

**Q.P. Code: 1802205**

**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
***SUB: Basic Electrical Engineering (CE&ME)***

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Explain the following: 7M  
i) Ideal Voltage source  
ii) Practical current source  
(b) Three resistors of 5 ohms, 10 ohms and 15 ohms are connected in parallel. If 40V is applied to the circuit then determine total current supplied to the circuit 7M

**(OR)**

2. (a) Explain Kirchoff's Current and Voltage law 7M  
(b) Explain star-delta and delta-star transformation 7M

**UNIT - II**

3. (a) Define the following 7M  
i) Peak value (ii) Form factor (iii) RMS value (iv) Peak factor  
(b) Determine the instantaneous value, peak value, RMS value, average value, form factor and peak factor of a signal of the form  $V(t) = V_m \cos(\theta t + \omega)$ . 7M

**(OR)**

4. (a) Define the following 7M  
i) Impedance (ii) Real power (iii) Apparent power (iv) Power factor  
(b) A coil takes a current of 6A when connected to a 24 V DC supply. To obtain same current with a 50 Hz AC supply, the voltage required is 30 V. Calculate i) the inductance of the coil and ii) the power factor of the coil 7M

**UNIT - III**

5. (a) Explain the principle and operation of DC Generator. 7M  
(b) Derive the generated voltage equations of various types of DC Generators. 7M

**(OR)**

6. (a) Derive the torque equation in DC Motor. 7M  
(b) Explain about three point starter with neat diagram. 7M

**UNIT - IV**

7. (a) Derive the EMF equation of single phase Transformer. 7M  
(b) The primary winding of a single phase transformer is connected to 220 V, 50 Hz AC supply. The secondary winding has 60 turns. If the maximum value of the core flux is 8m Wb, determine the secondary induced voltage. 7M

**(OR)**

8. (a) Explain the working principle of three phase Induction Motor. 7M  
(b) A three phase induction motor has 6 poles. If the full load slip is 2.5%, determine synchronous speed, rotor speed and frequency of the rotor current. 7M

**UNIT-V**

9. (a) Explain about LT Switchgear 7M  
(b) Explain about Miniature Circuit Breaker (MCB) 7M

**(OR)**

10. (a) Explain about Batteries. 7M  
(b) Explain about Power Converters. 7M

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
**SUB: Basic Electrical Engineering (EEE)**

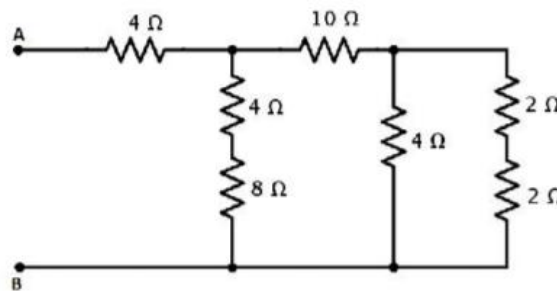
**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) State KCL and KVL. 6M  
 (b) Determine the equivalent resistance between A and B terminals in the following network. 8M

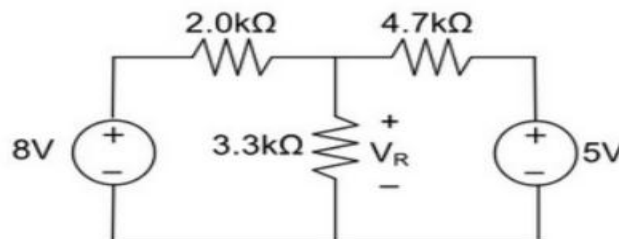


**(OR)**

2. (a) Explain the dependent and independent sources with an example. 7M  
 (b) Derive the expression for an equivalent resistance if any two resistors R1, R2 are connected in series. 7M

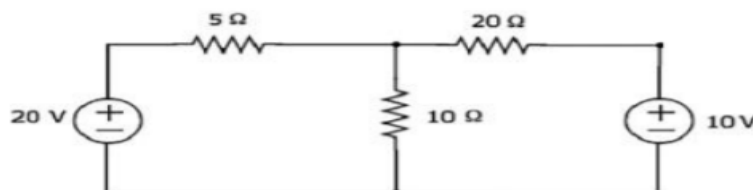
**UNIT - II**

3. (a) State and explain maximum power transformation theorem 7M  
 (b) Using the superposition theorem, determine the voltage drop and current across the resistor 3.3K as shown in figure below 7M



