AR20

CODE: 20HST101   **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Regular Examinations, August-2021
ENGLISH
(Common to CE, CSE, IT, MECH Branches)

Time: 3 Hours   Max Marks: 60

Answer ONE Question from each Unit.
All Questions Carry Equal Marks.
All parts of the Question must be answered at one place.

UNIT-I

1. a) "Swami went to school feeling that he was the worst perjurer on earth". Explain the quote, Why does Swami think so?   5M

   b) Provide at least two synonyms for each of the following words.   5x1=5
   i. Axiom   ii. Deceit iii. Epitome iv. Indifferent v. Ratify

(OR)

2. a) Did Swami Learn a lesson? Do you think Swami's father was right in doing so? Justify your answer.   5M

   b) Write one-word substitutes for the following expressions.   5x1=5
   i. A person who believes in or tries to bring about a state of lawlessness
   ii. One who is for pleasure of eating and drinking
   iii. One who does not express himself freely
   iv. A lover of mankind
   v. A group of worshippers

UNIT-II

3. a) Describe Abdul Kalam's simple living and humble nature with reference to the lesson prescribed.   5M

   b) Fill in the blanks with appropriate verb forms.   5x1=5
   i. I ----a splendid film last night.(see)

   ii. Be quiet! Someone is----- to our conversation. (listen)

   iii. . Tina ------- by herself since her divorce. (live)

   iv. I predict that by 2022, man ------ on Mars. (land)

   v. Ramesh ------his dog for a walk every morning. (take)

(OR)

4. a) Explain briefly Ahmed Jallaluddin's influence on Abdul Kalam? What did Kalam learn from him?   5M

   b) Fill in the blanks with appropriate verb forms.   5x1=5
   I.   He -------yesterday evening.(play)

   II. I --------the story just before his arrival. (write)

   III. Anil -------for London yesterday.(leave)

   IV. It------- on whether or not they have any vacancies. (depend)

   V.   Anthony------- soccer his entire life. (play)

UNIT-III

5. a) Give an account of Robert Frost's poem *The Road Not Taken.* Do you agree with the conclusion?   5M

   b) Rewrite / Convert the following as directed.   5x1=5

   "Don't' make a noise, please," said the mother to her son. (into Indirect Speech)

   II. The magistrate ordered them to call the witness. (into Direct Speech)

   III. Owing to his poverty he could not continue his studies. (into complex sentence.)

   IV. Sunil is the most courageous of all men. (into Comparative Degree)

   V. Ravi got money and at once he bought a car. (Use…..as soon as)

(OR)

6. a) Explain the quote, "I shall be telling this with a sigh / Somewhere ages and ages hence:… And that has made all the difference." What according to you is the difference?   5M

   b) Rewrite / Convert the following as directed.   5x1=5

   i) The Doctor said to Hari, "Why don't you get vaccinated?" (into Indirect Speech)

   ii) He suggested to her that they should have a party. (into Direct Speech)

   ii) The container is too heavy to lift. (Change it into complex sentence.)

   iv) This is more interesting than any other Hardy's novels. (into Superlative Degree)

   v) He is not only a poet but he is also a painter. (Use…..besides)

UNIT-IV

7. a) Explain the quote with reference to English language, "A man may take to drink because he feels himself to be a failure, and then fail all the more completely because he drinks."   5M

b) Punctuate the below extract. 5M

now we will meet dr sonali banerji who is a leading nutritionist of india She has won many awards for her research on chocolate therapy hello sonali it is wonderful to have you on the show thank you for having me here. your job is surely the dream job of all children of our country tell us when did you get interested in researching on chocolate and its healing properties

(OR)

8. a) According to George Orwell, "one needs rules that one can rely on when instinct fails." What are those tips suggested by him? 5M

   b) Fill in the blanks of the below passage with appropriate prepositions. 5x1=5
      I. He broke his leg just ---- his knee.
      II. The factory belongs ---his father.
      III. He has been waiting------7 O'clock.
      IV. He seized him ---- his arm
      V. The committee voted ---favour of the resolution.

UNIT-V

9. a) Explain in short the conversation between Mrs. Pearson and Mrs. Fitzgerald. What was their plan to resolve the problem? 5M

   b) Write a letter to the Chairman of ASEB complaining about frequent failures of electricity in your town. 5M

(OR)

10. a) How was the issue dealt by Mrs. Pearson in the lesson? Did she get back her status at home? Do you agree with the conclusion? 5M

    b) Draft an Email to the Registrar of Delhi University, enquiring about the Post-Graduation course you wish to pursue at the University. 5M

UNIT-VI

11. a) Who initiated the Chipko Movement and why? Explain Briefly. 5M

    b) Read the following passage carefully and answer questions given below. 5x1=5

       The study of history provides many benefits. First, we learn from the past. We may repeat mistakes, but, at least, we have the opportunity to avoid them. Second, history teaches us what questions to ask about the present. Contrary to some people's view, the study of history is not the memorization of names, dates, and places. It is the thoughtful examination of the forces

that have shaped the courses of human life. We can examine events from the past and then draw inferences about current events. History teaches us about likely outcomes. Another benefit of the study of history is the broad range of human experience which is covered. War and peace are certainly covered as are national and international affairs. However, matters of culture (art, literature, and music) are also included in historical study. Human nature is an important part of history: emotions like passion, greed, and insecurity have influenced the shaping of world affairs. Anyone who thinks that the study of history is boring has not really studied history.

