

# New Horizon College of Engineering, Bangalore

Autonomous College affiliated to VTU, Accredited by NAAC with 'A' Grade & NBA

**Supplementary Semester End Examination October 2020**

## WEB TECHNOLOGIES

Duration: 3 hrs

Max. Marks: 100

**Answer five full questions choosing one complete question from each module.**

### Module 1

- 1 a) What is MIME? Define its type specification. 5      L1      CO1
- b) Build XHTML document to describe the following table. Also give the importance of rowspan and colspan attribute. 10      L3      CO1

| Menu      |          |      |       |
|-----------|----------|------|-------|
|           | Sandwich | Rice | Salad |
| Breakfast | 1        | 0    | 1     |
| Lunch     | 0        | 1    | 1     |
| Dinner    | 0        | 1    | 1     |

- c) Distinguish XHTML and HTML syntactically. 5      L4      CO1

### OR

- 2 a) How do browsers usually set block quotation differently from normal text? 5      L1      CO1
- b) Apply XHTML concept to develop following form. 10      L3      CO1

- c) Compare the cellpadding and cellspacing. Give suitable examples. 5      L4      CO1

### Module 2

- 3 a) Define <span> and <div> with suitable example. 5      L1      CO2
- b) Create a document that has six short paragraphs. You must define three different paragraph style p1, p2, p3. The p1 style must use left and right margins of 20 pixels, a background color of pink and foreground color of blue. The p2 style must use left and right margins of 30 pixels, a background color of black and foreground 10      L6      CO2

color of yellow. The p3 style must use a text indent of 1 centimeter, a background color of green and foreground color of white. The first and fourth must use p1, the second and fifth must use p2, and the third and sixth must use p3.

- |    |  |   |    |     |
|----|--|---|----|-----|
| c) | Classify different levels of style sheet and their style specification format. | 5 | L4 | CO2 |
|----|--|---|----|-----|

**OR**

- |      |   |    |    |     |
|------|---|----|----|-----|
| 4 a) | If you want a background image to be repeated vertically but not horizontally, what value must be set to what property? Also mentioned all other properties of image. Give a simple example.  | 5  | L1 | CO2 |
| b)   | Create an XHTML document that describes an unordered list of at least five popular books. The bullet for each book must be a small image of the book's cover. Also explain the different list properties of ordered and unordered list. | 10 | L6 | CO2 |
| c)   | Analyze different selector forms and their importance.  | 5  | L4 | CO2 |

**Module 3**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 5 a) | Explain the following object available in JavaScript. Describe at least 3 methods for each.<br>1. Math object<br>2. Date Object            | 5  | L2 | CO3 |
| b)   | Write a XHTML document containing a JavaScript function to compute the median of an array of number with at least two different data sets. | 10 | L3 | CO3 |
| c)   | Analyze the methods of element access and find out the efficient method with suitable example.   | 5  | L4 | CO3 |

**OR**

- |      |   |    |    |     |
|------|---|----|----|-----|
| 6 a) | Explain handling events from body elements with examples?   | 5  | L2 | CO3 |
| b)   | Apply JavaScript to solve following problem:<br>1. Print a table of the number 1 to 10 and their square and cubes using alert.<br>2. Find the first 10 Fibonacci number | 10 | L3 | CO3 |
| c)   | Compare array and object in JavaScript with suitable examples.  | 5  | L4 | CO3 |

**Module 4**

- |     |  |    |    |     |
|-----|--|----|----|-----|
| 7a) | Interpret three different methods of positioning elements.   | 10 | L5 | CO4 |
| b)  | Develop the document which contain three images, stacked on top of each other, with only enough of each showing. When the mouse cursor is placed over the exposed part of any image, it should rise to the top to become completely visible. | 10 | L6 | CO4 |

