

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
Sub: Applied Physics (EEE & ECE)

Time: 3 Hours**Max. Marks: 60**

Answer any FIVE Questions choosing one question from each unit.

All questions carry Equal Marks.

UNIT - I

1. (a) Explain the Interference of light due to thin films by reflection. **4M**
(b) Give the theory of Newton's rings and describe the method of producing them. Explain how this phenomenon can be used to determine the radius of curvature of the plano convex lens. **8M**

(OR)

2. (a) Discuss the Fraunhofer diffraction pattern given by double slit. **8M**
(b) Write the differences between Interference and Diffraction. **4M**

UNIT – II

3. (a) Explain the principle, construction and working of He-Ne laser with neat diagram and write its applications. **8M**
(b) What are the characteristics of laser light than conventional light source. **4M**

(OR)

4. (a) Write the differences between Step index and Graded index optical fibers **5M**
(b) Discuss fiber optic communication system with neat block diagram. **7M**

UNIT – III

5. (a) Discuss the Hysteresis curve of a ferro magnetic material based on Weiss theory of ferromagnetism. **7M**
(b) Explain the classification of magnetic materials based on their magnetic moment / Spin. **5M**

(OR)

6. (a) Explain the temperature and frequency dependence of Polarization in dielectrics. **7M**
(b) Discuss different types of Polarizations in Dielectrics. **5M**

UNIT – IV

7. (a) Obtain energy eigen values and eigen functions of a particle moving in a one dimensional infinite high well. **8M**
(b) Explain dual nature of matter and write properties of matter waves. **4M**

(OR)

8. (a) Discuss the electrical conductivity in metals using quantum free electron theory. **8M**
(b) Write the merits and demerits of classical free electron theory. **4M**

UNIT-V

9. (a) Write the differences between direct and indirect band gap semiconductors. **4M**
(b) What is Hall effect? Obtain an expression of Hall coefficient of the Semiconductor. **8M**

(OR)

10. (a) Distinguish between Type - I and type - II Superconductors. **6M**
(b) Discuss High temperature Ceramic Superconductors and Write its applications **6M**

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
SUB: Engineering Chemistry (ME)

Time: 3 Hours**Max. Marks: 60**

Answer any FIVE Questions choosing one question from each unit.
All questions carry Equal Marks.

UNIT - I

1. (a) Explain the softened of water by Ion-exchange process and explain the advantages over other methods. 9M
(b) Disadvantages of hard water 3M
- (OR)
2. (a) i) Priming &Foaming ii) Scale & Sludge 8M
(b) Write notes on Reverse Osmosis 4M

UNIT – II

3. (a) Define secondary battery and explain working nature of lithium ion battery with neat diagram 7M
(b) Write notes on H₂-O₂-fuel cell with neat diagram 5M
- (OR)
4. (a) Give an account of the various factors influencing the rate of corrosion process 7M
(b) Write a short note on sacrificial anode cathodic protection 5M

UNIT – III

5. (a) Preparation, properties and applications of Buna-S, PVC 6M
(b) Write a short note on condensation (or) step-growth polymerization with examples 6M
- (OR)
6. (a) Define fuel and write the classification of fuels with examples 6M
(b) Write a short note on a) calorific value b) functionality of monomers 6M

UNIT – IV

7. (a) Write briefly manufacturing of cement with neat diagram 8M
(b) Define a) Anti-knock agents b) Viscosity Index 4M
- (OR)
8. (a) Define refractory and write the factors affecting the refractory materials 6M
(b) Define the lubricant and explain the classification of lubricants with examples 6M

UNIT-V

9. (a) Define colloids and write the applications of colloids 7M
(b) Explain the synthesis of colloids by electro chemical method. 5M
- (OR)
10. (a) Write notes on preparation of nano materials 6M
(b) Write notes on Stabilization of nano materials by stabilizing agents 6M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
SUB: Engineering Physics (CE)

Time: 3 Hours**Max. Marks: 60**

Answer any FIVE Questions choosing one question from each unit.
All questions carry Equal Marks.

