MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
B.Tech I Year I& II Semester (R14) Supplementary End Semester Examinations –OCT 2020
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

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Q.1   i.   Fill in the blank with appropriate article   1M
He is ------engineer.

ii.   Write the noun for the given verb in brackets.(DISAPPOINT)   1M

iii.   Use the phrase *brought up* in your own sentences.   1M

iv   Change the following sentence into passive voice.   1M
We are going to watch a movie tonight.

v.   Make the following sentence more empathetic by using *Thank you*   1M
You helped me in the need of the hour.

vi   Write one-word Substitute for the following sentence.   1M
A great lover of books.

vii.   Rewrite the following sentence using conditional clause *unless*   1M
You don't study. You will fail the test.

viii.   Why should plastic be banned. State one reason.   1M

ix.   Fill in the blank with suitable preposition.   1M
We will meet _____ the airport.

x.   Use the idiom *a blessing in disguise* in your own sentences.   1M

Q.2(A)   Is India really one Nation?Justify the statement in 300 words.   10M

OR

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

i.   We _____(go) to meet them at 6.P.M.

ii.   We _____(see) that movie three times.

iii.   Charlie's mother _____(cook) breakfast for us tomorrow.

iv.   I _____(go) to send her some flowers.

v.   I _____(hear) a lovely song in the morning.

vi.   The children _____(play) in the street.

vii.   We_____(eat) dinner and then_____(walk) around the park.

viii.   She _____(visit) the dentist tomorrow.

ix.   The boy_____(Freeze) at the site of the snake.

Q.3(A)   i. Here are some instructions related to a game. Name out the game and fill the gaps   5M
with the words from the box.   5M

Score   crosses   heading   touch
thrown back

The aim of the game is to (1)_____a goal, which is achieved by kicking or (2)_____ the ball into the opposition team's goal. If the ball touches or (3)_____the side line, it is (4)_____ in by the team that was not the last to (5)_____ the ball.

ii. Arrange the following jumbled sentences in a way so as to make a meaningful 5M paragraph.

    i.   The Konark temple, situated in the in the north-eastern corner of Puri, is dedicated to the sun God.
    ii.   The sculptures and paintings form an essential part of the temple architecture.
    iii.   In some temples the architecture is both an artistic masterpiece and an engineering marvel.
    iv.   Many Indian temples stand testimony to the high level of art that existed in bygone eras.
    v.   The temple is in the form of a chariot and is famous for its sculptures representing the daily life of warriors, animals and lovers.

OR

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

A rich man - had many servants- purse with lot of money is stolen from rich man's drawer- rich man files a complaint in the police station - all the servants called - stick of same length given to each -servants told that stick of the thief will grow by one inch overnight -the thief cuts his stick by one inch - he is easily caught the next day.

Q.4(A) i. Rewrite the following sentences using can, could or be able to whichever is 10M appropriate 5M
    i.   She got the job because she spoke five languages.
    ii.   I'll see you tomorrow.
    iii.   After the accident he managed to walk home.
    iv.   Perhaps they will go to the party next Saturday.
    v.   Her performance will be the best tomorrow.

Ii . Rewrite the following sentences by using the words in brackets so that they have a 5M similar meaning
    i.   I don't listen to rap music at all.(never)
    ii.   This isn't my book. (belongs)
    iii.   The baby is awake at the moment.(sleep)
    iv.   What are your plans tonight? (doing)
    v.   Sam fell during the football game.(while)

OR

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

    a) A student and the Professor greet each other when they meet at the supermarket.

b) Two friends talk about an internet fraud.

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

    i. I sympathize for you over your mother's death.
    ii. I left home at Sunday morning to catch a flight.
    iii. In 10'o clock in the morning, I went to the beach for fishing.
    iv. I have a good news for you.
    v. It's not good to go to the bed late.
    vi. He left with his belonging luggage.
    vii. I have read the Shakespeare's King Lear.
    viii. Exercise is good both for work as well as health.
    ix. Today I'll cut my hair.
    x. How much is the temperature?