## OR

- |             |  |           |           |            |
|-------------|--|-----------|-----------|------------|
| <b>8 a)</b> | Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servlet to do the following.<br>Create a Cookie and add these four user ids and passwords to this Cookie. | <b>10</b> | <b>L5</b> | <b>CO4</b> |
| <b>b)</b>   | Create a program which allows the user to drag and drop words to complete a short poem using DOM 2 event model.  | <b>10</b> | <b>L6</b> | <b>CO4</b> |

## Module 5

- |             |  |           |           |                |
|-------------|--|-----------|-----------|----------------|
| <b>9 a)</b> | Explain in detail the database access with PHP and MySQL along with the example. | <b>5</b>  | <b>L2</b> | <b>CO5,CO6</b> |
| <b>b)</b>   | Evaluate the different sorting function with suitable example.                   | <b>10</b> | <b>L5</b> | <b>CO5,CO6</b> |
| <b>c)</b>   | Examine the logical internal structure of array in PHP and explain it in detail. | <b>5</b>  | <b>L4</b> | <b>CO5,CO6</b> |

## OR

- |             |   |           |           |                |
|-------------|---|-----------|-----------|----------------|
| <b>10a)</b> | Which function is used in PHP to set a cookie? Explain with example .                                   | <b>5</b>  | <b>L2</b> | <b>CO5,CO6</b> |
| <b>b)</b>   | Justify the session tracking by writing suitable PHP code. Also explain the session tracking in detail. | <b>10</b> | <b>L5</b> | <b>CO5,CO6</b> |
| <b>c)</b>   | Analyse to find suitable data to create a file in PHP and perform read and write operation.             | <b>5</b>  | <b>L4</b> | <b>CO5,CO6</b> |

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**Supplementary Semester End Examination October 2020**

## SOFTWARE TESTING

Duration: 3 hrs

Max. Marks: 100

**Answer five full questions choosing one complete question from each module.**

### Module 1

- |   |    |    |     |
|---|----|----|-----|
| 1 a) Draw the flowchart for the traditional implementation of the triangle problem .          | 5  | L1 | CO1 |
| b) State the currency converter problem along with its features.                              | 5  | L1 | CO1 |
| c) Illustrate the different features of the SATM by assuming any ten real time ATM scenarios. | 10 | L3 | CO1 |

### OR

- |  |    |    |     |
|--|----|----|-----|
| 2 a) List and describe the distinct features of specification based testing with necessary diagrams. | 5  | L1 | CO1 |
| b) State how faults can be categorized based on severity levels.                                     | 5  | L1 | CO1 |
| c) Illustrate the garage door opener problem with a neat diagram .                                   | 10 | L3 | CO1 |

### Module 2

- |  |    |    |     |
|--|----|----|-----|
| 3 a) Summarize the types of BVA with support of triangle program.  | 10 | L2 | CO2 |
| b) Estimate the test cases based on equivalence class for next date problem using weak robust and strong normal scenarios. | 10 | L5 | CO2 |

### OR

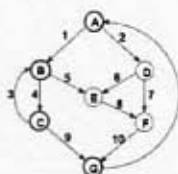
- |  |    |    |     |
|--|----|----|-----|
| 4 a) Discuss the Decision table for nextdate by considering suitable equivalence classes(third try) with a neat diagram. | 10 | L2 | CO2 |
| b) Evaluate the test cases based on equivalence class testing considering the input domain of the commission problem.    | 10 | L5 | CO2 |

### Module 3

- |  |    |    |     |
|--|----|----|-----|
| 5 a) Predict the importance of du paths for a variable and explain how it influences the dataflow testing and derive the du paths for stocks, locks sales, commission variables. | 10 | L6 | CO3 |
| b) Identify how effectively can you make slices for the variables used in the program and justify your answer with an example .  | 10 | L4 | CO3 |

### OR

- |  |    |    |     |
|--|----|----|-----|
| 6 a) Develop theMcCabes basis path method for an example graph shown below and identify set of basis path. | 10 | L6 | CO3 |
|--|----|----|-----|