UNIT - I

1. (a) Explain Newton's rings experiment with a neat diagram and obtain the condition for dark and bright fringe diameters. 8M
(b) In a Newton's rings experiment, the diameter of the 8th ring was 0.35cm and the diameter of 18th ring was 0.65cm, If the radius of curvature of plano convex lens is 125cm then find the wavelength of the light source? 4M

(OR)

2. (a) What is Diffraction? and Explain the differences between Fraunhofer and Fresnel's Diffraction. 6M
(b) Explain Fraunhofer diffraction to a double slit. 6M

UNIT – II

3. (a) Explain the differences between spontaneous and stimulated emission. 4M
(b) Explain the construction and working of He-Ne laser? 8M

(OR)

4. (a) Explain the Block diagram of Optical fiber communication system. 8M
(b) Explain various applications of optical fibers? 4M

UNIT – III

5. (a) Define Magnetic moment. 2M
(b) What is Hysteresis and Explain Soft and Hard magnetic materials? 10M

(OR)

6. (a) What are Nanomaterials? and Explain the electrical and magnetic properties of Nanomaterials. 6M
(b) Describe the synthesis of nanomaterials by Ball-Milling method? 6M

UNIT – IV

7. (a) Define Absorption coefficient and its determination? 6M
(b) Explain the factors affecting acoustics of buildings and their remedies? 6M

(OR)

8. (a) Explain the production of ultrasonics by Magnetostriction method? 8M
(b) Explain the various applications of ultrasonics. 4M

UNIT-V

9. (a) Explain seven crystal systems. 4M
(b) Explain the packing fraction of SC, BCC and FCC structures. 8M

(OR)

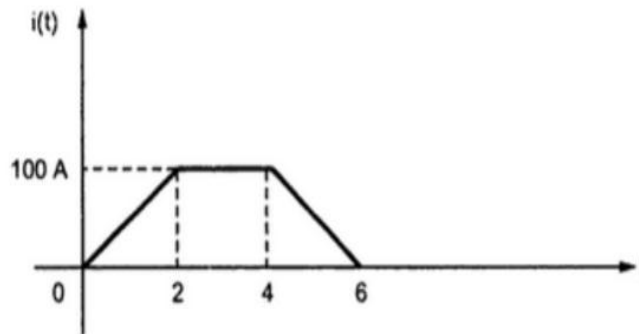
10. (a) Explain Bragg's law? 4M
(b) Explain the crystal structure determination by Powder method. 8M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**B. Tech. I Semester (R20) Supplementary Examinations of January – 2022*****SUB: Fundamentals of Electrical Engineering (ECE)*****Time: 3 Hours****Max. Marks: 60****Answer any FIVE Questions choosing one question from each unit.****All questions carry Equal Marks.****UNIT – I**

1. (a) Derive an expression for dynamically induced emf. 4M
 (b) A coil of 500 turns is wound over a magnetic material of relative permeability 500. 8M
 The length of the coil is 50cms and the diameter of the coil is 1cm. If a current of 5A is passed through the coil, find (i) inductance of the coil (ii) energy stored in the coil.

(OR)

2. (a) A current waveform flowing through an inductor of 1mH is shown in the figure. 8M
 Obtain and sketch the waveform of voltage across the inductor



- (b) State Ohms law and discuss about its limitations. 4M

UNIT – II

3. (a) A star connected 3-ph load is supplied from 3-ph, 415V, 50Hz supply. If the line current is 20 A and total power taken from supply is 10 kW, then determine: 6M
 (i) Load resistance and reactance per phase.
 (ii) Load power factor
 (iii) Total 3-phase reactive power
 (b) A choke coil has a resistance of 4Ω and inductance of 0.07H is connected in parallel 6M
 with another coil of resistance 10Ω and inductance 0.12H. The combination is connected to 230V, 50Hz supply. Determine total current and current through each branch

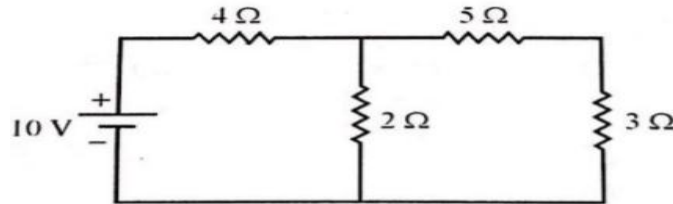
(OR)

