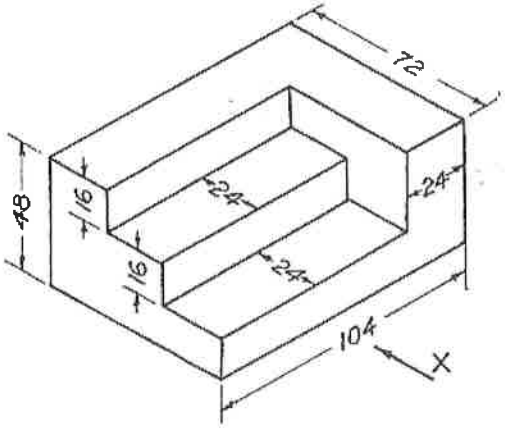


OR

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



Q.2(A)	Draw the projections of the following points, keeping the distance between the projectors as 40 mm on the same reference lines. A – 20mm above HP and 40 mm infront of VP B – 30 mm above HP and 50 mm behind VP C – 40 mm below HP and 30mm behind VP	12M
	OR	
Q.2(B)	Draw the projections of a 75mm long line in the following positions i. Inclined at 30^0 to H.P, its one end 20mm above H.P, parallel to and 30mm infront of V.P ii. Inclined at 60^0 to V.P, its one end 15mm infront of V.P. Parallel to and 25mm above H.P	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 topview of the diameter AB making an angle of 30^0 with the VP.	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 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.	12M
	OR	
Q.4(B)	A cone of base diameter 50mm and axis 60mm is resting on its base on the H.P. Draw the 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)	Draw the front view, top view and side view of the figure shown below	12M



*** END***

Set - 2

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 –Dec 2018

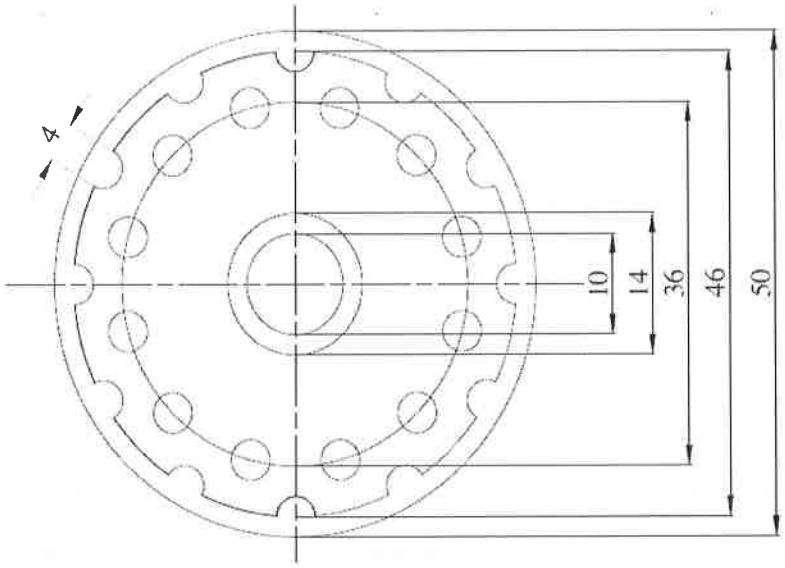
Engineering Graphics

(Common to ALL)

: 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

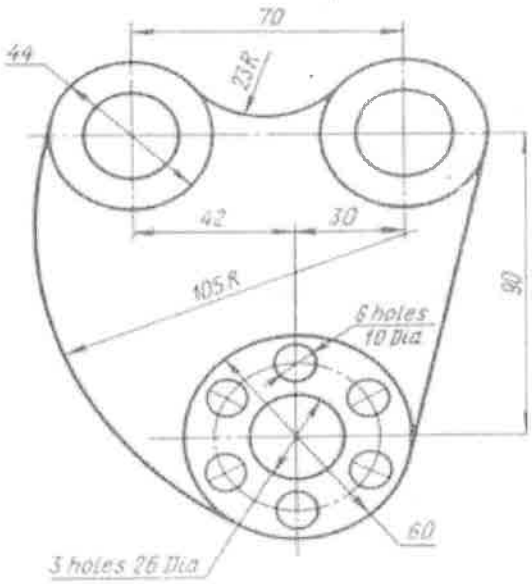
Q.1(A) 12M



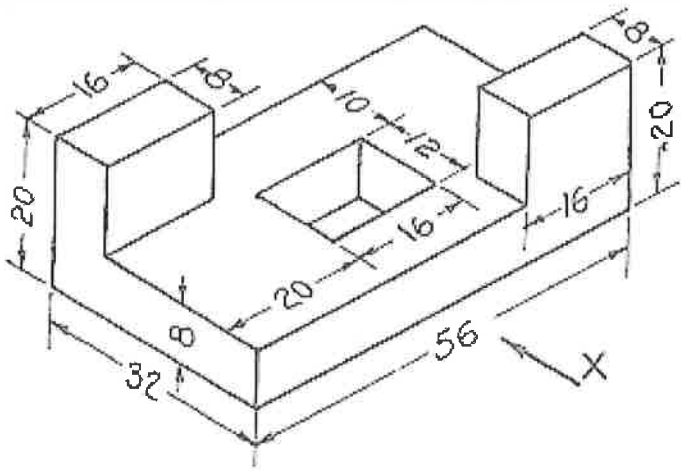
Draw the above figure using AutoCAD Commands

OR

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



Q.2(A)	i) A point A is 10mm below H.P, 20mm behind V.P and 30mm in front of P.P. Draw front view, top view and left side view of the point. ii) A point B is 20mm above H.P, 10mm in front of V.P and 30mm in front of P.P. Draw front view, top view and left side view of the point.	6M 6M
	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 cylinder having diameter 50mm and height 60mm is resting on its circumferential point of base if the axis parallel to VP. Draw projections of solid if the axis makes an angle 45^0 to the ground.	12M
Q.4(A)	A Pentagonal prism 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 Hexagonal prism of base side 40mm and height 60mm. Draw the development of the of the lateral surface of the prism.	12M
Q.5(A)	A Cone having base edge 70mm and height 70mm is resting on its base on the ground and it is cut by a square prism having base edge 40mm. The axis of the square prism coincides with the axis of the cone and one of the edges is parallel to the VP. The prism is removed after intersection. Draw the intersection profile.	12M
	OR	
Q.5(B)	Draw the Front view, Top View and Side view for the figure given	12M



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