- |    |  |    |    |     |
|----|--|----|----|-----|
| b) | Examine why program graph and DD path is needed. Support your answer considering your own example and illustrate how to proceed with path testing. | 10 | L4 | CO3 |
|----|--|----|----|-----|

**Module 4**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 7 a) | Illustrate the following terms<br>1)mutant 2)live mutant 3)killed mutant 4)mutation score 5)mutant operators | 10 | L3 | CO4 |
| b)   | Examine how the information present in an inspection packet helps in conducting reviews.                     | 10 | L4 | CO5 |

**OR**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 8 a) | Categorize the different types of mutators or mutant operators.  | 10 | L3 | CO4 |
| b)   | Identify the different types of reviews yielding effective testing process and explain each in detail. | 10 | L4 | CO5 |

**Module 5**

- |      |   |    |    |     |
|------|---|----|----|-----|
| 9 a) | Illustrate the steps involved in installation of selenium IDE with neat diagrams. | 10 | L3 | CO6 |
| b)   | Classify the various annotations used in testNG with an example.                  | 10 | L4 | CO6 |

**OR**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 10a) | Illustrate the benefits of automation testing over manual testing.                           | 10 | L3 | CO6 |
| b)   | Compare and contrast the differences between selenium RC,seleniumwebdriver and selenium IDE. | 10 | L4 | CO6 |



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**Supplementary Semester End Examination October 2020**

**MOBILE APPLICATION DEVELOPMENT**

Duration: 3 hrs

Max. Marks: 100

**Answer FIVE full questions choosing ONE complete question from each module.**

**Module 1**

- |             |  |   |    |            |
|-------------|--|---|----|------------|
| <b>1 a)</b> | Explain the architecture of Android Operating System with a neat diagram                                   | 7 | L2 | <b>CO1</b> |
| <b>b)</b>   | How to test an android application in different ways using Android Studio.                                 | 6 | L3 |            |
| <b>c)</b>   | Analyse any two well known App and point out where activities and services of android components are used. | 7 | L4 |            |

**OR**

- |             |  |   |    |            |
|-------------|--|---|----|------------|
| <b>2 a)</b> | Explain the following building blocks of Android:<br>a) Broadcast Receiver<br>b) Content provider  | 7 | L2 | <b>CO1</b> |
| <b>b)</b>   | How will you use Notification in android for developing app.   | 6 | L2 |            |
| <b>c)</b>   | Analyze Android Software Development Kit(SDK) and point out the tools that facilitate: developing, testing, and debugging Android applications | 7 | L4 |            |

**Module 2**

- |             |   |   |    |            |
|-------------|---|---|----|------------|
| <b>3 a)</b> | Consider an Application, which has two activities Act1 and Act2. Develop a code to start Act2 when a Button is clicked in Act1. | 8 | L6 | <b>CO2</b> |
| <b>b)</b>   | Draw and explain Activity Lifecycle.  | 8 | L3 |            |
| <b>c)</b>   | Compare Absolute layout and Table Layout  | 4 | L5 |            |

**OR**

- |             |  |   |    |            |
|-------------|--|---|----|------------|
| <b>4 a)</b> | Develop the code to create an Alert Dialog Box, that displays a Title "Warning", Message: "Virus is about to attack you" and Positive Button which returns control back to the App | 8 | L6 | <b>CO2</b> |
| <b>b)</b>   | Explain how to use fragments to build dynamic user interface   | 8 | L2 |            |
| <b>c)</b>   | Evaluate the states that an activity undergoes in android.   | 4 | L5 |            |

**Module 3**

- |             |   |   |    |            |
|-------------|---|---|----|------------|
| <b>5 a)</b> | Explain saving and restoring of Shared Preference                             | 7 | L2 | <b>CO3</b> |
| <b>b)</b>   | Analyze on how two application can share content in Android.                  | 7 | L5 |            |
| <b>c)</b>   | Compose the steps involved in creation and upgradation of a table in Android. | 6 | L6 |            |

EMPLOYEE with columns: EID ,Ename, Salary.