4. (a) Compare star and delta connection for the three phase systems. 6M
 (b) An Alternating voltage is given by $V=230\sin 314t$ 6M
 Calculate the following parameters
 (i) Frequency (ii) Maximum value,

(iii) Average value (iv) RMS value

UNIT – III

5. (a) State the Thevenin's theorem. Discuss the stepwise procedure for applying Thevenin's theorem to simple circuits. 6M
- (b) Apply the Norton's theorem for the given circuit for evaluating the current through $3\ \Omega$ resistance, for the circuit shown in Figure. 6M



(OR)

6. Discuss about the various tests, with a neat diagram for single phase transformer for evaluating the efficiency and voltage regulation. 12M

UNIT – IV

7. (a) Explain the principle of operation of Dc Motor. 6M
- (b) Explain different methods for the control of speed for dc shunt motor. 6M

(OR)

8. Classify the various types of DC Motors with a neat diagram along with voltage equations. 12M

UNIT-V

9. (a) Derive the EMF equation of Alternator. 6M
- (b) Explain the torque-slip characteristics of three phase induction motor. 6M

(OR)

10. From OC & SC test, explain the method of synchronous impedance method for evaluating the voltage regulation of alternator 12M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
SUB: Engineering Drawing (CE, EEE & ECE)

Time: 3 Hours**Max. Marks: 60**

Answer any FIVE Questions choosing one question from each unit.
All questions carry Equal Marks.

UNIT - I

1. Two straight lines OA and OB make an angle of 70° between them. P is a point 40 mm from OA and 50 mm from OB. Draw a hyperbola through P, with OA and OB as asymptotes, marking at least twelve points. 12M

(OR)

2. A circle of 40 mm diameter rolls on the circumference of another circle of 160 mm diameter and outside it. Trace the locus of a point on the circumference of the rolling circle for one complete revolution. Name the curve. Draw a tangent and a normal to the curve at a point 115 mm from the centre of the directing circle. 12M

UNIT – II

3. (a) A point P is 20mm above the H.P. and 25mm in front of the V.P. Another point Q is 30mm behind the V.P. and 35mm below the H.P. Draw projections of P and Q keeping the distance between their projectors equal to 85mm. Draw straight lines joining
i. Their top views and ii. Their front views. 7M

- (b) A point 20mm above xy line is the plan view of two points P and Q. The elevation of P is 30mm above the H.P. while that of the point Q is 25mm below the H.P. Draw the projections of the points and state their position with reference to the principal planes and the quadrant in which they lie. 5M

(OR)

4. (a) The line EF 75 mm long is in VP and inclined to HP. The top view measures 55 mm. The end E is 20 mm above HP, Draw the projections of the line. Find its inclination with HP. 7M
- (b) A line AB 60 mm long is in HP and inclined to VP. The end A is 10 mm in front of VP. The length of the front view is 40 mm. Draw the projections of the line. Determine its inclination with VP. 5M

UNIT – III

5. A hexagonal prism, side of the base 30mm long and axis 60mm long is resting on an edge of the base on the H.P, its axis being inclined at 50° to the H.P and parallel to the V.P. A section plane, inclined at 50° to the V.P and normal to the H.P cuts the prism and passes through a point on the axis at a distance of 20mm from the top end of the axis. Draw its sectional front view and true shape of the section. 12M

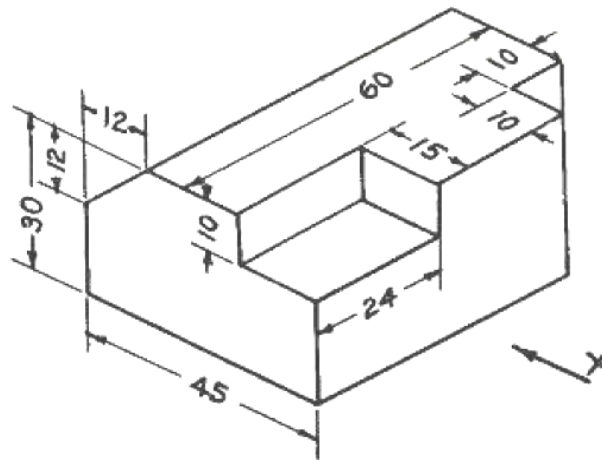
(OR)

