# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Maisammaguda, Dhulapally,(Post Via kompally), Secunderabad-500 100.

## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017
SUBJECT: <u>Engineering Physics – II</u>

Branch: Common to **CE, EEE, ME, ECE, CSE & MINING**

Time: **3 Hours**

Max Marks: **75 Marks**

## I. Answer all the questions

5 x 1 M = **5** Marks

1. What is the condition for constructive interference for mono chromatic light.
2. What is a meta stable state?
3. What is an electric dipole?
4. What is the principle of working of optical fibers.
5. What is reverberation?

## II. Answer all the questions

10x2M=20 Marks

1. Draw a neat diagram of Bragg's spectrometer.
2. What is the optical path length of a light ray that travelled through a glass plate of 2cm thick. Refractive index of glass is 1.5.
3. Distinguish between LASER and ordinary light.
4. Explain how LASER is used for data storage.
5. How are ferroelectric materials different from that of a piezo electric material.
6. Explain magnetic levitation.
7. Explain what is quantum confinement.
8. Give four applications of nano materials.
9. What kind of materials are used to detect ultrasonic waves?
10. What is Sabine's formula for reverberation time?

## PART- B

Answer all questions

5X10M=50 Marks

**Q1.** a) Discuss the phenomenon of interference of light due to reflection from a thin film and deduce the conditions for interference maxima and minima in tems of angle of incidence and thickness of the film.

b) Discuss Young's double slit experiment.

c) What is plane polarization of light and what is plane of polarization.          [5+3+2]

### (OR)

**Q2.** a) State and explain Bragg's law.

b) Explain the powder method of X-ray diffraction to determine the crystal structure.

c) In Newton's Ring's experiment the diameters of the 5$^{th}$ ring and 15$^{th}$ ring are 0.30cm and 0.62cm respectively. Find the wavelength of light if radius of curvature is 1m. Does the light fall in visible region.          [3+4+3]

**Q3.** a) What are Einstein's coefficients and deduce a relation between them.
   b) For a semiconductor Laser of 1micro watt power and with energy gap of 1.5eV find the number of photons emitted per second.
   c) Explain the application of LASER in medicine.                                    [5+3+2]

**(OR)**

**Q4.** a) Explain optical and electrical pumping mechanisms
   b) Explain construction and working of RUBY LASER.
   c) At 300K what is the ratio of concentrations of particles in two energy levels separated by 1eV energy?                                                               [3+5+2]

**Q5.** a) Define the terms Dielectric constant, Dielectric susceptibility and polarizability.
   b) Explain Type1 and Type2 superconductors along with neat diagrams?
   c) Deduce Clausius-Mossotti equation.                                               [3+4+3]

**(OR)**

**Q6.** a) Derive an expression for electronic polarisability of atoms.
   b) Give some applications of superconductors.
   c) For a mono-atomic dielectric gas of density $4 \times 10^{11}$ atoms per cubic meter find the polarisability. The dielectric constant of the gas is given as 1.065.            [5+2+3]

**Q7.** a) What are the two broad methods of nano material synthesis. Explain the PVD method.
   b) Discuss the construction and working of optical fibers.
   c) Find the acceptance angle for an optical fiber when the light is launched for water of refractive index1.3. Given the refractive indices of core and cladding of the fiber are 1.54 and 1.5 respectively                                                          [5+3+2]

**(OR)**

**Q8.** a) Explain the Sol-Gel synthesis of nano-materials along with neat diagram.
   b) Explain attenuation in optical fibers.
   c) Give two applications for optical fiber sensors, optical fibers in medicine and optical fibers in communication.                                                          [5+2+3]

**Q9.** a) Explain the method of production of ultrasonic waves by magnetostriction method .
   b) Explain the applications of ultrasonic waves in communication and medicine.
   c) What are the basic requirements of acoustically good hall.                        [4+3+3]

**(OR)**

**Q10.** a) What are the factors affecting the architectural acoustics and give their remedies.
   b) What are ultrasonic waves and explain how the ultrasonic waves are used for biological and industrial applications.                                                         [5+5]

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## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017

SUBJECT: Engg. Chemistry - II
Branch: **Common to CE, ME, MINING, CSE, EEE & ECE**

Time: **3 Hours**

Max Marks: **75 Marks**

### PART-A

**I. Answer all the questions**

**5 x 1M = 5 Marks**

1. Define a polymer?
2. What are the monomers of Thiokol rubber?
3. What are visible and UV radiations?
4. Why do colloidal solutions exhibit Brownian movement and Tyndal effect?
5. What is octane number?