**(OR)**

4. (a) State and explain Norton's theorem 7M  
 (b) Determine the current flowing through 10Ω resistor in the following circuit using Superposition theorem. 7M



**UNIT - III**

5. (a) Define the following: i) Amplitude of an alternating quantity ii) Instantaneous value 7M

- of an alternating quantity iii) Frequency iv) Phase  
 (b) Discuss about Power triangle and power factor in ac circuits. 7M  
 (OR)

6. (a) Define the following: 7M  
 i) Amplitude of an alternating quantity ii) Instantaneous value of an alternating quantity  
 iii) Frequency iv) Phase  
 (b) A series circuit having pure resistance of  $40\Omega$  pure inductance of  $50\text{mH}$  and a capacitor is connected across a  $400\text{V}, 50\text{Hz}$  supply. This series combination circuit draws  $10\text{A}$ . 7M  
 Calculate (i) Power factor of the circuit. (ii) Capacitance in  $\mu\text{F}$

#### UNIT – IV

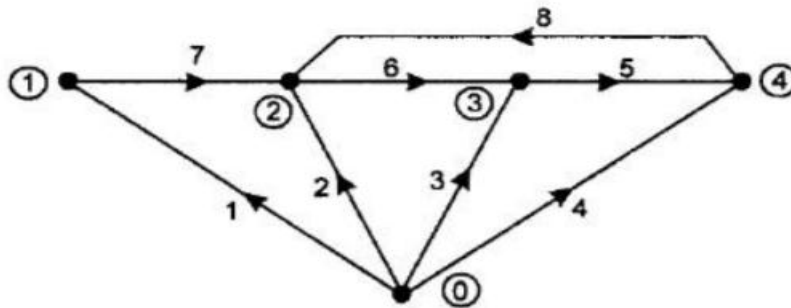
7. (a) Distinguish between self-inductance and mutual inductance. 4M  
 (b) Two coils connected in series-aiding fashion have a total inductance of  $250\text{mH}$ . When connected in a series-opposing configuration, the coils have a total inductance of  $150\text{mH}$ . If the inductance of one coil is three times the other, find  $L_1, L_2$  and  $M$ . What is the coupling coefficient? 10M

(OR)

8. (a) Define the term dual networks. Elaborate the procedure of obtaining the dual of the given network. 7M  
 (b) Develop an expression for equivalent inductance of two coupled coils connected in parallel with mutual inductance 7M

#### UNIT-V

9. (a) Define a tree and co-tree. 4M  
 (b) a) Show the basic loops and basic cut sets for the graph shown below and verify any relations that exist between them 10M



(OR)

10. (a) Explain the following terms with reference to network topology with an example. 8M  
 i. Twig  
 ii. Link  
 iii. Oriented graph  
 iv. Incident matrix  
 (b) Write the properties of tie-set matrix and cut-set matrix 6M

**Q.P. Code: 1805204**

**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
***SUB: Programming for Problem Solving (ECE & CSE)***

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Define Algorithm. What are essential characteristics of an Algorithm? Explain with suitable example. 7M  
(b) Explain about the structure of a C program with suitable example. 7M  
**(OR)**  
2. (a) Write a C program to find whether the given number is a prime number or not. 7M  
(b) Define Keyword. Explain the significance of keywords in detail. 7M

**UNIT - II**

3. (a) Explain the following operators and illustrate it with an example each. 8M  
(i) Increment and decrement operator (ii) Conditional operator  
(iii) Logical AND (iv) Bitwise OR  
(b) Explain about nested if else statement with suitable example. 6M  
**(OR)**  
4. (a) Write a C program to find sum of even numbers from 1 to 100 using for loop. 7M  
(b) Explain about the following statements along with suitable examples: 7M  
(i) break (ii) continue

**UNIT - III**

5. (a) What is an Array? What are the different types of an array? Explain in detail. 7M  
(b) Write a C program implement binary search algorithm. 7M  
**(OR)**  
6. (a) How can we declare and initialize a two-dimensional array? Explain with suitable example. 7M  
(b) Explain about the following string handling functions along with their syntax: 7M  
i) `strlwr()` ii) `strcmp()` iii) `strupr()` iv) `strlen()`