6. A cylinder of diameter of base 40 and axis 55 long is resting on its base on H.P. it is cut by a section plane, perpendicular to VP and inclined at 45° to H.P. the section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder. 12M

UNIT – IV

7. Draw the elevation, plan and side view for the following Figure.

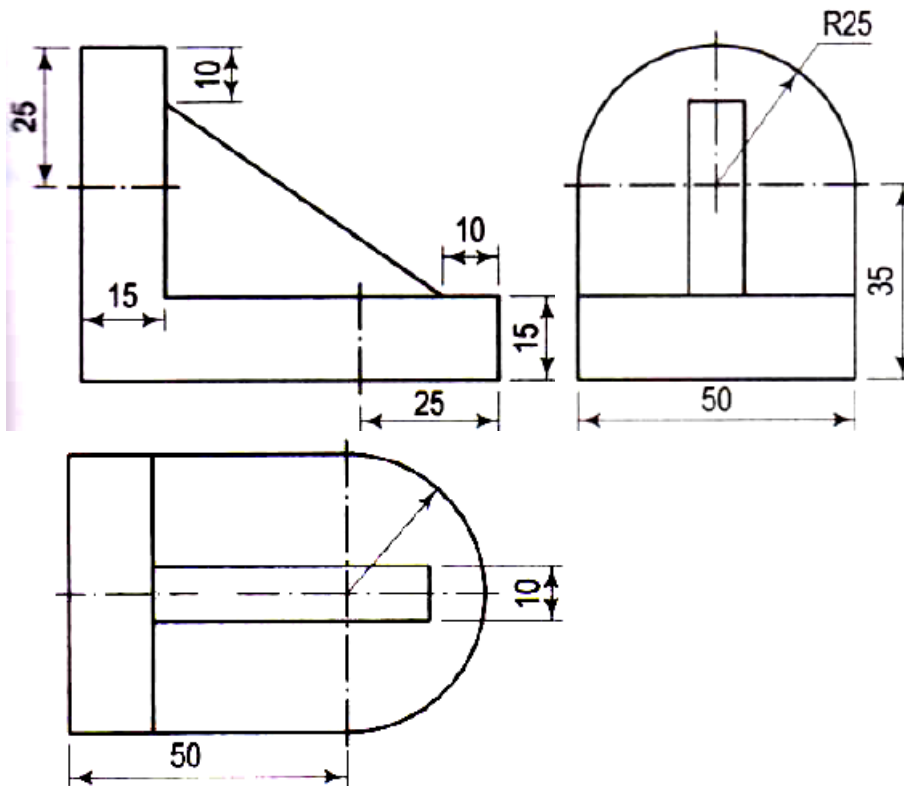
12M



(OR)

8. Draw the isometric view of the objects whose orthographic projections are given in Figure. All dimensions are in mm.

12M



UNIT-V

9. Draw the perspective projections of a line AB, 60mm long. It is parallel to and 10mm above the ground plane and inclined at 45° to PP. the end A is 20mm behind the picture plane. Station point is 35mm in front of the picture plane and 45mm above the ground plane and lies in a central plane passing through the midpoint of AB.

12M

(OR)

10. A square lamina of 40mm side lies on the ground plane. One of its corners is touching the picture plane and an edge is inclined at 60° to picture plane. The station point is 40mm in front of picture plane, 60mm above ground plane and lies in a central plane which is at a distance of 35mm to the right of the corner touching the picture plane. Draw the perspective projection of the lamina using visual ray method.

12M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**B. Tech. I Semester (R20) Supplementary Examinations of January – 2022*****SUB: C-Programming & Data Structures (EEE, ME & CSE)*****Time: 3 Hours****Max. Marks: 60****Answer any FIVE Questions choosing one question from each unit.****All questions carry Equal Marks.****UNIT - I**

1. (a) Explain Switch statement. Write a c program to demonstrate switch case 8M
(b) Write a C program to reverse a number using do-while loop 4M

(OR)

2. Explain in detail about various operators in 'c' with suitable examples 12M

UNIT – II

3. (a) Define Array. Write a c program to find the trace of a matrix. 6M
(b) Explain in detail about argument passing in functions 6M

