

# AR18

**CODE: 18CET101**

**SET-2**

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI  
(AUTONOMOUS)**

**I B.Tech II Semester Supplementary Examinations, February-2021**

**BUILDING MATERIALS**

**(Civil 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) Write about the classification of stones. 6M  
b) What are the precautions to be taken while dressing a stone? Explain 6M  
(OR)
2. a) Write a note on temperature transition approach. 6M  
b) What is meant by quarrying? Explain the methods of quarrying? 6M

## **UNIT-II**

3. a) Define seasoning. Explain various methods of seasoning. 6M  
b) What are the market forms of timber? 6M  
(OR)
4. a) What is Lime and what are the various ingredients of lime? 5M  
b) Explain the process of manufacturing of bricks. 7M

## **UNIT-III**

5. a) What are the factors affecting quality of cement? 5M  
b) Explain the procedure of production of concrete. 7M  
(OR)
6. a) Describe the different types of mortar. 6M  
b) What are the specifications for plastering with cement mortar? 6M

## **UNIT-IV**

7. a) What are the market forms of steel? 6M  
b) Explain the mechanical properties of metals. 6M  
(OR)
8. a) Explain the specific uses of metals and Glass materials 7M  
b) What are the causes of corrosion? 5M

## **UNIT-V**

9. a) What are the Qualities expected of a good paint? 6M  
b) What are the considerations in choosing paints? 6M  
(OR)
10. a) Write a note on Fiber reinforced plastics. 6M  
b) Describe the properties of plastics. 6M

# AR18

**CODE: 18HST101**

**SET-2**

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI  
(AUTONOMOUS)**

**I B.Tech II Semester Supplementary Examinations, February-2021**

**ENGLISH**

**(Common to EEE, ME, ECE 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 speaks about different modes of punishment at school. Do you think Samuel punishes boys like that? State reasons to justify your answer. 6M
- b) Write the meaning of the prefix and give one example for each word 6M  
i. mono ii. anti iii. mis iv. post  
Give antonyms for the following words:  
v. responsible vi. intolerance

**(OR)**

2. a) Discuss the reasons for Swami's unwillingness to go to school with reference to RK Narayan's story- "Father's Help" 6M
- b) Use the following idioms in your own sentences: 6M  
i. Crocodile tears  
ii. Break the ice  
iii. Burn the midnight oil  
iv. A feather in one's cap  
Write abbreviations for the following:  
v. BCC vi. ASAP

## **UNIT-II**

3. a) Give a brief account on some of the influences in Abdul Kalam's early life. 6M
- b) Convert the following expressions into reported speech. 6M  
i. He said to me, "who are you?"  
ii. I said to Ram, "Please send your pen."  
iii. He says, "Today is a holiday."  
iv. Mother says to children, "Go away immediately."  
Change degrees of following expressions into the degrees as directed in brackets.  
v. Manju is wiser than her sister. ( positive )  
vi. It is the greatest novel. ( comparative )

**(OR)**

4. a) How did Hindus and Muslims maintain the relation in Rameswaram according to Abdul Kalam? 6M
- b) Transform the following expressions into passive voice: 6M  
i. Someone left the wallet in the classroom yesterday.  
ii. We are building over 1000 new houses every year.  
iii. I can't repair your clock.  
iv. We have warned you. Supply suitable verb forms in the conditional sentences starting with If.  
v. If it is fine tomorrow, we ----- (go) for a walk in the evening.  
vi. If I ----- (present) well in the exam, I would pass easily.

### UNIT-III

5. a) According to George Orwell's observation, most people believe that language grows organically and it is not an instrument shaped according to one's needs. Do you agree with this statement? Justify your answer by using examples from the text. 6M
- b) Rewrite the following sentences avoiding redundancy: 6M
- Our top student is a physically ill student today.
  - I will complete my research paper in a period of a week.
  - Pavan's stylish boots, made of crocodile skin, cost him an arm and a leg.
  - Sarma is the teacher who teaches chemistry at her high school.
  - The book, which is located on the table, is a grammar book.
  - Her purse, which was manufactured in Italy, was stolen yesterday.
- (OR)
6. a) Discuss three expressions and their meanings that George Orwell wishes to stop using. 6M
- b) Choose the appropriate Modifiers to fill the blanks 6M
- Brush your teeth ----- (good, well) after eating sweets.
  - Ralph's plan sounded ----- (foolish, foolishly) to most of the members.
  - Do you consider math or algebra----- (harder, hardest)?
  - I thought that his flute sounded----- (terribly, terrible).
  - The new rules are----- (stricter, more stricter) than the old ones.
  - It was the ----- (most delightful, delightfulest) trip I have ever taken.