**II. Answer all the questions**

**5 x 2M = 10 Marks**

1. What are Biodegradable polymers?
2. Write preparation and two uses of butyl rubber
3. Natural rubber needs vulcanization. Give reason
4. How do thermoplastics differ with thermo setting resins (any three?)
5. What is quantum efficiency?
6. Define Absorbance (with formulae)?
7. Decomposition of $CaCO_3$: C=? P=?
8. What are lyophilic and lyophobic sols? Give examples
9. What is the composition of LPG and CNG?
10. What is the principle involved in Fischer- Tropsch's synthesis of petrol?

### PART-B

**Answer all the questions**

**5 x 10 = 50 Marks**

1. A). Write preparation, any two properties and uses of the following:

      1). PVC      2). Bakilite

  B). Explain the mechanism of chain growth polymerisation

OR

2. A. Write brief note on Fibre Reinforced Plastics

  B. Preparation, properties and uses of Dacron

3. A. Write brief note on Conductivity of polyacetalene

   B. How will you fabricate the thermoplastic by compression moulding?

   OR

4. A. Write brief note on biodegradable polymers

   B. Write the preparation and applications of Poly lactic acid.


5. A. State and explain Lambert-Beer law

   B. Why molecules absorb in UV-VIS region? What are the types of transitions occur in a molecule? Discuss with examples

   OR

6. A. State and explain Grotthuss–Draper law

   B. What is the principle involved in UV-Visible spectrocopy


7. A. Draw a phase diagram for one component system

   B. Derive Langmuir adsorption isotherm.Write the factor on which adsorption depends

   OR

8. A. What are colloids? Discuss their optical properties

   B. Differentiate between physisorption and chemisorptions


9. A. How do you analyse coal by Ultimate analysis? Give its significance

   B. Calculate the volume of oxygen and air required for complete combustion of 10 litres of gas fuel containing 50% $CH_4$, 25% $H_2$ and 25% CO

   OR

10. A. How do you refine(fractional distillation)the crude oil?

    B. Determine the calorific value (CV) of gas fuel by Junker's gas calorimeter? And

    calculate CV from the following data

    Weight of the water circulated =3000grams; volume of the gas fuel burnt=10litr Temperature of incoming water=$27^0$c; Temperature of outgoing water=$32^0$cAmount of water condensed=3grams: Latent heat of condensation=600calories

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### I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017
### SUBJECT: Mathematics-II
### Branch: Common to CE, ME, MINING, CSE, EEE & ECE

Time: **3 Hours**                                                    Max Marks: **75 Marks**

## PART-A

**I. Answer all the questions**                                   5 x 1M = 5 Marks

1. If x= $r\cos\theta$, y=$r\sin\theta$, find $\dfrac{\partial(x,y)}{\partial(r,\theta)}$

2. What as the relation between $\Delta$ and E

3. Find $=\sqrt{\dfrac{5}{2}}$

4. Evalueate $\int_{1}^{2}\int_{1}^{3} xy^2\, dxdy$

5. If R = xI+yJ+zK, find div R.

**II. Answer all the questions**                                 10 x 2M = 20 Marks

1. Fid 'C' pf Cauchy's mean value theorem for f(x) = $x^2$ and g(x) = x in [1,2].

2. If u= $x^2$-$y^2$, v = 2xy and x = $r\cos\theta$, y=$r\sin\theta$, find $\dfrac{\partial(u,y)}{\partial(r,\theta)}$

3. Evaluate $\Delta(x+\cos x)$

4. Show that $E = \Delta + 1$

5. Express the integral $\int_{0}^{1} x^3(1-\sqrt{x})^5$ dx in terms of Beta function.

6. Evaluate $\int_{0}^{\pi/2} Sin^2\theta\ Cos^3\theta\ d\theta$

7. Evaluate $\int\int\int_{0\,0\,0} xyz$ dz dy dx

8. Evaluate $\int_{0}^{\pi}\int_{0}^{aSin\theta} r$ d r d$\theta$

9. What is the greatest rate of increase of u=$xyz^2$ at the point (1,0,3)

10. If $\overline{R} = x\overline{i} + x\overline{i} + y\overline{j} + z\overline{k}$ then find curl $\overline{R}$.

# PART-B

**Answer all the questions**                                   **5 x 10M = 50 Marks**

1. Prove tha (if $0<a<b<1$), $\dfrac{b-a}{1+b^2} < \text{Tan}^{-1}b - \text{Tan}^{-1}a < \dfrac{b-a}{1+a^2}$.

   Hence show that $\dfrac{\pi}{4} + \dfrac{3}{25} < \tan^{-1}\dfrac{4}{3} < \dfrac{\pi}{4} + \dfrac{1}{6}$.