OR

Q.5(B) Today's Technology is impacting the banking sector. Write down your views in 300   10M
words.

Q.6(A) Read the following passage and answer the questions given below.   10M   10M
Richard Parker was so named because of a clerical error. A panther was terrorizing the
Khulna district of Bangladesh, just outside the Sundarbans. It has recently carried off a
little girl. She was the seventh person killed in two months by the animal. And it was
growing bolder. The previous victim was a man who had been attacked in broad
daylight in his field. The beast dragged him off into the forest and his corpse was later
found hanging from a tree. The villagers kept watch nearby that night, hoping to
surprise the panther and kill it, but it never appeared.
The Forest Department hired a professional hunter. He set up a small, hidden
platform in a tree near a river where two of the attacks had taken place. A goat was
tied to a stake on the river's bank. The hunter waited several nights. He assumed the
panther would be an old, wasted male with worn teeth, incapable of catching
anything more difficult than a human. But it was a sleek tiger that stepped into the
open one night; a female with a single cub. The goat bleated. Oddly, the cub who
locked to be about three months old, paid little attention to the goat. It raced to the
water's edge to have some water and its mother followed. Only once the tiger had
quenched her thirst did she turn to the goat to satisfy her hunger.
Questions
    1. Give the meaning of the word "Corpse".
    2. Why did the forest department heir a professional hunter?
    3. What did the hunter expect to encounter? And what did he actually
       encounter?
    4. What name did the hunter give the "cub" why?
    5. Write the synonym for the word "quenched".

OR

Q.6(B) Is e-learning a substitute for classroom learning? Write in 300 words   10M

*** END***

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-Autonomous)
B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – OCT 2020
ENGINEERING PHYSICS
(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.	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 center of mass of a system of two masses 3Kg and 2Kg located at (3,0,1) and (1,4,5).	1M
	v.	What is the relation between angular momentum (**L**) and torque (τ)?	1M
	vi	What is the law conservation of angular momentum?	1M
	vii.	What are the characteristics of simple harmonic motion?	1M
	viii.	What are beats?	1M
	ix.	What is phase difference equivalent to a path difference of $\lambda/2$?	1M
	x.	Write any two difference between interference and diffraction?	1M

Q.2(A) i) Explain Scalar and Vector products?   5M
ii) Vectors **C** and **D** have magnitudes 3 units and 5 units respectively. What is the angle   5M
between the directions of **C** and **D**, if **C·D** equals to *a*) Zero, *b*) 15 units, and *c*) -15 units.

OR

Q.2(B) i) The Atwood's machine shown in the drawing has a pulley of negligible mass. Find the tension in the rope and the acceleration of *M*.   5M
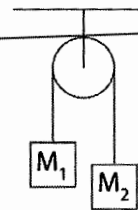
ii) Two blocks are in contact on a horizontal table. A horizontal force is applied to one of the blocks, as shown in the drawing. If m_1 = 6 kg, m_2 = 3 kg, and F = 9 N, find the force of contact between the two blocks.   5M

Q.3(A) i. By using Rocket equation, find the final velocity of Rocket in free space.   5M
ii. Derive fundamental Rocket equation.   5M

OR

Q.3(B) A 50 Kg skater travelling at 4 m/s overtakes a 60 Kg skater travelling at 2 m/s in the   10M
same direction and collides with her. If the two skaters remain in contact, what is
their final velocity? How much kinetic energy is lost?

Q.4(A)   i. What is moment of inertia?   10M

          ii. State and prove parallel axis theorem of moment of inertia?

OR

Q.4(B)   Show that energy of a simple harmonic oscillator is a constant and is proportional to the   10M
         square of the amplitude?

Q.5(A)   Construct the Lissajous figures for the motion described by   10M

$$x = 5\cos(\omega t) \text{ and } y = 5\cos(\omega t + \frac{\pi}{2})$$

OR

Q.5(B)   i) Write the relation between group velocity and phase velocity?   5M
         ii) A long uniform string of mass density 0.1 kg/m is stretched with a force of 40 N.   5M
         One end of the string is oscillated transversely with amplitude of 0.02m and a period
         of 0.1 sec, so that travelling waves are set up in +x direction.
            a) What is the velocity of the waves?
            b) What is the wavelength?
            c) If at the driving end the displacement at $x=0$ and $t=0$ is 0.0173m with dy/dt
               negative, what is the equation of the travelling waves?