1. What is the main idea of this passage?

     A. Studying history helps us to live in today's world.

     B. Studying history is not just memorization.

     C. The role of education is to help students deal with real life.

     D. Students should study both national and international history.

2. In the passage, inferences means

     A. Graphs   B. Articles   C. Conclusions   D. Circumferences

3. Which method of teaching history would the author of this passage support?

     A. Applying historical events to modern society.

     B. Using flash cards to remember specific facts.

     C. Weekly quizzes on dates and events.

     D. Student competitions for most books memorized.

4. Study of history includes

     A Arithmetic B. Culture C. Politics D. Altitudes

5. Writ a synonym for the word *passion*

     A .Anxiety B. Compliment C. Abasement D. Desire

(OR)

12. a) Why is the Chipko Movement recognised as an Eco-Feminist Movement? Elucidate briefly.   5M

    b) Write an essay on "Is Social Media a hub of fake news?" in 500 words.   5M

CODE: 20EET101   **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Regular Examinations, August-2021

ELECTRONIC DEVICES AND CIRCUITS
(Electrical and Electronics Engineering)

Time: 3 Hours   Max Marks: 60

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1. a) Explain forward and reverse bias characteristics of PN Junction.   5M
   b) Explain the construction & working of LED.   5M

(OR)

2. a) Derive the expression for contact potential of an open circuited PN junction.   6M
   b) Explain zener and Avalanche breakdown Mechanisms.   4M

UNIT-II

3. a) Explain the operation of FWR with L- Section filter and derive the ripple factor.   7M
   b) Derive Ripple factor for HWR, Center tapped full wave rectifier.   3M

(OR)

4. a) Explain the operation of HWR with neat sketches.   7M
   b) Compare the performance of series inductor, L-section, and C-section filters.   3M

UNIT-III

5. a) Explain the about input and output characteristics of a transistor when it is connected in CE configuration.   7M
   b) Compare Enhancement MOSFET and Depletion MOSFET.   3M

(OR)

6. a) Discuss the operation JFET at different regions with suitable characteristics   7M
   b) In a given transistor α =0.98, I_{CBO}=10µA, I_B=100µA Find I_E=?   3M

UNIT-IV

7. a) In a Feedback resistor bias circuit a Si transistor with β=100 is used, V_{CC}=12V, R_C=5KΩ, R_B=630KΩ. Determine the Q-point and stability factor ?   6M
   b) Define stability factor and derive stability factor for self bias circuit.   4M

(OR)

8. a) What is thermal runaway? Explain how it can be avoided.   7M
   b) Define thermal stability factors of S, S^1, S^{11} ?   3M

UNIT-V

9. a) Explain the different types of topologies in feedback amplifiers using equivalent circuits?   8M
   b) What are the applications of transistor.   2M

(OR)

10. a) Draw the circuit diagram of voltage series feedback amplifier. Derive input impedance and output impedance of voltage series feedback amplifier.   7M
    b) Explain the effect of negative feedback on input and output resistances.   3M

UNIT-VI

11. a) Show that the gain of Wein bridge oscillator using BJT amplifier must be 3 for oscillations.   8M
    b) What are the conditions required for sustained oscillations?   2M

(OR)

12. a) Derive the an expression for the frequency of oscillations for RC phase shift Oscillator?   8M
    b) Classify the oscillators based on feedback and feedback network?   2M

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ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Regular Examinations, August, 2021
ELECTRONICS-I
(Electronics And Communication Engineering)

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

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explain forward and reverse bias characteristics of PN Junction.	6M
	b)	Explain LED with neat sketch.	4M

(OR)

2.	a)	Derive the expression for contact potential of an open circuited PN junction.	6M
	b)	Write the applications of Tunnel diode.	4M

UNIT-II

3.	a)	Explain the operation of FWR with neat circuit diagram and input output wave forms.	6M
	b)	Compare HWR, Center tapped FWR, Bridge rectifier.	4M

(OR)

4.	a)	Explain the operation of HWR with neat sketches.	6M
	b)	Compare the performance of series inductor , L-section, and C-section filters.	4M

UNIT-III

5.	a)	Explain the about input and output characteristics of CE configuration.	8M
	b)	Write the advantages of FET over the BJT.	2M

(OR)

6.	a)	Discuss the operation JFET at different regions with suitable characteristics.	7M
	b)	In a given transistor α =0.98, I_{CBO}=10µA, I_B=100µA Find I_E=?	3M

UNIT-IV

7.	a)	In a Feedback resistor bias circuit a Si transistor with β=100 is used, V_{CC}=12V, R_C=5KΩ, R_B=630KΩ. Determine the Q-point and stability factor.	5M
	b)	Write the different biasing circuits and its advantages in amplifiers?	5M

(OR)

8.	a)	Explain self bias circuit and derive stability factor.	7M
	b)	What are parameters affected to shift the operating point in amplifiers ?	3M

UNIT-V

9.	a)	Draw the h-parameter model of CE configuration and derive voltage gain, current gain, input impedance and output impedance of approximate model by using exact model.	8M
	b)	Write the advantages of h-parameter analysis.	2M

(OR)

10.	a)	Draw the circuit diagram CE amplifier with emitter resistance. Derive the expressions for voltage gain, current gain, input impedance and output impedance using h-parameter approximation model.	8M
	b)	What is the effect of emitter resistance in CE amplifiers?	2M

UNIT-VI

11.	a)	Explain the different types of feedback amplifiers using equivalent circuits or block diagrams?	8M
	b)	Explain the concept of feedback.	2M

(OR)

12.	a)	Draw the circuit diagram of current series feedback amplifier and derive input impedance output impedance .	7M
	b)	Explain the effect of negative feedback on input and output resistances.	3M