**UNIT - IV**

7. (a) Define function. Explain about the various categories of functions in detail. 7M  
(b) What is recursion? Write a C program to find factorial of a given number using recursive function. 7M  
**(OR)**  
8. (a) Explain about pointer to pointer with the help of suitable example. 7M  
(b) Explain about the following storage classes along with suitable examples: 7M  
i) External ii) Static

**UNIT-V**

9. (a) Define Structure. How can you declare structure variables? Illustrate with a suitable example program. 8M  
(b) Write a C program to compare the contents of two structure variables. 6M  
**(OR)**  
10. (a) Define Union. Write a C program to demonstrate union concept. 7M  
Write a C program using structure to create a library catalogue with the following 7M  
(b) fields: Access number, Author's name, Title of book, Year of publication, Publisher's name, Price.

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of March – 2021**  
**SUB: Mathematics-II (Common to all Branches)**

Time: 3 Hours

Max. Marks: 70

Answer any FIVE Questions choosing one question from each unit.

All questions carry Equal Marks.

**UNIT - I**

1. (a) Solve the differential equation  $x \frac{dy}{dx} + y = x^3$  7 M

(b) Solve  $(xy^3 + y)dx + 2(x^2y^2 + x + y^4)dy = 0$  7 M

(OR)

2. A body originally at  $80^{\circ}\text{C}$  cools down to  $60^{\circ}\text{C}$  in 20 minutes, the temperature of the air being  $40^{\circ}\text{C}$ . What will be the temperature of the body after 40 minutes from the original 14 M

**UNIT - II**

3. (a) Solve the differential equation  $(D-2)^2 y = 2(x + e^x + \sin 3x)$  8 M

(b) Solve the differential equation  $(D^2 + 2D - 3)y = x^2 e^{-3x}$  6M

(OR)

4. (a) Solve  $(D^3 + 1)y = 100$  4 M

(b) Solve  $y'' - 2y' + y = e^x \log x$  by the method of variation of parameter 10 M

**UNIT - III**

5. (a) Find  $L\left(\frac{1-e^t}{t}\right)$  7 M

(b) Find the inverse Laplace Transform of  $L^{-1}\left(\frac{2s^2 - 4}{(s+1)(s-2)(s-3)}\right)$  7 M

(OR)

6. Solve the differential equation  $\frac{d^2x}{dt^2} + 2\frac{dx}{dt} + 5x = e^{-t} \sin t$ ,  $x(0) = 0$ ,  $x'(0) = 1$  using Laplace Transform 14 M

**UNIT - IV**

7. (a) Calculate  $\int_1^2 \int_3^4 (xy + e^y) dy dx$  4 M

(b) Change the order of integration in  $\int_0^a \int_y^a \frac{xdxdy}{x^2 + y^2}$  and hence evaluate the same 10 M

(OR)

8. (a) Evaluate  $\int_1^e \int_1^{\log y} \int_1^{e^x} \log z dz dx dy$  10 M

(b) Explain briefly, how to change the Cartesian coordinates  $(x, y, z)$  to cylindrical coordinates  $(r, \phi, z)$ , 4 M

**UNIT-V**

9. (a) Find a unit vector normal to the surface  $x^3 + y^3 + 3xyz = 3$  at the point  $(1, 2, -1)$  6 M

(b) Show that  $\text{div}(\text{grad} r^n) = n(n+1)r^{n-2}$  8 M

(OR)

10. Verify the divergence theorem for  $F = 4xi - 2y^2j + z^2k$  taken over the region bounded by the cylinder  $x^2 + y^2 = 4$ ,  $z = 0$ ,  $z = 3$  14 M

**Q.P. Code: 1822202**

**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
***SUB: Engineering Physics (CE)***

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Explain the interference in the thin film by reflection? 9M  
(b) What is the thickness of the thinnest film of 1.33 refractive index in which destructive interference of the yellow light ( $6000 \text{ \AA}$ ) of a normally incident beam in air can take place by reflection? 5M