### UNIT-IV

7. a) Prepare a brief note on the main characters of the play *Sacrifice*? 6M
- b) Write a letter to police authorities to arrange a traffic post in order to control the surging traffic during evenings in the junction nearby your locality. 6M
- (OR)
8. a) Do you think the play *Sacrifice* is based on reality? If Yes / No, Why? 6M
- b) Draft an email to your friend describing your recent visit of school you studied together. 6M

### UNIT-V

9. a) "Woods are lovely dark and deep- But I have promises to keep- Miles to go before I sleep"- Explain the message conveyed by Robert Frost through these lines. 6M
- b) Read the following passage and answer the questions: 6M

Floods are second only to fire as the most common of all natural disasters. They occur almost everywhere in the world, resulting in widespread damage and even death. Consequently, scientists have long tried to perfect their ability to predict floods. So far, the best that scientists can do is to recognize the potential for flooding in certain conditions. There are a number of conditions, from deep snow on the ground to human error, that cause flooding.

When deep snow melts it creates a large amount of water. Although deep snow alone rarely causes floods, when it occurs together with heavy rain and sudden warmer weather it can lead to serious flooding. If there is a fast snow melt on top of frozen or very wet ground, flooding is more likely to occur than when the ground is not frozen. Frozen ground or ground that is very wet and already saturated with water cannot absorb the additional water created by the melting snow. Melting snow also contributes to high water levels in rivers and streams. Whenever rivers are already at their full capacity of water, heavy rains will result in the rivers overflowing and flooding the surrounding land.

Rivers that are covered in ice can also lead to flooding. When ice begins to melt, the surface of the ice cracks and breaks into large pieces. These pieces of ice move and float down the river. They can form a dam in the river, causing the water behind the dam to rise and flood the land upstream. If the dam breaks suddenly, then the large amount of water held behind the dam can flood the areas downstream too.

Broken ice dams are not the only dam problems that can cause flooding. When a large human-made dam breaks or fails to hold the water collected behind it, the results can be devastating. Dams contain such huge amounts of water behind them that when sudden breaks occur, the destructive force of the water is like a great tidal wave. Unleashed dam waters can travel tens of kilometres, cover the ground in metres of mud and debris, and drown and crush everything and creature in their path.

Although scientists cannot always predict exactly when floods will occur, they do know a great deal about when floods are likely, or probably, going to occur. Deep snow, ice-covered rivers, and weak dams are all strong conditions for potential flooding. Hopefully, this knowledge of why floods happen can help us reduce the damage they cause.

- i. What do you mean by the word 'unleashed'? 1M
- ii. List the strong conditions that lead to potential flooding. 1M
- iii. Find out a word from the passage which is synonym of 'forecast'. 1M
- iv. Explain how melting snow results in floods. 2M
- v. What is compared to the effect of tidal wave in the given passage? 1M

**(OR)**

10. a) How does Robert Frost relate human life in his poem "Stopping by Woods on a Snowy Evening" . 6M
- b) Present your views in the form of an essay on "Participation in games and sports leads to holistic development of one's personality" 6M

# AR18

**CODE: 18CST101**

**SET-2**

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI  
(AUTONOMOUS)**

**I B.Tech II Semester Supplementary Examinations, February-2021**

**DATA STRUCTURES AND ALGORITHMS**

**(Common to CSE, IT 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) Write a recursive algorithm to compute GCD. 6 M
- b) Explain in detail about time complexity. 6 M

**(OR)**

2. a) Explain about various operations performed on Data Structures. 6 M
- b) With the aid of an example, show how to compute time complexity of an algorithm. 6 M

## **UNIT-II**

3. a) Write an algorithm to implement Binary Search technique. Use the algorithm to search 32 in the following list of elements. Explain the process at each step. 7 M  
12, 16, 17, 19, 20, 22, 24, 29, 30, 32, 37
- b) Write an algorithm for implementing bubble sort technique. 5 M

**(OR)**

4. a) Trace the working of quick sort by sorting the following numbers 45, 34, 12, 46, 27, 56, 11, 87, 6, 33, 28. 6 M
- b) What is hashing? Describe in brief. 6 M

## **UNIT-III**

5. a) Write a program for implementing queue operations. 7 M
- b) Show how to convert a given infix expression to postfix form using a stack. 5 M

**(OR)**

6. a) What is a priority queue? Describe its operations. 6 M
- b) What is a stack? Discuss any two applications of stacks. 6 M

## **UNIT-IV**

7. a) What is linked list? Write an algorithm for inserting an element E, at the end of the linked list. 7 M
- b) List out the advantages and disadvantages of using linked list over an array 5 M

**(OR)**

8. a) Write an algorithm to delete a node from a doubly linked list. 6 M
- b) Explain the push and pop operations on a linked stack. 6 M

## **UNIT-V**

9. a) What is a Binary Search Tree? What is its need? 5 M
- b) Discuss about different binary tree traversals with examples. 7 M

**(OR)**

10. a) Write and describe the steps of DFS algorithm. 6 M
- b) What is a Graph? How graphs can be represented? Discuss. 6 M