<div align="center">OR</div>

2. If u=x+y+z, uv=y+z, uvw=z, show that $\dfrac{\partial(x,y,z)}{\partial(u,v,w)} = u^2 v$.

3. Interpolate by means of Gauss's backward formula, the population of a town for the year 1974, given that:

| Year: | 1939 | 1949 | 1959 | 1969 | 1979 | 1989 |
|---|---|---|---|---|---|---|
| Population (in thousands) | 12 | 15 | 20 | 27 | 39 | 52 |

<div align="center">OR</div>

4. Using Lagrange's formula, express the function $\dfrac{x^2+x-3}{x^3-2x^2-x+2}$ as sum of partial fractions.

5. Find a real root of the equation $x^3-2x-5=0$ by the method of false position correct to three decimal places.

<div align="center">OR</div>

6. Prove that $\beta(m,n) = \dfrac{\sqrt{m}\sqrt{n}}{\sqrt{m+n}}$

7. Evaluate $\displaystyle\iint_R (x+y)^2 \, dx \, dy$ over the area bounded by the ellipse $\dfrac{x^2}{a^2} + \dfrac{y^2}{b^2} = 1$

<div align="center">OR</div>

8. Find the volume of the tetrahedron bounded by the coordinate planes and the plane $\dfrac{x}{a} + \dfrac{y}{b} + \dfrac{z}{c} = 1$.

9. Find the total work done by the force F=3xyI-yJ+2zxK in moving a particle around the circle $x^2+y^2=4$.

<div align="center">OR</div>

10. Verify Stoke's theorm for F =$(x^2+y^2)$ I-2xyJ taken around the rectangle bounded by the lines x= $\pm$ a, y=0, y=b.

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## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017
### SUBJECT: Engineering Drawing
Branch: **Common to CE, ME & MINING**

Time: **3 Hours**                                                                   Max Marks: **75 Marks**

**Answer all the questions**                                             **5 x 15=75M**

1. Construct a vernier scale to read centimetres and to centimetres and measure up to 4 metre, having a scale factor of 1/25. Mark a distance of 2.52 metres on it.

**OR**

2. Construct a diagonal scale showing yards, feet and inches in which A 2 inch long line represents 1.25 yards and the scale is long enough to measure up to 5 yards. Find R.F. and mark a distance of 4 yards 2 feet and 8 inches.

3. A triangular prism with a 50 mm side and 70mm long axis lies on the H.P on one of its triangular faces with its axis is inclined at 30 degrees to the V.P. it is cut by a horizontal section plane at a distance of 5 mm from the axis. Draw its front view and sectional top view.

**OR**

4. A cylinder with a 70 mm diameter is resting on its base on the H.P. it is penetrated by another cylinder of 60 mm base diameter, such that their axis intersects each other at right angles. Draw the projections of the combination and show the curves of intersection.

5. A hexagonal prism, having base with 30 mm side and a 70 mm axis, is resting on its base on the ground with a side of base inclined at 45 degrees to the V.P. It is cut by an auxiliary inclined plane at an angle of 45 degree with the H.P. and passing through a point 15 mm below the top end of the axis. Obtain the development of the lateral surface of the truncated prism

**OR**

6. In a cylindrical drum, with a 60 mm diameter and a 100 mm height is resting on its base on the H.P. A square hole with a 50 mm side is cut through the drum such that one of the faces of the square hole makes 30 degrees with the H.P. The axis of the square hole is perpendicular to the V.P. and 12 mm away from the axis of the cylinder. Draw the development of the retained cylinder.

7. The frustum of a square pyramid with a 50 mm base edge, 25 mm top edge and 40 mm height rests on its base in the GP with an edge of the base parallel to and 15 mm behind the PP. The section point is 70 mm above the GP and 60 mm in front of the PP and lies in a CP which is 40 mm towards the right of the axis. Draw its perspective projections.

**OR**

8. A hexagonal plane with a 30 mm side lies on the GP with an edge parallel to and 10 mm behind the PP. The station point is 60 mm in front of PP, 75 mm above GP and lies in a CP which is at a distance of 40 mm towards right of the centre of the object. Draw its perspective.