**(OR)**

2. (a) Describe Fraunhofer diffraction due to single slit? 9M  
(b) Distinguish between Fraunhofer and Fresnel's diffraction? 5M

**UNIT – II**

3. (a) Explain the construction and working of He-Ne laser with the help of energy level diagram? 9M  
(b) Write in detail about population inversion? 5M

**(OR)**

4. (a) Derive the relation between Einstein coefficients? 9M  
(b) Mention the applications of laser? 5M

**UNIT – III**

5. (a) What are the Newton's laws and explain their applications? 7M  
(b) Explain the conservative and non-conservative forces? 7M

**(OR)**

6. (a) Derive the formal solution of kinematical equations? 8M  
(b) Explain velocity and acceleration in polar coordinates? 6M

**UNIT – IV**

7. (a) What is rigid body? Explain motion of a rigid body rotation in the plane? 7M  
(b) Explain angular momentum about a point of a rigid body in planar motion? 7M

**(OR)**

8. (a) Explain the Euler's laws of motion? 7M  
(b) Explain Euler's laws necessity in describing rigid body motion? 7M

**UNIT-V**

9. (a) Discuss the formation of allowed and forbidden energy bands on the basis of Kronig-Penny model? 10M  
(b) Explain about drift velocity and electrical conductivity? 4M

**(OR)**

10. (a) Describe the carrier concentration and Fermi energy level for intrinsic and extrinsic semiconductor? 9M  
(b) Write differences between metals, semiconductor, and insulator? 5M

**Q.P. Code: 1822202**

**SET - 2**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Supplementary Examinations of March – 2021**  
***SUB: Engineering Physics (CE)***

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Describe the formation of Newton's rings with necessary theory? 9M  
(b) Explain how the refractive index of liquid is determined by forming Newton's rings? 5M

**(OR)**

2. (a) Describe Fraunhofer diffraction due to grating? 9M  
(b) Distinguish between interference and diffraction? 5M

**UNIT – II**

3. (a) State the principle and explain the working of semiconductor laser with neat energy band diagram? 9M  
(b) Explain the various excitation mechanisms? 5M

**(OR)**

4. (a) Describe the construction and working of Nd-YAG laser? 9M  
(b) Write in detail about optical resonator? 5M

**UNIT – III**

5. (a) What are the Newton's laws and write their applications? 7M  
(b) Explain velocity and acceleration in polar coordinates? 7M

**(OR)**

6. (a) Derive the formal solution of kinematical equations? 8M  
(b) Explain motion of the particle in one dimension and several dimensions? 6M

**UNIT – IV**

7. (a) What is the rigid body and explain motion in the plane? 7M  
(b) Derive the kinematics in a co-ordinate system rotating and translating in the plane? 7M

**(OR)**

8. (a) Explain the Euler's laws of motion? 7M  
(b) Explain angular momentum about a point of a rigid body in planar motion? 7M

**UNIT-V**

9. (a) What are the assumptions and drawbacks of classical free electron theory? 7M  
(b) Explain in detail about origin of energy bands in solids? 7M

**(OR)**

10. (a) Describe the direct and indirect band gap semiconductors? 7M  
(b) Write in detail about drift and diffusion in semiconductor? 7M

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
**SUB: Engineering Physics (EEE)**

**Time: 3 Hours****Max. Marks: 70****Answer any FIVE Questions choosing one question from each unit.****All questions carry Equal Marks.****UNIT - I**

1. (a) Define simple harmonic motion. Derive the equation of simple harmonic motion. Discuss the following characteristics of SHM (a) Displacement (b) Acceleration (c) time period and (d) phase 10M  
(b) Discuss the principle of superposition of waves 4M  
**(OR)**
2. (a) Explain the damped harmonic oscillations with an example. Determine the energy and power dissipations in damped harmonic oscillator. 10M  
(b) What is resonance? Give any two examples. 4M

