

Reg. No.

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B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2024

Third Semester

IT22309 – IT ESSENTIALS: THEORY AND PRACTICES*(Information Technology)***(Regulation 2022)****TIME:1 HOUR 30 MINUTES****MAX. MARKS: 50**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Analyse the various information systems and technologies to improve an organization's performance.	4
CO 2	Demonstrate the use of networking concepts to develop a simple network.	3
CO 3	Apply the cellular radio concepts and standards in real time applications.	3
CO 4	Design and Deploy web based applications.	6
CO 5	Develop dynamic and interactive Web pages using scripting languages.	6

PART- A(10x2=20Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Show the utilization of a look-up table in compression processes.	1	2
2. Discuss in brief about the social impacts of information technology.	1	2
3. Classify the TCP / IP protocol.	2	3
4. State the difference between Internet and Intranet.	2	2
5. Define Home Location Register.	3	2
6. What are the basic components of cellular network?	3	2
7. Develop a HTML code to generate a mail link within a web page and explain the process of creating a nested web page using HTML.	4	3
8. Identify the method for adding an icon or logo adjacent to the title of a web page.	4	4
9. Develop a JavaScript program to display an alert message when the text box is empty.	5	3
10. What will be the output of the following PHP code? <pre><? php \$count=1; do echo "\$count times is 10 “. count*10.”
”; while (++\$count<=2); ?></pre>	5	3

PART- B (2x 10=20Marks)

- | | Marks | CO | RBT LEVEL |
|--|------------|----------|-----------|
| 11. (a) (i) Apply the Block Truncation Coding (BTC) method to encode the given image using 4x4 pixel blocks.
X= 68 69 62 63
 67 68 69 64
 62 69 68 67
 68 69 68 62 | (5) | 1 | 3 |
| (ii) Illustrate in detail about the key factors of Star and Ring topology. | (5) | 2 | 3 |

(OR)

- | | | | |
|---|------------|----------|----------|
| (b) (i) Apply run length encoding to encode the given image.
0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 1 1 1 1 0 0 0 0
0 0 0 0 1 0 0 1 0 0 0 0
0 0 0 0 1 1 1 1 0 0 0 0
0 0 0 0 1 0 0 1 0 0 0 0
0 0 0 0 1 1 1 1 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 | (5) | 1 | 3 |
| (ii) Illustrate the functions of any two layers within the OSI model. | (5) | 2 | 3 |

- | | | | |
|---|------------|----------|----------|
| 12. (a) (i) Classify any four components of digital cell phone and identify the use of each component. | (5) | 3 | 3 |
| (ii) Write a HTML code to generate a navigation menu comprising three tabs with essential styling. | (5) | 4 | 3 |

(OR)

- | | | | |
|--|------------|----------|----------|
| (b) (i) Illustrate in detail about any three switching subsystem of GSM architecture. | (5) | 3 | 3 |
| (ii) Design the given table using HTML tags. | (5) | 4 | 3 |

1	2 and 3	4	
5, 9 and 13	6	7	8
	10	11	12
	14, 15 and 16		

PART- C (1x 10=10Marks)

(Q.No.13 is compulsory)

- | | Marks | CO | RBT LEVEL |
|---|-------------|----------|-----------|
| 13. Design and evaluate a Railway Reservation form comprising at least six distinct elements. Implement JavaScript validation to ensure that if the user leaves any input box blank, it triggers an error alert. | (10) | 5 | 5 |