(OR)

4. (a) Explain in detail about different storage classes in 'c' 6M
(b) Write a c program to demonstrate command line arguments 6M

UNIT – III

5. (a) Explain in detail about passing structures to functions 6M
(b) Define Nested structure. Write a c program to demonstrate nested structure. 6M

(OR)

6. (a) Write a c program to demonstrate Array of pointers. 6M
(b) Define self Referential structure. Explain in detail about structure pointers with suitable examples. 6M

UNIT – IV

7. (a) Define Queue. Explain various operations of queues with examples. 6M
(b) Explain in details about various applications of stacks. 6M

(OR)

8. (a) Convert the following infix notations to postfix. $(A + B) * (C - D)$ 6M
(b) With an example, explain insertion operation in binary search tree 6M

UNIT-V

9. (a) Define Tree. Explain various tree traversal technique's with suitable examples 6M
(b) Explain briefly about various operations in circular linked list 6M

(OR)

10. Write a c program to demonstrate various operations done on double linked list. 12M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA

B. Tech. I Semester (R20) Supplementary Examinations of January – 2022

SUB: Basic Electrical and Electronics Engineering (CE, ME & CSE)

Time: 3 Hours

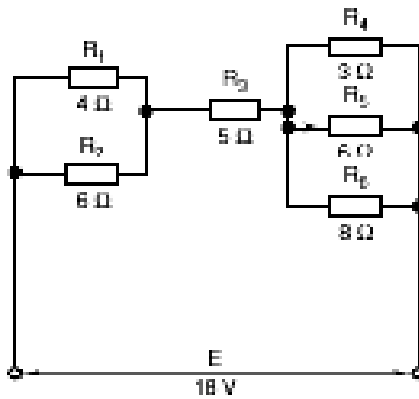
Max. Marks: 60

Answer any FIVE Questions choosing one question from each unit.

All questions carry Equal Marks.

UNIT - I

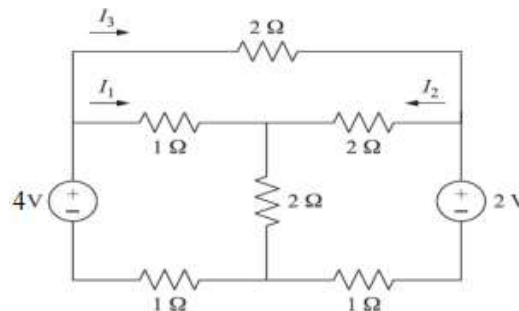
1. (a) For the circuit of figure shown below, calculate (i) the current drawn from the source, (ii) the potential drop across $3\ \Omega$ resistors, (iii) the current through $6\ \Omega$ resistor, and (iv) the power dissipated by the $5\ \Omega$ resistor. 6M



- (b) A capacitor C is connected in series with a $40\ \Omega$ resistor across a supply of frequency $60\ \text{Hz}$. A current of $3\ \text{A}$ flows and the circuit impedance is $50\ \Omega$. Calculate: (i) the value of capacitance, C , (ii) the supply voltage, (iii) the phase angle between the supply voltage and current, (iv) the potential drop across the resistor, and capacitor. 6M

(OR)

2. (a) Apply nodal analysis to the network of Figure given below. 6M



- (b) In a series R-L-C circuit, $R = 5\ \Omega$, $X_C = 10\ \Omega$, $X_L = 12\ \Omega$. A voltage V is applied across the combination such that the series current is $3\ \text{A}$ and it lags the system voltage by 20° . Assuming the system frequency to be $50\ \text{Hz}$, find the voltage drops across each element. 6M

UNIT – II

3. (a) Draw the phasor diagram for the practical transformer on load. Explain its operation with necessary diagrams. 6M

(b) A 150 kVA, 2000V/200V, 50Hz single-phase transformer has 200 secondary turns. Determine (i) the primary and secondary current, (ii) the number of primary turns. 6M

(OR)

4. (a) Derive EMF equation of a DC Generator. 6M

(b) Explain in details about the speed control of DC motors. 6M

UNIT – III

5. (a) Explain in detail about AC distribution system with neat sketches and applications. 6M

(b) Discuss about medium and long transmission lines. 6M

(OR)