**UNIT - II**

3. (a) What is plane diffraction grating? Discuss the diffraction phenomena in the plane diffraction grating and determine the grating equation. 10M  
A parallel beam of sodium light is allowed to be incident normally on a plane having 4250 line per cm and a second order spectral line is observed to be deviated through  $30^\circ$ . Calculate the wavelength of spectral line.  
(b) In a Newton's ring experiment, the diameter of the 5<sup>th</sup> ring was 0.3 cm and the diameter of 25<sup>th</sup> ring was 0.8 cm. if the radius of curvature of the plano-convex lens is 100 cm. find the wavelength of light is used. 4M  
**(OR)**
4. (a) Discuss the Young's double slit experiment and determine the intensity positions of maxima and minima in the interference pattern. 10M  
(b) What is meant by wave front and explain the propagation of wave front based on Huygens' theory 4M

**UNIT - III**

5. (a) Describe the construction and working of He-Ne laser with a neat sketch of energy level diagram. Draw its merits and demerits. 10M  
(b) Differentiate spontaneous and stimulated emission with the energy level diagram. 4M  
**(OR)**
6. (a) Derive the relation between Einstein's A and B coefficients. Obtain the conditions for dominated stimulated emission process in the laser materials. 10M  
(b) Mention the different industrial application of lasers. 4M

**UNIT - IV**

7. (a) Discuss the dual nature of Matter 4M  
(b) Derive the time-dependent and time-independent Schrodinger wave equations. 10M  
**(OR)**
8. (a) Describe the significance of wave function. 4M  
(b) Show that the solution of Schrodinger's time independent wave equation for a particle in an infinite potential well leads to the concept of quantization of energy levels. Discuss its wave functions and energy levels for the ground state and the two excited states. 10M

**UNIT-V**

9. (a) What are the postulates of free electron theory of metals? Determine the electrical conductivity of metals based on free electron theory. Discuss the merits and demerits of the free electron theory. 10M  
(b) Discuss the temperature dependence of Fermi energy level in n-type semiconductors. 4M  
**(OR)**
10. (a) Explain the drift and diffusion current transport mechanisms in semiconductors and evaluate drift and diffusion current densities for p-and n-type semiconductors. 10M  
(b) Differentiate metals, semiconductors and insulators based on the band structure. 4M



**Q.P. Code: 1822204**

**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
***SUB: Engineering Physics ( ME )***

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Describe the interference of light using Young's double slit experiment. Derive the expression for fringe width. 8M  
(b) What is plane diffraction grating? Derive the expression  $(a+b) \sin\theta = n\lambda$ . 6M

**(OR)**

2. (a) Discuss the Huygens' principle of superposition of light. 4M  
(b) Describe and explain the Fraunhofer diffraction pattern obtained due to a single slit. Obtain the expressions for the maximum and minimum intensity in the diffraction pattern. 10M

**UNIT - II**

3. (a) With the help of neat energy level diagram, explain how the population inversion is achieved in a He-Ne laser. Explain with a neat diagram the principle, construction and working of He-Ne laser. What are its merits and demerits. 10M  
(b) Discuss the three different processes observed when radiation interacts with the matter 4M

**(OR)**

4. (a) State the necessary condition for stimulated emission and derive the relation between Einstein's "A" and "B" coefficients. 10M  
(b) Discuss any two important characteristics of laser in detail 4M

**UNIT - III**

5. (a) Discuss the Simple harmonic motion of a Mass spring system and evaluate the frequency and time period for horizontal and vertical vibrations. 10M  
(b) Discuss the significance of Quality factor in damped oscillators 4M

**(OR)**

6. (a) What are forced vibrations and give two examples. Discuss a Forced electric oscillator and determine the frequency and amplitude of the oscillator. 10M  
(b) What is Electrical impedance? Derive the impedance of electrical circuit. 4M

**UNIT - IV**

7. (a) Differentiate longitudinal and transverse waves. Derive the Wave equation for the longitudinal waves of a string. 10M  
(b) Why impedance matching is important? Mention the problems associated with mismatched impedance. 4M

**(OR)**

8. (a) How Standing waves are generated based on the principle of superposition and explain the generation of harmonics in the standing waves. 10M  
(b) Discuss the Reflection of waves at a boundary and derive the conclusions. 4M

**UNIT-V**

9. (a) Explain with suitable mathematical expression the motion of an electron in a periodic potential. Discuss how the above theory leads to the concept of band theory of solids. 8M  
(b) Differentiate intrinsic and extrinsic semiconductors with suitable examples. 6M

**(OR)**

10. (a) How the Fermi energy level does varies with temperature in extrinsic 10M

semiconductors? Discuss the effects of increasing amounts of doping concentration in extrinsic semiconductors.