## OR

- |      |   |   |    |     |
|------|---|---|----|-----|
| 6 a) | Explain lifecycle of service with a neat diagram  | 7 | L2 |     |
| b)   | Analyze the significance of threads in android application and discuss their implementation.                          | 7 | L4 | CO3 |
| c)   | Compose the code involved in reading a line from a file called Employename.txt and populating a TextBox called edit1. | 6 | L6 |     |

## Module 4

- |      |   |   |    |      |
|------|---|---|----|------|
| 7 a) | Discuss Bluetooth Adapter class in brief                                  | 6 | L2 | CO4, |
| b)   | Evaluate how to include Camera in android app, both using intent and API. | 8 | L5 | CO5  |
| c)   | Compose code to receive change in Location.                               | 6 | L6 |      |

## OR

- |      |   |   |    |      |
|------|---|---|----|------|
| 8 a) | Discuss the various classes and interfaces in Sensor API.                                       | 6 | L2 | CO4, |
| b)   | Identify the techniques to access telephony service in android app.                             | 8 | L5 | CO5  |
| c)   | Write the code to play the audio file maine.mp3 file located inside the sdcard/Music directory. | 6 | L6 |      |

## Module 5

- |      |  |   |    |     |
|------|--|---|----|-----|
| 9 a) | Demonstrate Logcat and how it can be used for debugging                    | 6 | L3 |     |
| b)   | Recommend the procedure to be followed before publishing your application. | 8 | L5 | CO6 |
| c)   | How ADB tool can be used in debugging.                                     | 6 | L4 |     |

## OR

- |      |  |   |    |     |
|------|--|---|----|-----|
| 10a) | Demonstrate how to digitally sign your app.  | 6 | L3 |     |
| b)   | Summarize the best practice to incorporate in your application for security and privacy. | 8 | L5 | CO6 |
| c)   | Identify the uses of Dalvik Debug Monitor Server   | 6 | L4 |     |

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**Supplementary Semester End Examination October 2020**

**ARTIFICIAL INTELLIGENCE**

Duration: 3 hrs

Max. Marks: 100

**Answer five full questions choosing one complete question from each module.**

**Module 1**

- |      |   |    |    |     |
|------|---|----|----|-----|
| 1 a) | What is Problem Definition? Explain with an example                 | 5  | L1 | CO1 |
| b)   | Apply different problem solving techniques to solve tic-tac problem | 10 | L3 | CO1 |
| c)   | Analyze Best-First search with an example.                          | 5  | L4 | CO1 |

**OR**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 2 a) | List different Heuristic search techniques     | 5  | L1 | CO1 |
| b)   | Apply production rule on chess problem         | 10 | L3 | CO1 |
| c)   | Analyze how local maxima problem is addressed? | 5  | L4 | CO1 |

**Module 2**

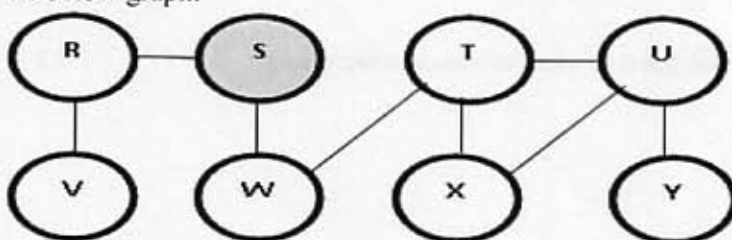
- |      |  |    |    |     |
|------|--|----|----|-----|
| 3 a) | How propositional logic is represented? Explain                                    | 5  | L1 | CO2 |
| b)   | Design the algorithm for wumpus world agent to find pits, wumpuses and safe square | 10 | L3 | CO2 |
| c)   | Using a simple knowledge base prove that there is no pit in P(1,1).                | 5  | L5 | CO2 |