9. Explain about coordinate system used in auto CAD with examples

**OR**

10. Explain all draw and modify commands used in auto CAD with examples.

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### I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017
SUBJECT: __Mathematics - III__
Branch: **Common to EEE, ECE & CSE**

Time: **3 Hours**                                                         Max Marks: **75 Marks**

## PART-A

**I. Answer all the questions**                                        **5 x 1M = 5 Marks**

1. Give an example of a function which is both even and odd.

2. What is the Z-Transform of $a^n f(n)$ given $Z(f(n)) = F(z)$.

3. Write the normal equations to fit the curve $y = ae^{bx}$.

4. Write the predictor- corrector formulae for Adams - Bashforth method.

5. Form a partial differential equation from $z = (x + a)(y + b)$.

**II. Answer all the questions**                                        **10 x 2=20M**

1. State the sufficient conditions for Fourier series of a function f(x).
2. Find the Fourier cosine series of f(x) = 1 in 0 < x < 2.
3. Show that $Z(nf(n)) = - z \frac{d}{dz}\{Z(f(n))$
4. Find the inverse Z-Transform of $\frac{z}{(z-1)^2}$ .
5. What are single step and multi-step methods.
6. What are the advantages and disadvantageous of the predictor-corrector methods compared to Runge Kutta methods.
7. Suppose we measure a distance four times and obtain the following results: 2, 69, 70 and 73km. What is the best estimate of the correct measurement by the principle of least squares.
8. Derive normal equation for y = a + bx.
9. Form a partial differential equation from $z = ax^2 + f(y)$.
10. Find the solution of px – qy = 2x - z.

## PART-B

Answer all the questions                                              **5 x 10= 50M**

1. (i) Find the Fourier series of the function f(x) = | cos x | in $-\pi < x < \pi$.

    (ii) Find the Fourier transform of $e^{-a^2 x^2}, a>0$ .

                                   OR

2. (i) Find the Fourier sine series for the function f(x) = x($\pi$ – x), in 0 < x < $\pi$.

    (ii) Find the Fourier integral representation of $f(x)=\begin{cases}1 & if \ |x|\le 1 \\ 0 & if \ |x|>1\end{cases}$ and hence find the value of

    the integral $\int_0^\infty \frac{\sin x}{x}dx$ .

3. (i) Using method of least squares fit a second degree polynomial to the following data:

| x | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 |
|---|-----|-----|-----|-----|-----|-----|
| y | 1.3 | 1.6 | 2.0 | 2.7 | 3.4 | 4.1 |

(ii) Find an approximate value of $\log_e 5$ by calculating $\int_0^5 \dfrac{dx}{4x+5}$ Simpson's 1/3 rule of integration.

OR

4. (i) An experiment gave the following values:

| v (ft/min) | 350 | 400 | 500 | 600 |
|------------|-----|-----|-----|-----|
| t(min) | 61 | 26 | 7 | 26 |

It is known that v and t are connected by the relation $v = at^b$. Find the best possible values of a and b

(ii) Find the value of the integral $\int_2^3 \dfrac{\cos 2x}{1+\sin x} dx$ using Gauss-Legendre two and three point integration rules.

5. (i) Find approximate solutions using Picards's iteration method to the initial value problem $\dfrac{dy}{dx} = 1 + y^2$ with initial condition y(0) = 0. Hence find approximate value of y at x = 0.1 and 0.2.

(ii) Use Runge-Kutta method to find y(2) for the equation $\dfrac{dy}{dx} = 2 + \sqrt{xy}$ , y(1) = 1 taking h = 0.5.

OR

6. (i) Using predictor correct method the solution of $\dfrac{dy}{dx} = x - y^2$ at x = 0.8 given that y(0) = 0.0000, y(0.2) = 0.0200, y(0.4) = 0.0795, y(0.6) = 0.1762.

(ii) Find by Taylor's series method the value of y at x = 0.1 and 0.2 to five decimal places from $\dfrac{dy}{dx} = y^2 + x$, y(0) = 1.

7. (i) Find the Z-Transform of (i) $\cos\left(\dfrac{n\pi}{2} + \dfrac{\pi}{4}\right)$ (ii) $n^2 e^{n\theta\backslash 78}$

(ii) Obtain the inverse transform of $\dfrac{10z}{(z-1)(z-2)}$

OR

8. (i) If $X(z) = \dfrac{2z^2 + 3z + 12}{(z-1)^4}$, find the values of $x_2$ and $x_3$.

(ii) Using Z transform Solve the difference equation $y_{n+2} + 4y_{n+1} + 3y_n = 3^n$ with $y_0 = 0$, $y_1 = 1$.

9. (i) By the method of separation of variables, find the solution of $u_{xx} - u_{yy} = 0$.

(ii) Solve $(z^2 - y^2)p + y(x^2 - z^2)q = z(y^2 - x^2)$.