Q.6(A)   Explain Newton's ring experiment to find the expression of radius of curvature of   10M
         plano convex lens with necessary theory.

OR

Q.6(B)   Describe Fraunhofer diffraction due to single slit with a suitable diagram. And obtain   10M
         the conditions for maxima, minima, and secondary maxima intensities in the
         diffracted spectrum.

*** END***

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

B. Tech. I Year I & II Semester (R14) Supplementary End Semester Examinations – Oct 2020
ENGINEERING CHEMISTRY
(Common to All)

Time: 3 Hrs　　　　　　　　　　　　　　　　　　　　　　　　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.	1 ppm = 1 mg/L, true or false?	**1 M**
	ii.	Name any two methods of sterilization or disinfection water treatment for drinking water purpose.	**1 M**
	iii.	State 'First Law of Thermodynamics'	**1 M**
	iv	Write the Arrhenius equation which relates 'k' and 'Ea'?	**1 M**
	v.	What is the basic principle behind Infrared (IR) Spectroscopy?	**1 M**
	vi	Name the monomers used in the preparation of Bakelite	**1 M**
	vii.	Calculate the EMF of the cell: $Ag_{(S)}|Ag^+_{(aq)}||Cu^{2+}_{(aq)}|Cu_{(S)}$ at 25 °C. The standard reduction potential of Ag and Cu electrodes are 0.80 V and 0.34 V, respectively.	**1 M**
	viii.	State Pilling-Bedworth rule on oxidative layers.	**1 M**
	ix.	Give any two examples of solid lubricants.	**1 M**
	x.	Write the Scherrer equation	**1 M**

Q.2(A) Define Hardness and explain in detail how the hardness of the water will be determined using EDTA.　　　　**10 M**

OR

Q.2(B) Describe the ion-exchange process for softening of water in detail along with its advantages and disadvantages?　　　　**10 M**

Q.3(A) (i) Derive the expression for the work done of an ideal gas in reversible isothermal expansion.　　　　**7 M**

(ii) 1 mole of a gas molecule changes in volume from 2.00 L to 8.00 L against an external pressure of 2.50 atm. Calculate the work done.　　　　**3 M**

OR

Q.3(B) Derive Rate law expression for the first order reaction and explain half-life period of the same.　　　　**10 M**

Q.4(A) (i) Explain Thin Layer Chromatography method.　　　　**7 M**

(ii) Compare S_N1 and S_N2 (any three)　　　　**3 M**

OR

Q.4(B) Write the preparation, properties, and applications of Nylon 6,6.　　　　**10 M**

Q.5(A) Why Li-ion battery is called a rocking chair battery, how it functions and mention the applications?　　　　**10 M**

OR

Q.5(B) Explain the various factors influencing the rate of corrosion.　　　　**10 M**

Q.6(A) Discuss the method of manufacturing cement with a diagram.   **10 M**

OR

Q.6(B) Explain the principle and procedure of sol-gel process for the preparation of   **10 M**
nanomaterials along with its advantages and disadvantages.