- (b) Differentiate drift and diffusion mechanisms in semiconductors.

4M

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**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
**SUB: Engineering Chemistry (ECE & CSE)**

**Time: 3 Hours**

**Max. Marks: 70**

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

**UNIT - I**

1. (a) Derive an equation for particle in one dimensional box and write its application. 7 M  
(b) What is doping? Explain the n-type and p-type doping with examples. 7 M

**(OR)**

2. (a) Write the postulates of LCAO 7 M  
(b) Explain the crystal field splitting of energy levels in octahedral complexes. 7 M

**UNIT – II**

3. (a) Explain how the following properties varies in a group/period in periodic table. 6 M  
(i) Atomic size, (ii) electronegativity and (iii) electron affinity  
(b) Define ionization potential. Write the factors affecting ionization potential. 8 M

**(OR)**

4. (a) Explain about hard and soft acids and bases with examples. 7 M  
(b) Write short notes on (i) oxidation states (ii) electronegativity. 7 M

**UNIT – III**

5. (a) Define corrosion. Explain the various factors influencing corrosion. 14M

**(OR)**

6. (a) Derive Nernst equation and write its applications. 7 M  
(b) Explain the types of water. Write a note on (i) priming and foaming (ii) scales and sludges. 7 M

**UNIT – IV**

7. (a) Describe the phenomenon of fluorescence and write its applications. 7 M  
(b) Define spectroscopy. Explain the principles of spectroscopy. 7 M

**(OR)**

8. (a) Discuss about vibrational and rotational spectra of diatomic molecules. 14M

**UNIT-V**

9. (a) Illustrate the structural isomers by giving suitable examples. 7 M  
(b) Write in detail about absolute configuration. 7 M

**(OR)**

10. (a) Describe the SN<sup>1</sup> reaction mechanism with suitable examples. 7 M  
(b) Write a note on Clemmenson reduction. 7 M

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**SET - 1**

**K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA**  
**B. Tech. II Sem. (R18) Reg. & Supple. Examinations of November - 2020**  
***SUB: English - I (ECE & CSE)***

**Time: 3 Hours**

**Max. Marks: 70**

**Answer any FIVE Questions.**  
**All questions carry Equal Marks.**

1. Correct the following sentences if necessary 14M
- (i) Have you had a breakfast?
  - (ii) We will have completed the work in tomorrow.
  - (iii) we walked very far we made it all the way to secunderabad
  - (iv) I have visited the Niagara Falls last weekend.
  - (v) i speak telugu and hindi better than English what about you
  - (vi) whos there oh its you
  - (vii) Either Sumi or her parents will has his way.
  - (viii) Neither of the dogs returned to their master.
  - (ix) He do not have a laptop.
  - (x) He did not wrote the test last week.
  - (xi) I cannot cope up with this pressure.
  - (xii) I am angry on you.
  - (xiii) I congratulated him by his success.
  - (xiv) When did you return back from America?
2. (a) Give synonyms of the following words. 3M
- (i) Catastrophe
  - (ii) Philanthropy
  - (iii) Negotiation
- (b) **Fill in the blanks by modifying the words in the brackets as instructed** 3M
- (i) Don't kill animals because it is -----to kill endangered animals.(prefix+ legal)
  - (ii) He wants to -----me on Facebook because he likes me a lot. (prefix+ friend)
  - (iii) You need a-----of hard work and determination to succeed.  
(combine +suffix)
- (c) Write a short note on the word formation methods along with three examples each 8M
3. **Rewrite the sentences as directed** 14M
- i) I sent Ravi an email, but it bounced. (change into simple)
  - ii) Seeing the butterflies, the children clapped their hands in joy.( change into compound)
  - iii) They spoke to him in Spanish, but he responded in English. (change into complex)
  - iv) He is rich, yet he is not happy. (change into simple)
- Rewrite the following sentences to correct the misplaced modifiers:**
- v) The contractors needed all kinds of artists to paint the mural badly.
  - vi) Jessie ate a cold bowl of cereal for breakfast.
- Correct the sentences from redundancy:**
- vii) Tim and Paul decided to return again for a second time to the old ancient house.
  - viii) It is usually his custom to visit the houses of the affluent rich.
  - ix) In my opinion I am correct in this matter.
  - x) Two companies collaborated together in this venture.
- Change the sentences as directed.**
- xi) My house is bigger than any other house in the colony. (change it into superlative)
  - xii) No other player is as great as Ravi in this game. (change it into comparative)
  - xiii) The Pacific ocean is deeper than all other oceans.(change it into superlative )
  - xiv) The rose is the most beautiful flower in the world. (change it into positive degree)
4. (a) Organize the following sentences into a meaningful paragraph. 5M