6. (a) Explain with necessary diagrams how 3-phase power is generated. 6M

(b) Explain in detail about DC distribution system with neat sketches and applications. 6M

UNIT – IV

7. (a) What is inverting amplifier circuit? Draw it using op-amp and explain. 6M

(b) Define CMRR, PSRR and Slew rate. And hence list where they are used. 6M

(OR)

8. (a) What is meant summing and differencing amplifier? Explain them in brief. 6M

(b) Draw the characteristics of JFET. Explain in brief. 6M

UNIT-V

9. (a) Draw the half adder circuit and explain with the help of truth table. 6M

(b) Write the excitation table for S-R Flip flop and D flip flop 6M

(OR)

10. (a) Explain the input and output characteristics of Common Base configuration in Bipolar Junction Transistor. 6M

(b) Explain about shift registers in brief. 6M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
SUB: Linear Algebra and Calculus (Common to All branches)

Time: 3 Hours

Max. Marks: 60

Answer any FIVE Questions choosing one question from each unit.

All questions carry Equal Marks.

UNIT - I

1. (a) Reduce the matrix $A = \begin{bmatrix} 1 & 2 & 3 & 0 \\ 2 & 4 & 3 & 2 \\ 3 & 2 & 1 & 3 \\ 6 & 8 & 7 & 5 \end{bmatrix}$ into echelon form and hence find its rank. 6M
- (b) Investigate for what values of λ and μ the simultaneous equations $2x + 3y + 5z = 9$, $7x + 3y - 2z = 8$, $2x + 3y + \lambda z = \mu$ have (i) no solution (ii) a unique solution (iii) an infinite number of solutions. 6M

(OR)

2. Determine diagonal matrix orthogonally similar to the real symmetric matrix 12M
- $$A = \begin{bmatrix} 3 & -1 & 1 \\ -1 & 5 & -1 \\ 1 & -1 & 3 \end{bmatrix}.$$

UNIT - II

3. (a) Using Lagrange's mean value theorem, show that $x > \log(1+x) > \frac{x}{1+x}$ if $f(x) = \log(1+x)$ for $x > 0$. 6M
- (b) Obtain the expansion of $e^{\sin x}$ by Maclaurin's series in ascending powers of x up to the term containing x^4 . 6M

(OR)

4. (a) Verify Rolle's theorem in the interval $[a, b]$ for the function $f(x) = (x-a)^m (x-b)^n$ where m, n are positive integers. 6M
- (b) Obtain the Taylor's series expansion of e^x about $x = -1$. 6M

UNIT - III

5. (a) Show that $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z} = 0$, if $u = f(y-z, z-x, x-y)$. 6M
- (b) Using Lagrange's method of undetermined multipliers, find the minimum value of $x^2 + y^2 + z^2$ subject to the condition $x + y + z = 3a$. 6M

(OR)

6. (a) Show that the functions $u = \frac{x+y}{1-xy}$, $v = \tan^{-1} x + \tan^{-1} y$ are functionally dependent and hence find the relation between them. 6M
- (b) The sum of three numbers is constant. Prove that their product is maximum when they are equal. 6M

UNIT – IV

7. (a) Evaluate the double integral $\int_0^{\pi} \int_0^{a \sin \theta} r \, dr \, d\theta$. 6M

(b) Evaluate $\int_0^1 \int_0^2 \int_0^3 xyz \, dz \, dy \, dx$. 6M

(OR)

8. (a) By changing the order of integration, evaluate $\int_0^{16} \int_{\sqrt{x}}^4 \cos y^3 \, dy \, dx$. 6M

(b) Find the volume of the sphere $x^2 + y^2 + z^2 = a^2$ by changing into spherical polar coordinates. 6M

UNIT-V

9. Show that $\Gamma(n)\Gamma(1-n) = \frac{\pi}{\sin n\pi}$. 12M

(OR)

10. (a) Show that $\int_0^{\pi/2} \frac{d\theta}{\sqrt{\sin \theta}} \times \int_0^{\pi/2} \sqrt{\sin \theta} \, d\theta = \pi$. 6M

(b) Evaluate $\int_0^1 x^{n-1} \left[\log \left(\frac{1}{x} \right) \right]^{m-1} dx$ where $m, n > 0$. 6M

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA
B. Tech. I Semester (R20) Supplementary Examinations of January – 2022
SUB: Chemistry (CSE)

Time: 3 Hours**Max. Marks: 60**

Answer any FIVE Questions choosing one question from each unit.
All questions carry Equal Marks.