**OR**

- |      |  |    |    |     |
|------|--|----|----|-----|
| 4 a) | Write the syntax of First Order logic? Explain | 5  | L1 | CO2 |
| b)   | Design an agent based on propositional logic   | 10 | L3 | CO2 |
| c)   | Evaluate CNF for the problem                   | 5  | L5 | CO2 |
- Everyone who loves all animals is loved by someone
  - Anyone who kills an animal is loved by someone
  - Jack Loves all animals.
  - Either Jack or curiosity killed the cat. Who is named Tuna
  - Did curiosity killed the cat

**Module 3**

- |      |   |    |    |     |
|------|---|----|----|-----|
| 5 a) | Illustrate Forward reasoning with an example.   | 5  | L2 | CO3 |
| b)   | Analyze the graph with S as the source node and Illustrate BFS traversal using the below graph. | 10 | L4 | CO3 |





- c) Pam putting 15 paintings, 4% of his work has won first prize  
Pia put in 5 paintings, 5% of his work has won first prize  
Pablo put in 10 paintings, 3% of his work has won first prize  
Evaluate the chance that pam will win First prize?

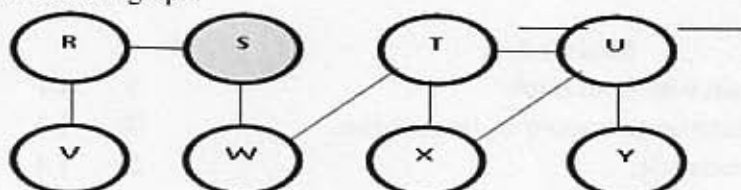
5 L5 CO3

- 6 a) Illustrate Backward reasoning with an example.

5 L2 CO3

- b) Analyze the graph with S as the source node and Illustrate DFS traversal using the below graph.

10 L4 CO3



- c) Evaluate the term TMS with help of suitable example.

5 L5 CO3

#### Module 4

- 7 a) Implement Conceptual dependency in real time scenario

5 L3 CO4

- b) Create a decision tree for deciding whether to wait for a table.

10 L6 CO4

- c) Identify the significance of supervised learning and unsupervised learning

5 L4 CO4

#### OR

- 8 a) Implement semantic nets and frames with an example.

5 L3 CO4

- b) Create an example to illustrate how boosting algorithm works.

10 L6 CO4

- c) Identify the requirement of reinforcement learning and illustrate with an example.

5 L4 CO4

#### Module 5

- 9 a) Explain different components of planning

5 L2 CO5,

CO6

- b) Examine the key features of Iterative deepening with depth first search

10 L4 CO6,

CO5

- c) Create goal stack planning for a simple blocks world problem.

5 L3 CO5,

CO6

#### OR

- 10a) Illustrate mini-max search procedure.

5 L2 CO5,

CO6

- b) Analyze non-linear planning using constraint posting

10 L4 CO6,

CO5

- c) Implement alpha-beta cutoffs from the point of view of maximizing player.

5 L3 CO5,

CO6

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**Supplementary Semester End Examination October 2020**

## CYBER SECURITY, FORENSICS AND LAW

Duration: 3 hrs

Max. Marks: 100

**Answer five full questions choosing one complete question from each module.**

### Module 1

- |   |   |    |     |
|---|---|----|-----|
| 1 a) List the categories of Cybercrime and write a short note on any two of them. | 6 | L1 | CO1 |
| b) Explain how lack of information security gives rise to Cybercrime.             | 7 | L2 | CO1 |
| c) Describe how cybercriminal plans attack in Cybercafe.                          | 7 | L3 | CO1 |

### OR

- |  |   |    |     |
|--|---|----|-----|
| 2 a) Define Cyberstalking, Cybercafe, and Social engineering.            | 6 | L1 | CO1 |
| b) Explain different types of cyber criminals.                           | 7 | L2 | CO1 |
| c) Describe how cyber criminals plan passive attack using various tools. | 7 | L3 | CO1 |