- (i) With the passage of time, vices become more apparent and virtues become objects of jealousy and envy, thereby causing contempt and hatred in the hearts of each other.
- (ii) They become familiar with not only strengths but also weaknesses of each other's characters.
- (iii) Generally people think that familiarity should breed love, mutual understanding and tolerance.
- (iv) They expect that coming together of two persons should bring them closer and forge the bond of kinship between them.
- (v) But when two persons come closer, they come to know not only strengths but also weaknesses of each other's character.

(b) Use the following idioms and phrases in your own sentences. 5M

- (i) Black sheep                      (ii) bitter pill                      (iii) apple of one's eye
- (iv) kick the bucket              (v) rainy days

(c) Fill in the blanks with suitable article. 4M

- (i) Please give me ---- large nail; it's --- only one strong enough to hold this painting.
- (ii) After -----long day, ----- cup of tea tasted particularly good.

5. (a) Write an essay on 'life before technological advancement and life after technological advancement in your village' in 350 words. 7M

(b) Write a précis of the following essay. 7M

The essay is a commonly assigned form of writing that every student will encounter while in academia. Therefore, it is wise for the student to become capable and comfortable with this type of writing early on in her training.

Essays can be a rewarding and challenging type of writing and are often assigned either to be done in class, which requires previous planning and practice (and a bit of creativity) on the part of the student, or as homework, which likewise demands a certain amount of preparation. Many poorly crafted essays have been produced on account of a lack of preparation and confidence. However, students can avoid the discomfort often associated with essay writing by understanding some common genres.

Though the word *essay* has come to be understood as a type of writing in Modern English, its origins provide us with some useful insights. The word comes into the English language through the French influence on Middle English; tracing it back further, we find that the French form of the word comes from the Latin verb *exigere*, which means "to examine, test, or (literally) to drive out." Through the excavation of this ancient word, we are able to unearth the essence of the academic essay: to encourage students to test or examine their ideas concerning a particular topic.

Essays are shorter pieces of writing that often require the student to hone a number of skills such as close reading, analysis, comparison and contrast, persuasion, conciseness, clarity, and exposition. As is evidenced by this list of attributes, there is much to be gained by the student who strives to succeed at essay writing.

The purpose of an essay is to encourage students to develop ideas and concepts in their writing with the direction of little more than their own thoughts (it may be helpful to view the essay as the converse of a research paper). Therefore, essays are (by nature) concise and require clarity in purpose and direction. This means that there is no room for the student's thoughts to wander or stray from his or her purpose; the writing must be deliberate and interesting.

6. (a) Read the following and answer the questions given below. 10M

Unidentified Flying Object (or "UFO") is a term commonly used to describe lights or shapes in the sky. It was first coined by the United States Air Force in 1952 to describe sightings of mysterious objects in the sky that could not be explained even after careful investigation. Nowadays UFOs are spotted frequently, and feature in numerous movies and TV shows. Another popular name for such an object is, "Flying

Saucer,” in reference to the round shape of many UFOs.

The first widely publicized UFO sighting was in 1947, by a pilot called Kenneth Arnold. Following this event, public sightings of UFOs increased dramatically. Movies and TV shows began featuring visitors from outer space, arriving on earth in flying saucers. With the popularity of these images, many people claimed to have seen lights in the sky. Some experts believe that people simply think they see UFOs because of the influence of TV and movies. However, experts estimate that as little as 5% of these sightings could be called “unidentified.” Usually these lights are made by aircraft, satellites, or weather balloons. Top secret air force activities during the Cold War may have been responsible for many of the UFO sightings in America and Europe. Although not actually aliens, the secretive nature of these flying objects is definitely unidentified.