UNIT - I

1. (a) Identify the magnetic behavior of nitric oxide molecule based on its energy level diagram. 8M
(b) Explain Plank's quantum theory. 4M

(OR)

2. (a) Derive the Schrödinger wave equation for the wave mechanical model of an atom. 10M
(b) Define bond order and give its significance. 2M

UNIT – II

3. (a) Explain the band structure of solids and illustrate the role of doping with one example on band structure. 8M
(b) Discuss the oxidation states of coordination compounds. 4M

(OR)

4. (a) Discuss the crystal field theory for the octahedral complexes of transition metals. 8M
(b) List the applications of nanoomaterials. 4M

UNIT – III

5. (a) Describe the construction and working of Hydrogen-Oxygen fuel cell. List its advantages. 10M
(b) Write the Nernst's equation for the electrode reaction: 2M
$$M^{n+}(aq) + ne^{-} \rightarrow M(s)$$

(OR)

6. (a) What is EMF? How is it measured by potentiometric method? 8M
(b) Write the cell reactions that occur in NiCad batteries. 4M

UNIT – IV

7. (a) Discuss the types of polymerization with examples. 9M
(b) Write the preparation of PVC and tell why is PVC used in chemical industries? 3M

(OR)

8. (a) Explain the conductivity in polyacetylenes with a suitable mechanism. 8M
(b) Write the differences between Buna-N and Buna-S. 4M

UNIT-V

9. (a) Explain the Basic principle and applications of UV-Visible Spectroscopy. 8M
(b) Write note on retardation factor in chromatography. 4M

(OR)

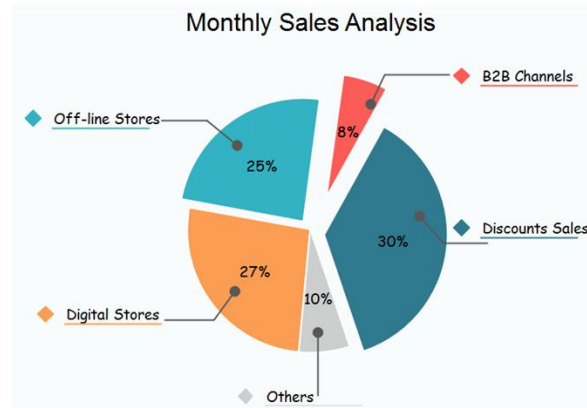
10. (a) Discuss the selection rules for IR Spectroscopy. 6M
(b) Summarize your understanding about TLC. 6M

UNIT – III

5. (a) **Write the summary of Goldsmith's Essay , "A City Night-Piece"** 7M
(b) **Convert the following sentences as directed.** 5M
(i) He asked Rama to go with him.(change into Direct Speech)
(ii) ' Bring me a drink of milk' said the swami to the villagers.(change into Indirect Speech)
(iii) My mother said to me, "Close the window."(change into Indirect Speech)
(iv) John said that he wanted to be a soldier. (change into Direct Speech)
(v) The boy said, "Alas! My sister failed in the test."(change into Indirect Speech
(OR)
6. (a) **Convert the following sentences as directed.** 6M
(i) Vivian Richards scored twelve double centuries.(change into Passive Voice)
(ii) Our principal was vaccinated by the nurse. (change into Active Voice)
(iii) They will postpone the meeting. (change into Passive Voice)
(iv) Who taught you English? (change into Passive Voice)
(v) Let the door be opened. (change into Active Voice)
(vi) The thief was caught. (change into Active Voice)
(b) **Convert the following sentences as directed.** 6M
(i) Rohit Sharma is the best batsman.(change into Positive Degree)
(ii) Apple is as sweet as mango. (change into Comparative Degree)
(iii)No other river in the world is as long as Nile.(change into Superlative Degree)
(iv)Very few colleges in India are as old as Layola.(change into Superlative Degree)
(v) Rustom is not the laziest boy in the class.(change into Positive Degree)
(vi)This boy is the strongest in the class. (change into Comparative Degree)