*** END***

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
B.Tech I Year I Semester Regular & Supplementary End Semester Examinations – JAN 2020
(Regulations: R14)
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.	When the cartesian curve is symmetric about origin	1M
	ii.	Write polar form of the equation $x^2 +(y-1)^2 =2$	1M
	iii.	Find the directional derivative of $f(x,y,z)=x+y+z$ at the point $(2,-1,1)$ in the direction of the vector $i + 2j + 2k$.	1M
	iv	Define the saddle point.	1M
	v.	Evaluate $\int_0^2 \int_0^x dy\, dx$	1M
	vi	What is the cylindrical co-ordinate system	1M
	vii.	State the divergence theorem	1M
	viii.	Find the gradient of $f(x,y)= x^2+y^2$	1M
	ix.	State P-series test.	1M
	x.	Define the conditional convergence.	1M
Q.2(A)		Sketch the curve $r^2=4Sin2\theta$	10M
		OR	
Q.2(B)		Find the Binormal and Torsion of the curve $r(t) = 3\sin t\, i + 3\cos t\, j + 4t\, k$	10M
Q.3(A)		Find all first and second order derivatives of $f(x,y,z) = \log(x+2y+3z)$.	10M
		OR	
Q.3(B)		Find the extreme values of $x^3+3xy^2-15x+y^3-15y$	10M
Q.4(A)		Find the volume of the tetrahedron cut from the first octant by the plane $6x+3y+2z=6$.	10M
		OR	
Q.4(B)		Change the order of integration in $\int_0^1 \int_{x^2}^{2-x} xy\, dx\, dy$ and hence evaluate the double integral.	10M
Q.5(A)		Test the vector field $\vec{F} = (ySinz)\vec{i} + (x\, Sinz)\,\vec{j} + (xyCosz)\vec{k}$ is conservative or not?	10M
		OR	
Q.5(B)		Verify Green's theorem in the plane for $\int_C (x^2 - xy^3)dx + (y^2 - 2xy)dy$ where C is a square with vertices $(0,0),(2,0),(2,2),(0,2)$.	10M
Q.6(A)		Examine the convergence of the series i) $\sum \frac{n^2}{2^n}$ ii) $\sum \frac{n^{10}}{10^n}$	10M
		OR	
Q.6(B)		Obtain the Taylor's series expansion of $sinx$ in powers of $x-\frac{\pi}{4}$	10M

*** END***

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

B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – October 2020
LINEAR ALGEBRA & 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.	Is inverse of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$ exist?	1M
	ii.	Check whether the vectors (1, 2, -3),(3 ,-1 ,2),(1,-5,8) are linearly independent or not.	1M
	iii.	Define Kernel of linear transformation.	1M
	iv	Find the eigen values of $\begin{bmatrix} 5 & 4 \\ 0 & 2 \end{bmatrix}$	1M
	v.	Write C-R equations in Cartesian form.	1M
	vi	Prove that f(z) = x-iy is not analytic .	1M
	vii.	What is the relation between trigonometric and hyperbolic functions	1M
	viii.	Find the value of log (i)	1M
	ix.	State Cauchy's residue theorem	1M
	x.	Define Isolated singularity of f(z).	1M

Q.2(A)   Use Gauss-Jordan method, to find the minimal positive integer values for the variables that will balance the chemical equation $aAgNO_3 + bH_2O \rightarrow cAg + dO_2 + eHNO_3$.   10M

OR

Q.2(B)   Find the transition matrices from B-coordinates to C-coordinates and from C to S for P_2 10M
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 $= \left(x^2, x, 1\right)$ for P_2.

Q.3(A)   For each of the following linear transformations, find a basis for *ker*(L) and a basis for   10M
range(L). Verify that dim(*ker*(L)) + dim(*range*(L)) = dim (P_4)

i) $L : M_{22} \rightarrow M_{22}$ given by $L(A) = A^T$

ii) $L : R^2 \rightarrow R^3$ given by $L([x_1, x_2]) = [x_1, x_1 + x_2, x_2]$

OR

Q.3(B)   Find the characteristic roots of the matrix $\begin{bmatrix} 5 & -2 & 0 \\ -2 & 6 & 2 \\ 0 & 2 & 7 \end{bmatrix}$ and the corresponding eigen   10M
vectors.

Q.4(A) State and prove Cauchy-Riemann Equations in Polar form.   10M

OR

Q.4(B) Verify C-R equations for the function $f(z)=z^2$ and find its derivative using C-R   10M
equations.