### Module 2

- |   |   |    |     |
|---|---|----|-----|
| 3 a) Define Phishing. What are the different steps involved in Phishing?    | 8 | L1 | CO2 |
| b) Explain Proxy Server and Anonymizers.                                    | 7 | L2 | CO2 |
| c) Illustrate the different preventive measures for buffer overflow attack. | 5 | L3 | CO2 |

### OR

- |  |   |    |     |
|--|---|----|-----|
| 4 a) List the purpose of password cracking and also the different steps involved in password cracking. | 8 | L1 | CO2 |
| b) Explain SQL injection attack in detail.   | 7 | L2 | CO2 |
| c) Identify some of the strong and weak passwords and also justify.                                    | 5 | L3 | CO2 |

### Module 3

- |   |   |    |     |
|---|---|----|-----|
| 5 a) What are the amendments made to the Indian IT Act?                   | 6 | L1 | CO3 |
| b) Explain the cryptographic perspective on the Indian IT act.            | 6 | L2 | CO3 |
| c) Identify the challenges in Indian Law and Cybercrime scenario in India | 8 | L3 | CO3 |

## OR

- |      |  |   |    |     |
|------|--|---|----|-----|
| 6 a) | Why do we need cyber laws under Indian Context?                                      | 6 | L1 | CO4 |
| b)   | Explain the digital signatures and Indian IT Act.                                    | 6 | L2 | CO4 |
| c)   | Identify the impact of IT Act Amendments on Information technology and organization. | 8 | L3 | CO4 |

## Module 4

- |      |  |   |    |     |
|------|--|---|----|-----|
| 7 a) | Analyze how steganography can be considered as antifoerensics method.        | 6 | L4 | CO5 |
| b)   | Classify the different context involved in identifying the digital evidence. | 6 | L4 | CO5 |
| c)   | Defend the relevance of OSI 7 layer Model to Computer forensics.             | 8 | L5 | CO5 |

## OR

- |      |   |   |    |     |
|------|---|---|----|-----|
| 8 a) | Compare physical evidence and digital evidence under Cyber forensics.   | 6 | L4 | CO5 |
| b)   | Compare network forensics and Computer forensics.                       | 6 | L4 | CO5 |
| c)   | Recommend the steps for approaching a computer forensics investigation. | 8 | L5 | CO5 |

## Module 5

- |      |   |   |    |     |
|------|---|---|----|-----|
| 9 a) | Examine the use of forensics on a sample real life scenario.  | 8 | L4 | CO6 |
| b)   | Justify the importance of printer forensics.  | 6 | L5 | CO6 |
| c)   | Inspect the various mobile phone forensics tools based on its features as well as the various phases of forensics it can support. | 6 | L5 | CO6 |

## OR

- |      |  |   |    |     |
|------|--|---|----|-----|
| 10a) | Compare E-Discovery and Computer forensics.  | 8 | L4 | CO3 |
| b)   | Examine the importance of iPod forensics techniques under evidence handling and crime scene consideration. | 6 | L5 | CO3 |
| c)   | Justify the importance of smartphone forensics.  | 6 | L5 | CO3 |

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## Supplementary Semester End Examination October-2020

### DATA ANALYTICS

Duration: 3 hrs

Max. Marks: 100

**Answer five full questions choosing one complete question from each module.**

#### Module 1

- |   |   |    |     |
|---|---|----|-----|
| 1 a) Explain data marting concept with a neat diagram.              | 7 | L2 | CO1 |
| b) Design star schema for Indigo flight.                            | 7 | L3 | CO1 |
| c) Identify the differences between dimension table and fact table. | 6 | L3 | CO1 |

#### OR

- |  |   |    |     |
|--|---|----|-----|
| 2 a) Explain the different types of data analytics.  | 7 | L2 | CO1 |
| b) Design fact constellation schema for Columbia Asia hospital.  | 7 | L3 | CO1 |
| c) Use the knowledge of different type's data analytics and Illustrate why Amazon became a successful company. | 6 | L3 | CO1 |