UNIT – IV

7. (a) What did you understand in Chetan Bhagath's essay 'Being rich, Being good'? 7M
(b) Conver the following pie chart texting it verbally 5M



(OR)

8. (a) **Convert the following sentences as directed.** 6M
(i) As she got selected for Civil Service, she cried with joy. (convert into Simple Sentence)
(ii) Tendulakr is too old to play T20 matches.. (convert into Complex Sentence)
(iii)Although they could not win medal, they were not disgraced. (convert into Compound sentence)
(iv)You must take rich diet, or you will not gain weight. (convert into Simple Sentence)
(v) Because of his poverty , he could not buy the house . (convert into Compound Sentence) We saw a wounded tiger. (Convert into Complex Sentence)
(b) **Add question tags to the following statements.** 6M
(i) Mr McGuinness is from Ireland. ?
(ii) His car isn't in the garage. ? (iii) You are John, ?
(iv) She went to the library yesterday (v) He didn't recognize me.

(vi) Cars pollute the environment.

UNIT-V

9. (a) **Why is George Orwell's essay "Politics and the English Language" significant?** 7M
(b) **Read the passage given below and answer the questions that follow:** 5M

Mike and Morris lived in the same village. While Morris owned the largest jewelry shop in the village, Mike was a poor farmer. Both had large families with many sons, daughters-in-law and grandchildren. One fine day, Mike, tired of not being able to feed his family, decided to leave the village and move to the city where he was certain to earn enough to feed everyone. Along with his family, he left the village for the city. At night, they stopped under a large tree. There was a stream running nearby where they could freshen up themselves. He told his sons to clear the area below the tree, he told his wife to fetch water and he instructed his daughters-in-law to make up the fire and started cutting wood from the tree himself. They didn't know that in the branches of the tree, there was a thief hiding. He watched as Mike's family worked together and also noticed that they had nothing to cook. Mike's wife also thought the same and asked her husband " Everything is ready but what shall we eat?". Mike raised his hands to heaven and said " Don't worry. He is watching all of this from above. He will help us."

The thief got worried as he had seen that the family was large and worked well together. Taking advantage of the fact that they did not know he was hiding in the branches, he decided to make a quick escape. He climbed down safely when they were not looking and ran for his life. But, he left behind the bundle of stolen jewels and money which dropped into Mike's lap. Mike opened it and jumped with joy when he saw the contents. The family gathered all their belongings and returned to the village. There was great excitement when they told everyone how they got rich.

Morris thought that the tree was miraculous and this was a nice and quick way to earn some money. He ordered his family to pack some clothes and they set off as if on a journey. They also stopped under the same tree and Morris started commanding everyone as Mike had done. But no one in his family was willing to obey his orders. Being a rich family, they were used to having servants all around. So, the one who went to the river to fetch water enjoyed a nice bath. The one who went to get wood for fire went off to sleep. Morris's wife said " Everything is ready but what shall we eat ?" Morris raised his hands and said, " Don't worry. He is watching all of this from above. He will help us." As soon as he finished saying, the thief jumped down from the tree with a knife in hand. Seeing him, everyone started running around to save their lives. The thief stole everything they had and Morris and his family had to return to the village empty handed, having lost all their valuables that they had taken with them.

- (i) Why did Mike and his family decide to rest under the thief's tree ?
(ii) Which of the following best describes Morris ?
a. He was a rich businessman
b. He bullied his wife
c. He paid his servants well
d. He was greedy and imitated Mike
(iii) What did Mike mean when he said "He is watching all this from above"?
(iv) Why did the thief return to the tree?
(v) How did the fellow villagers react to Mike getting rich overnight?

(OR)

10. (a) **Correct the following sentences.** 7M
(i) Boxing is one of the deadliest game.
(ii) The price of bananas are high.
(iii) You have much dresses.
(iv) John speaks loudly than his brother.
(v) Tendulkar is one of the few Indians who has won the Arjuna award.
(vi) I thanked him for what he did.
(vii) Ramesh worked hard and he failed.

(b) Prepare a dialogue between two friends about the fears of Covid vaccination?

5M