OR

10. A rod of length 10 cm has its ends A and B kept at $20°$ C and $40°$C until steady state conditions prevail. The temperature at A is then suddenly raised to $50°$ C and at the same instant that at B is lowered to $10°$ C and the end temperatures are there after maintained. Find the subsequent temperature distribution u(x, t) at a distance x from one end of the rod at any time t.

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## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017

### SUBJECT: Data Structures And Software Tools
Branch: **Common to EEE, ECE & CSE**

Time: **3 Hours**                                                     Max Marks: 75 Marks

## PART-A

**I. Answer all the questions**                                    5 x 1M = 5 Marks

1. Define queue
2. What do you mean by time complexity of algorithm
3. What are the advantages of linked list
4. What is XML?
5. What is JUnit test case?

**II. Answer all questions**                                       10x2M=20 Marks

1. List the applications of stack
2. Differentiate stack and queue
3. List the basic operations carried out in linked list.
4. Define sparse matrix and its representation of linked lists
5. What is the difference between linear search and binary search?
6. Define sorting and list the various types of sorting techniques
7. What are the features of XML
8. How to setup JDT UI development environment
9. Write about J2EE Standard tools
10. What is an eclipse plug in?

## PART-B

**Answer all the questions**                                       5 x 10=50M

1. Explain stack postfix expression evaluation with example.
                                **OR**
2. What is circular queue? Explain about applications of queues.
3. What are the disadvantages of linked lists? Write a C program to implement queue operations using linked list.
                                **OR**
4. Explain representation of linked list in memory and write a C program to implement factorial calculation of given number.
5. Discuss various the asymptotic notations used for best case, average case and worst case analysis of algorithms.
                                **OR**
6. Write a C program for implementing quick sort to arrange a list of integers in ascending order.
7. What is DTD? Explain how to create XML document by using DTD.
                                **OR**
8. Write short notes:      (a) XML schemas          (b) Automating testing with Junit
9. Explain about the following:
   a) Hot code replace    b) Eclipse debugger
                                **OR**
10. Write short notes on: (a) Data Tools Project (b) Web Standard Tools

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## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017
### SUBJECT: Engineering Mechanics
### Branch: Common to CE, ME & MINING

Time: **3 Hours**                                                           Max Marks: **75 Marks**

## PART-A

**I. Answer all the questions**                                           **5 x 1M = 5 Marks**
1. Define Resultant Force.
2. What are various system of Forces?
3. Where does the centre of a semicircle lies?
4. What is instantaneous center of rotation?
5. Write the efficiency of a screw jack.

**II. Answer all the questions**                                           **10 x 2=20M**

1. State the parallelogram law of forces.
2. Write about Varignon's theorem
3. State Lamis Theorem.
4. Converse of the Triangle law of forces
5. What is Radius of Gyration?
6. Write about Pappu's-Guldinus theorems.
7. Differentiate between kinematics and kinetics
8. What is D'Alemberts Principle.
9. State the impulse momentum principle. Write its equation.
10. Define the law of conservation of momentum.

## PART-B
**Answer all the questions**                                               **5 x 10= 50M**

1a) A system of four forces acting on a body is shown in fig. Determine the resultant.  (5 marks)
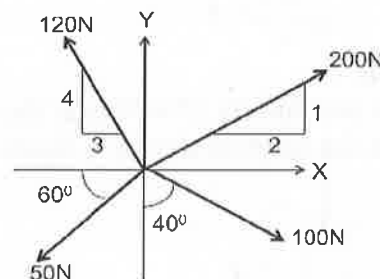


b) The body on the 30˚incline in figure is acted upon by a force P inclined at 20˚with the horizontal. If P is resolved into components parallel and perpendicular to the incline and the value of the parallel component is 300N, compute the value of the perpendicular component and of P.          (5 marks)
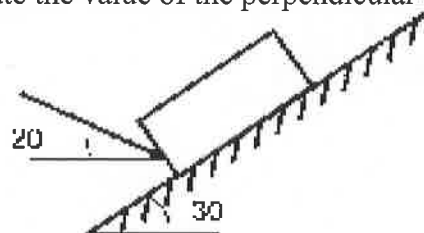


**(OR)**

**Q2. (a)** Determine the components of force F along the X-Y axis which are parallel and perpendicular to the incline as shown in figure.

F=260N  5

12

3

4
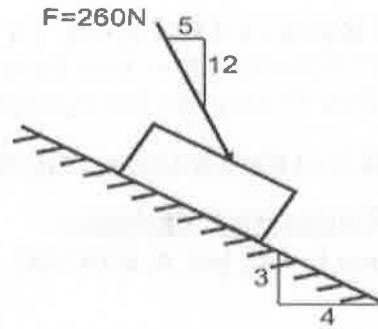
**(b)** Two locomotives on opposite banks of a canal pull a vessel moving parallel to the banks by means of two horizontal ropes. The tensions in these ropes are 2000N and 2400N while the angle between them is 60°. Find the resultant pull on the vessel and the angle between each of the ropes and the sides of the canal.