Q.5(A) Evaluate $\int_c \frac{e^{2z}}{(z-1)(z-2)} dz$ where c is the circle $|z| = 1.5$ 10M

OR

Q.5(B) Separate real and imaginary parts of a) sinz b) e^z 10M

Q.6(A) Evaluate $\oint \frac{sinz}{z^6} dz$ where c is $|z|=1.5$ using Residue theorem.   10M

OR

Q.6(B) Represent the function $\dfrac{1}{z^2-4z+3}$ in Laurent   series within   10M

(a) $1<|z|<3$ (b) $|z|<1$ (c) $|z|>3$

*** END***

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – OCT 2020
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.	State Kirch offs Current law.	1M
	ii.	Write Different types of Source Transformation?	1M
	iii.	A 230 V lamp is rated to pass a current of 0.26 A. Calculate its power output. If a second similar lamp is connected in parallel to the lamp, calculate the supply current required to give the same power output in each lamp.	1M
	iv	If the three resistors are connected In parallel the resistances are 5Ω,10Ω & 20Ω find the Equivalent Resistance.	1M
	v.	Draw the B-H Curve Characteristics?	1M
	vi	State Relative Permeability.	1M
	vii.	What is the function of Yoke?	1M
	viii.	What are the different types of DC Generators?	1M
	ix.	Define superposition theorem.	1M
	x.	What is the value of voltage drop across a non-ideal P-N junction silicon diode in forward-bias condition?	1M

Q.2(A) Using Nodal analysis, calculate the voltages V1 and V2 in the circuit shown in the figure?   10M
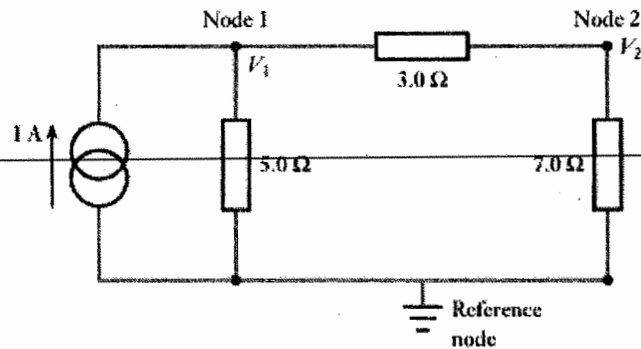
OR

Q.2(B) i) Explain the source transformation Techniques?   5 M
ii) Explain the mesh analysis with suitable example?   5 M

Q.3(A) A 60 Hz sinusoidal voltage v = 141 sin ω t is applied to a series R-L circuit. The values of the resistance and the inductance are 3 Ω and 0.0106 H respectively. (i) Compute the r.m.s. value of the current in the circuit and its phase angle with respect to the voltage. (ii) Write the expression for the instantaneous current in the circuit. (iii) Compute the r.m.s. value and the phase of the voltages appearing across the resistance and the inductance. (iv) Find the average power dissipated by the circuit. (v) Calculate the p.f. of the circuit.   10M

Q.3(B) A Three-phase, balanced delta connected load of (4+j8) ohm is connected across a   10M
400V three-phase balanced supply. Determine the phase current and the line
currents. Assume the phase sequence to be RYB. Also calculate the power drawn by
the load.

Q.4(A) Calculate the efficiency at full load current, 0.8 lagging power factor for the following   10M
test results were obtained on a 4 kVA, 200 V/400 V, 50 Hz single phase transformer.
The OC/SC Test results are as follows:
OC Test: 200 V 0.8 A 70 W (LV side)
SC Test: 20 V 10 A 60 W (HV side).

OR

Q.4(B) Draw the Equivalent Circuit of a Transformer Referred to Primary and Secondary?   10M

Q.5(A) Explain the Construction and working principle of DC Generator.   10M

OR

Q.5(B) i) Explain the Working principle of 3 Phase Induction Motor.   5 M
ii) Derive the EMF Equation of DC Generator?   5 M

Q.6(A) Explain the Transistor Biasing Circuits.   10M

OR

Q.6(B) Explain the working of full wave rectifier with necessary diagram. Give the expressions for RMS   10M
current, efficiency, ripple factor.