#### Module 2

- |  |   |    |     |
|--|---|----|-----|
| 3 a) With a neat diagram, Explain the process of Massive Parallel processing in Vertica. | 6 | L2 | CO2 |
| b) Illustrate the columnar oriented feature of Vertica and also identify the advantages. | 7 | L3 | CO2 |
| c) Create the below table with proper constraints and solve the given queries.           | 7 | L6 | CO2 |

Doctor (DID, Docname, Designation, Hosp\_No, Salary, Years\_of\_Experience, Speciality)

Increase the salary of Professor whose experience is above 12 years by 20% of their salary.

List the doctor details whose salary is in range 70000-95000 but not an ENT nor a Cardiac specialist.

Display the specialty and the maximum, minimum salary paid for each specialty

#### OR

- |  |   |    |     |
|--|---|----|-----|
| 4 a) Explain advanced compression property of Vertica with suitable example.   | 6 | L2 | CO2 |
| b) Illustrate the features which makes Vertica as an analytical platform.      | 7 | L3 | CO2 |
| c) Create the below table with proper constraints and solve the given queries. | 7 | L6 | CO2 |

Patient(Pid, Pname, age, gender, disease, Doc\_No, Hosp\_no, Fees\_amount)

Display the details of male patients of age above 45 year who are suffering from dengue.

Decrease fees\_amount to be paid for children below 10 years by 5% of current fees\_amount.

Display the hospital\_no and no: of female patients got recorded in that hospital due to 'high fever'

**Module 3**

- |      |  |   |    |     |
|------|--|---|----|-----|
| 5 a) | Examine the differences between WOS and ROS.                       | 6 | L4 | CO3 |
| b)   | Illustrate the concept of database designer with relevant example. | 7 | L3 | CO3 |
| c)   | Categorize the projection types in Vertica.                        | 7 | L3 | CO3 |

**OR**

- |      |   |   |    |     |
|------|---|---|----|-----|
| 6 a) | Analyze how partitioning helps to improve Vertica's performance.            | 6 | L4 | CO4 |
| b)   | Illustrate the process of bulk loading in Vertica with appropriate example. | 7 | L3 | CO4 |
| c)   | Categorize the different modes with which DBD can be run in Vertica.        | 7 | L3 | CO4 |

**Module 4**

- |     |   |   |    |     |
|-----|---|---|----|-----|
| 7a) | Illustrate behavior analysis with suitable example. | 6 | L3 | CO5 |
| b)  | Evaluate the dashboard types based on its metrics.  | 7 | L5 | CO5 |
| c)  | Compare audience analysis and acquisition analysis. | 7 | L4 | CO5 |

**OR**

- |      |  |   |    |     |
|------|--|---|----|-----|
| 8 a) | Illustrate importance of web analytics with suitable example.      | 6 | L3 | CO5 |
| b)   | Justify whether KISS metrics can be used as a web analytical tool. | 7 | L5 | CO5 |
| c)   | Investigate Closed Loop model.                                     | 7 | L4 | CO5 |

**Module 5**

- |      |  |   |    |     |
|------|--|---|----|-----|
| 9 a) | Examine how big data analytics is used by weather.com      | 6 | L4 | CO6 |
| b)   | Classify the types of segmentation in Marketing analytics. | 7 | L3 | CO6 |
| c)   | Explain the steps to be followed in marketing analysis.    | 7 | L2 | CO6 |

**OR**

- |      |   |   |    |     |
|------|---|---|----|-----|
| 10a) | Examine how big data analytics is used by Xerox corp.             | 6 | L4 | CO6 |
| b)   | Use and explain the marketing strategy for AVIS-Budget Car Rental | 7 | L3 | CO6 |
| c)   | Explain the stages in target marketing strategy development.      | 7 | L2 | CO6 |