**Q3. (a)** The forces on the gusset plate of a joint in a bridge truss act as shown in figure. Determine the values of P and F to maintain equilibrium of the joint.

4000N

45

P

15

60

F

Fig-3.4.4

3000N
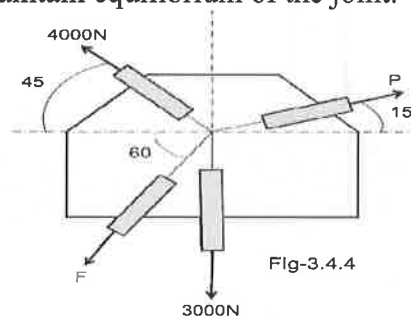
**(b)** A bar 12 m long and of negligible weight is acted upon by forces as shown in figure. Determine angle $\theta$ for equilibrium of bar.
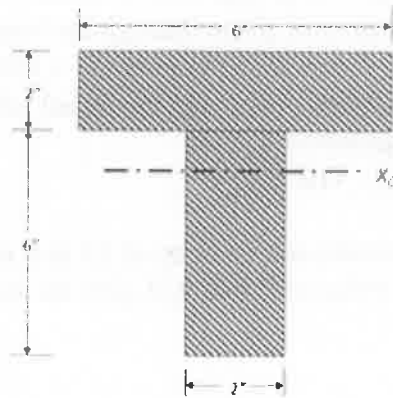
220N

A

AC=5M
CD=3M
DB=4M

C

110N

D

B

3

4
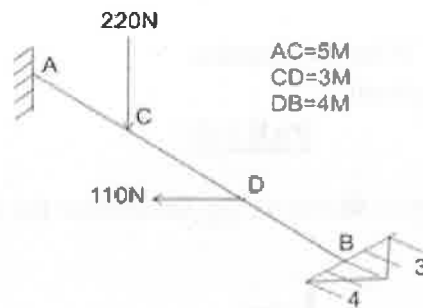
**OR**

**Q4.** A beam supports a load varying uniformly from an intensity of w N/m at the left end to p N/m at the right end. Find the values of w and p to cause the reaction shown in figure.

P

W

3

5

4

R₁=6000N

R₂=12000N
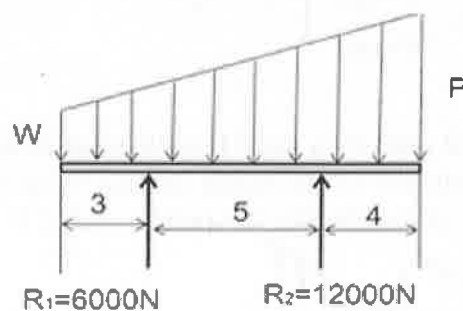
**Q5. (a)** Determine the moment of inertia of the T-section shown in figure about its centroidal $X_0$ axis.
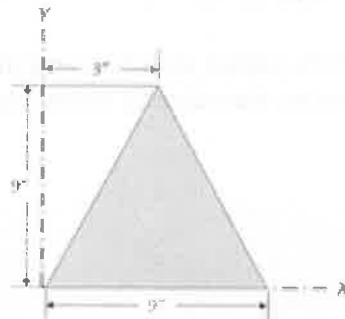


**(b).** The frustum of the right circular cone (ABCD) has radii of 50 cm and 25 cm and its height is 60 cm. Locate the CG of the given frustum as shown in the shaded figure.
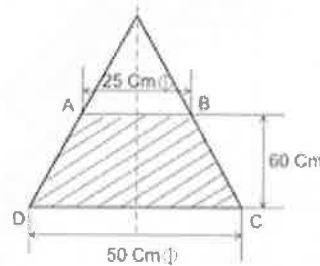


**OR**

**Q6. (a)** Determine the moment of inertia of the T-section shown in figure about its centroidal $X_0$ axis.



**(b).** Prove that of moment of inertia of a circular section about an horizontal axis and passing through C.G of the section is given by $\Pi D^4/64$.

**Q7. (a)** The motion of a particle along a straight line is defined by s $=1/3\ t^3 - 36t$. Find the average acceleration during the fourth second. Then the particle reverses its direction, what is its acceleration?