*** 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 – OCT 2020
## 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.	Define communication?	1M
	ii.	What are the different formats of a report?	1M
	iii.	What is the difference between Technical Writing and Business Writing?	1M
	iv	What is extensive reading?	1M
	v.	List the difference between oral and written report.	1M
	vi	Define Scanning.	1M
	vii.	Describe two techniques for good reading comprehension skills.	1M
	viii.	Define horizontal communication.	1M
	ix.	What is grapevine communication?	1M
	x.	Why proof reading is important in Report writing?	1M

Q.2(A)   Explain formal and informal communication networks.   10M

OR

Q.2(B)   Discuss the Psychological barriers to effective communication.   10M

Q.3(A)   Discuss in detail communication networks.   10M

OR

Q.3(B)   Explain the strategies of reading skills.   10M

Q.4(A)   Draft a report on your college day celebrations.   10M

OR

Q.4(B)   Explain the different types of reports. Give an example of each.   10M

Q.5(A)   The District Collector is concerned about the rapid increase in the number of road accidents in   10M
the local area. The Chairman, Municipal Corporation, has asked to submit a report
investigating the causes and suggesting measures to improve the situation.

OR

Q.5(B)   Prepare a report towards the eve-teasing on girls in public places. Assume yourself as the   10M
convener of the committee on Girl Child Welfare, Andhra Pradesh. Submit the report to the
Secretary, Ministry of Women Welfare, Andhra Pradesh.

Q.6(A)   10M
The following pie-chart shows the distribution of the household items used in the house
throughout the year. The information given is in terms of percentage. Summarize the information
by selecting and reporting the main features, and make comparisons wherever relevant. Write at
least 150 words.

Budget

18·6

3·4 ← 3.4

11·38

15·16

- Food Items
- Clothes
- Technology
- Cosmetics
- Others

→ 51·3
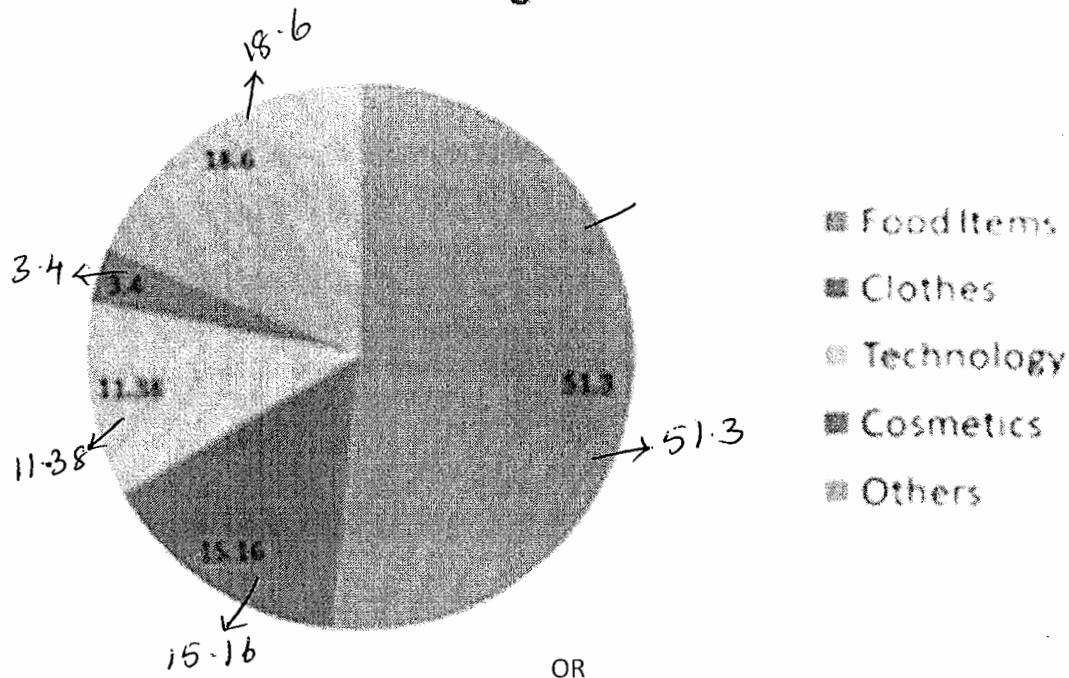
OR

Q.6(B) Read the following passage carefully and answer questions that follow by choosing the correct options.   10M