Another popular idea concerning UFOs concerns the role of world governments. Specifically, people believe that the US government has discovered alien life and operates a “cover-up” to hide the truth from the public. The most widely believed cover-up is that of the Roswell Incident. In July, 1947, a UFO supposedly landed in Roswell, New Mexico, and was examined and hidden by government agents. There have been many investigations into the Roswell Incident, however, these reports always claim that no such event occurred.

(i) What is the purpose of this report?

(ii) Why are UFO sightings so controversial?

(iii) Why is Kenneth Arnold famous among UFO believers?

(iv) How do experts explain many UFO sightings?

(v) What do many people believe happened at Roswell?

(vi) Which of the following is true?

(vii) What influence did the Cold War have upon UFO sightings?

(viii) State whether the following statements are True or False

(a) Kenneth Arnold saw the first UFO

(b) The Rose well Incident occurred in 1952

(c) Flying-saucers are square shaped.

(b) Identify the redundancy in the following sentences and rewrite them. 4M

(i) My friend returned back from USA yesterday.

(ii) The red coloured shirt is kept on the sofa.

(iii) When can we restart the work again?

(iv) Can we call India a developed forward country?

7. (a) Fill in the blanks with suitable verb forms of the words in the brackets. 7M

(i) My grandfather ----- (fight) the second world war when he ----- (be form) eighteen.

(ii) The mob ----- (leave) before the Minister ----- (arrive).

(iii) It was Ravi who ----- (alert) the police.

(iv) I ----- (know )her for a long time.

(v) One of my friend ----- (go) to Italy recently

(vi) I ----- (call) you when the guests arrive.

(vii) Age and experience ----- (bring) wisdom to a man.

(b) Fill in the blanks with suitable prepositions. 7M

(i) Although they were sisters, they rarely spoke-----each other.

(ii) Many girls are opting-----aerospace engineering.

(iii) He gave a presentation -----being ill.

(iv) I can't drink coffee---sugar.

(v) My house is -----the university.

(vi) The fabric costs rupees 20 -----metre.

(vii) There are cherry trees-----the road.

8. (a) Write an essay on 'human beings' desire to conquer the nature would be destructive' in 350 words. 7M
- (b) Write a précis of the following essay. 7M

Environment is the surroundings in which we live. But the contamination of our environment by pollutants is environmental pollution. The current stage of the earth that we are seeing is the cause of centuries of exploitation of earth and its resources. Moreover, the earth cannot restore its balance because of environmental pollution. The human force has created and destroyed life on earth. Human plays a vital role in the degradation of the environment. The environmental pollution, directly and indirectly, affects the lives of humans and other species. These living beings co-existed on the earth with human from centuries.

Carbon and dust particles string up with the air in the form of smog, damaging respiratory system, haze, and smoke. These are caused by the emission of industrial and manufacturing units by burning of fossil fuels, vehicle combustion of carbon fumes. Moreover, these factors affect the immune system of birds which become a carrier of viruses and infections. Besides, it also affects the body system and body organs. Human's organic and chemical both waste harm the land and soil with its decomposition. Also, it introduces some chemical in the soil and water. Land and soil pollution mainly caused by the use of pesticides, fertilizers, soil erosion, and crop residues. Water gets contaminated easily with any pollutant whether it is human waste or chemical discharge from factories. Also, we use this water for irrigation of crops and drinking. But, because of infection they become contaminated too. Besides, an animal dies because they drink this same contaminated water. Moreover, around 80% of pollutants of land such as chemical, industrial and agricultural waste end up in the water bodies. Besides, these water bodies ultimately connect to the sea which means it indirectly pollutes the biodiversity of the sea.

Because of contaminated soil and water, the crop or agricultural produce also get toxic. Furthermore, this contaminated food effect our health and organs. From the beginning of their life, these crops are laced with chemical components that reach a mass level until the time of harvest. Climate change is also a cause of environmental pollution. Also, it affects the physical and biological components of the ecosystem. Moreover, ozone depletion, greenhouse gases, global warming all these climate changes are a cause of environmental pollution. Besides, their effect can be fatal for our upcoming generations. The irregular extreme cold and hot climate affect the ecological system of the earth.