**(b)** Find the acceleration of each body in the system shown in figure
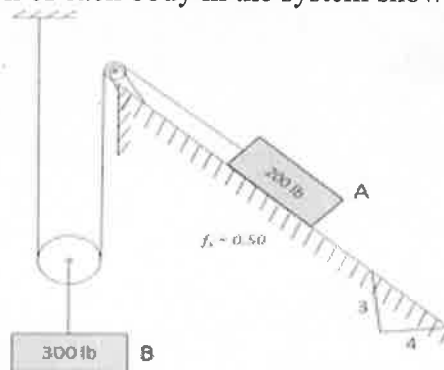


**OR**

**Q8. (a)** A projectile is fired from the top of a cliff 100 m high with a velocity of 430 m/s directed at 45° to the horizontal. Find the range on a horizontal plane through the base of the cliff.

**(b)** A ball is thrown so that it just clears a 7.5 m wall 30 m away. If it left the hand 1.5 m above the ground and at an angle of 60° to the horizontal, what was the initial velocity of the ball?

**Q9.** The system shown in figure is moving rightward at a velocity of 15 m/s when a constant horizontal force P is applied as shown. Determine the value of P that will give the system a leftward velocity of 30m/s in a time interval of 10 sec.
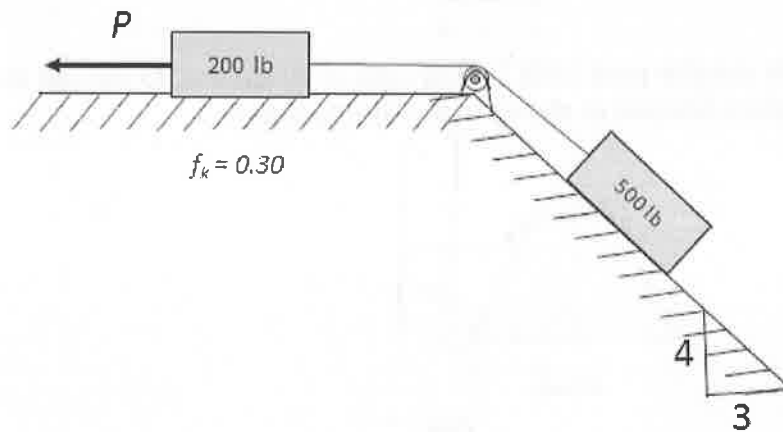


**OR**

**Q10.** A flexible rope, 24 m long and weighing 8 N/m, passes over two smooth pegs as shown in figure. The rope starts from rest when d = 3m. Determine the velocity of the rope at the instant when d = 12 m.
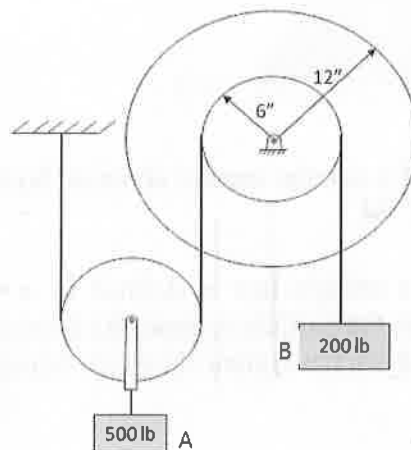
# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Maisammaguda, Dhulapally,(Post Via kompally), Secunderabad-500 100.

## I B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MAY - 2017

SUBJECT: **English & Professional Ethics**
Branch: Common to **CE, EEE, ME, ECE, CSE & MINING**

Time: 3 hours

Max. Marks: 75

## PART - A

**I.   Answer all questions**

**5x1M=5 Marks**

1. What according to Kalam is a 'unique characteristic of our country… it may even be genetic'!
2. The Coronary Artery Disease (CAD) patients, popularly known as _____, at Global Hospital & Research Centre.
3. The abbreviation, NPT stands for _____.
4. The abbreviation, TERLS stands for _____.
5. Write a synonym for the following word and use it in your own sentence. - ACUMEN

## II. Answer all questions

**10x2M=20 Marks**

1.   Match the following: Author and Title
     A. Chidanand Rajghatta       i. The Horse that Flew.
     B. Dr.Wayne W. Dryer       ii. Manifest your Destiny

2. Use the sets of words below to write grammatical and meaningful sentences, adding other words that are necessary.
     i. london you with did uncle in your stay.
     ii. new like some I'd buy shoes to.

3. Write one word substitutes for the following phrases/ sentences.
     i. A person appointed by parties to settle the disputes between them.
     ii. One who is all powerful.

4.   Correct the following sentences.

     i. One of my teachers are from IIT, Khargapur.
     ii. How long are you here?