The Government of India's policy regarding the joint sector is derived from the industrial policy resolution. 1956 and the objective of reducing the concentration of economic power. In appropriate case the Central and the State governments have taken equity participation either directly or through their co-operation with private parties. Some joint sector units have come up in this way.

This type of joint sector unit is a device which may be resorted in specific cases having regard to the production target of the plan. Each proposal for establishing a joint sector unit of this nature will have to be judged and decided on its merits in the light of the government's social and economic objectives. The joint sector will also be a promotional instrument, as for instance, in case where state governments go into partnership with new and medium entrepreneurs in order to guide them in developing a priority industry.

The joint sector will not be permitted to be used for the entry of larger houses, dominant undertakings and foreign company industries in which they are otherwise precluded on their own. In all the different kinds of joint sector units, the government will ensure for itself an effective role in guiding policies, management and operations, the actual pattern and mode being decided as appropriate in each case.

The government hopes that there will be greater certainty in the investment climate and all sections of the community will come forward to play their due role in the promotion of growth with self-reliance within the accepted framework of a socialist pattern of society.

QUESTIONS:
1. What are joint sector units?
2. What is the objective of setting up industries in the joint sector?
3. Why will large business houses not be permitted to enter this sector?
4. What is the difference between joint sector units and public undertakings?
5. Suggest a suitable title to the passage.

*** END***

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
B.Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – OCT 2020
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.	Give Structure of a C Program?	1M
	ii.	Write the syntax of While Loop?	1M
	iii.	What are the disadvantage of Linear Search?	1M
	iv	What is a template?	1M
	v.	Disadvantages of SLL?	1M
	vi	Define Pointer?	1M
	vii.	List Dynamic Memory Allocation Functions?	1M
	viii.	Give the syntax of Class?	1M
	ix.	Give Disadvantage of Stack?	1M
	x.	Differentiate between Stack and Queue?	1M

Q.2(A)	i) Write a program to find the biggest of three numbers?	10M
	ii) Write a program to find whether given number is even or odd?	
	OR	
Q.2(B)	Differentiate between Break and Continue in detail?	10M

Q.3(A)	Write a program to find Multiplication of two matrices?	10M
	OR	
Q.3(B)	Perform Selection Sort for following values in detail?	10M
	12,56,23,48,98,100,24,57,65	

Q.4(A)	i) Write a program to find string palindrome or not?	10M
	ii) Explain strlen and strcpy in detail?	
	OR	
Q.4(B)	i)Write a program to copy one file to another?	10M
	ii) Explain fopen and fclose?	

Q.5(A)	i) Explain new and delete operators in detail?	10M
	ii) Write an example program using class in detail?	
	OR	
Q.5(B)	Explain Constructor and destructor in detail?	10M

Q.6(A)	Write a program to perform Queue using arrays?	10M
	OR	
Q.6(B)	Write a program to perform Stack using arrays?	10M

*** END***

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

B.Tech I Year I & II Sem (R14) Supplementary End Semester Examinations –Oct 2020
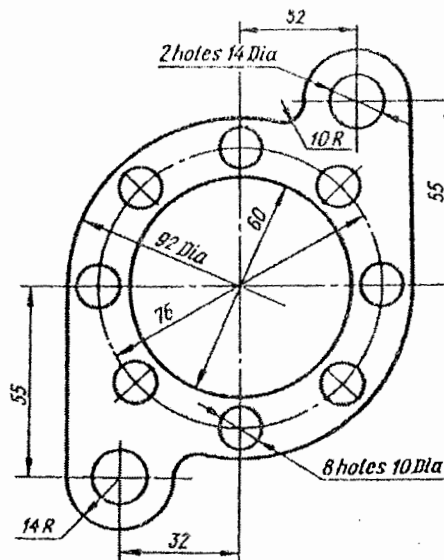
ENGINEERING GRAPHICS