5. Use the following idiomatic expressions in your own sentences.
     i. All ears
     ii. Piece of cake

6. Choose the right question tag given in the brackets.
    i. Students must study well throughout their course, _____? (must they, mustn't they)
    ii. I'm right, _____? (amn't I, aren't I)

7. Change the following sentences from Active Voice to Passive Voice.
    i. The principal presided over the meeting.
    ii. Gandhiji taught us the doctrine of non-violence.

8. Fill in the blanks using the words formed from those in brackets.
    i. The young girl was rewarded by the police for her _____. (brave)
    ii. They are _____ the roads in the city. (wide)

9. Rewrite the sentences using correct punctuation marks.
    i. How interesting the film is?
    ii. I am correcting my students's assignments.

10. Identify the closet antonym of the word
    i. GENEROUS: unhelpful, cruel, stingy
    ii. OVER: below, under, beneath

## PART- B

**Answer all questions**                                    **5X10M=50 Marks**

Q1. a) "Kalam imagined a conversation among five people who symbolized the finest attributes of
        human mind". Elaborate the statement.
    b) Write an essay on the importance of leading a goal oriented life.

**(OR)**

Q2. a) Discuss in detail on the need to have a "Role Model" in everyone's life.
    b) Discuss the transformation that takes place from 'Dream to Character building'.

Q3. a) Explain the context when Albert Einstein made the remark- "we owe a lot to the Indians who
        taught us how to count…"
    b) Read the passage and then answer the questions below.

One thing, however, is certain: both epics were created without recourse to writing. Between the decline
of Mycenaean and the emergence of classical Greek civilization—which is to say, from the late 12th to
the mid-8th century B.C.—the inhabitants of the Greek lands had lost all knowledge of the syllabic script
of their Mycenaean fore-bears and had not yet acquired from the easternmost shore of the Mediterranean
that familiarity with Phoenician alphabetic writing from which classical Greek literacy (and in turn,
Etruscan, Roman, and modern European literacy) derived. The same conclusion of illiterate composition
may be reached from a critical inspection of the poems themselves. Among many races and in many
different periods there has existed (and still exists sporadically) a form of purely oral and unwritten
poetic speech, distinguishable from normal and printed literature by special traits that are readily
recognizable and specifically distinctive. To this class the Homeric epics conform. Hence it would seem
an inevitable inference that they must have been created either before the end of the 8th century B.C. or
so shortly after that date that the use of alphabetic writing had not yet been developed sufficiently to
record lengthy compositions. It is this illiterate environment that explains the absence of all contemporary
historical record of the authors of the two great epics.

It is probable that Homer's name was applied to two distinct individuals differing in temperament and artistic accomplishment, born perhaps as much as a century apart, but practicing the same traditional craft of oral composition and recitation. Although each became known as "Homer, " it may be (as one ancient source asserts) that "homros "was a dialectal word for a blind man and so came to be used generically of the old and often sightless wandering reciters of heroic legends in the traditional meter of unrhymed dactylic hexameters. Thus, there could have been many Homers. The two epics ascribed to Homer, however, have been as highly prized in modern as in ancient times for their marvelous vividness of expression, their keenness of personal characterization, their unflagging interest, whether in narration of action or in animated dramatic dialogue.

1. What are the qualities which personify Homer as an epic?
2. What is the traditional meter of the Homer?
3. How did the ancient texts survive centuries?
4. What is the meaning of the word- Dialect?
5. What is the name of the language of which the Greek lands have lost the script?

**(OR)**

**Q4. a)** What is the topic of discussion between A.P.J Abdul Kalam and Pramukh Swami Maharaj?
   **b)** What are the management techniques which Abdul Kalam learned from Prof. Dhawan?

**Q5. a)** "Kalam, you have to give me a promise and assurance to the nation. The day India makes its own ICBM. I shall be stronger as an Indian". Who said these lines and when?
   **b)** Draft a memorandum on behalf of the principal to the office staff emphasizing the need of observing punctuality and adhering to lunch hours.

**(OR)**

**Q6. a)** Summarize the two important components of the knowledge society?
   **b)** Draft a congratulatory message on the golden jubilee celebrations of an allied company.

**Q7. a)** Explain the purpose of REACH in educational institutions.
   **b)** Describe the process of making an omlette.

**(OR)**

**Q8. a)** Dialogue Writing: Write dialogues on any one of Abdul Kalam's interaction with students.
   **b)** As the Union Minister of Industries, you have been requested to address fresh engineering graduates. Draft a suitable speech.

**Q9.** Khushwanth Singh said, "Kalam is a dreamer of great dreams…Ignited Minds will fire the minds of the young". Comment on the statement.

**(OR)**

**Q10.** Write a narrative essay on the historical monument, 'Charminar'