(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 using Auto CAD commands   12M
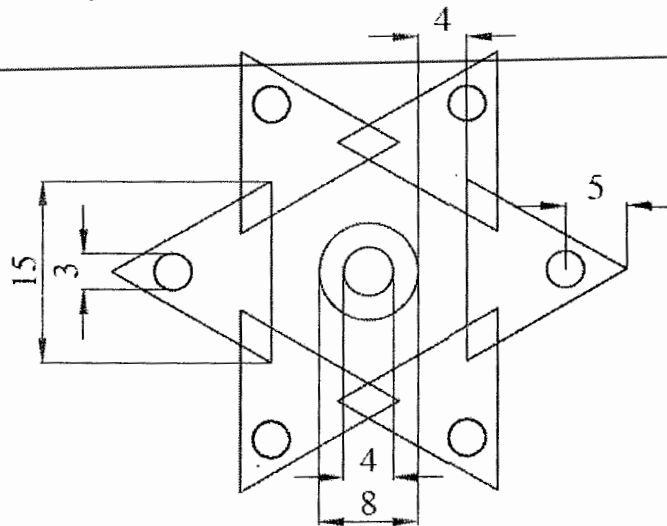

OR

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

Q.2(B)	Draw the projections of the following points on the same ground line by keeping the distance between the projectors as 50mm. Also name the quadrants in which they are?	12M
	1. Point G, 40mm in front of the V.P. and 20mm above the H.P.	
	2. Point F, 45mm below the H.P. and on the V.P.	
	3. Point N, 25mm below the H.P. and 40mm behind the V.P.	
	Point M, 20mm above the H.P. and 45mm in front of the V.P.	

| 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 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 |

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

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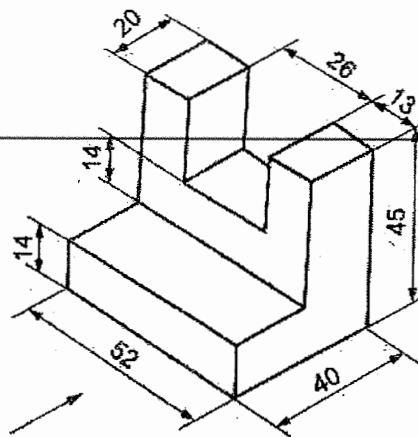
OR

| Q.5(B) | 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 |

END

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE
(UGC-AUTONOMOUS)
B. Tech I Year I & II Semester (R14) Supplementary End Semester Examinations – Oct 2020
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.	Name a renewable energy source	1M
	ii.	What is water logging?	1M
	iii.	Give an example for consumers in food chain.	1M
	iv	What is ecological pyramid	1M
	v.	Name any one hotspot in India	1M
	vi	Distinguish between In-situ and Ex-Situ conservation?	1M
	vii.	Define soil pollution?	1M
	viii.	Give an example for a greenhouse gas.	1M
	ix.	What is population explosion?	1M
	x.	What is acid rain?	1M

Q.2(A)	Compare Modern & Traditional Agriculture systems.	10M
	OR	
Q.2(B)	Brief out the multidisciplinary nature of Environmental Science.	10M
Q.3(A)	Discuss forest ecosystem in detail.	10M
	OR	
Q.3(B)	i. Differentiate between food chain & food web.	5M
	ii. Write a note on aquatic ecosystem.	5M
Q.4(A)	Compose an essay on values of Biodiversity.	10M
	OR	
Q.4(B)	Explain why India is a Mega diversity nation?	10M
Q.5(A)	What are the causes and effects of water pollution?	10M
	OR	
Q.5(B)	Explain the adverse effect of a) cyclone b) earthquake.	10M
Q.6(A)	Write in detail about Global warming.	10M
	OR	
Q.6(B)	What is rain water harvesting? Explain one method of rain water harvesting?	10M

*** END***