



VIT

Vellore Institute of Technology
CHENNAI

Reg. Number:

22BCE1138

Continuous Assessment Test (CAT) – I - JAN 25

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|----------------------------|---|--|--------------|---|------------------------------------|
| Program me | : | B.Tech (CSE) | Semester | : | Winter Semester 2024-2025 |
| Course Code & Course Title | : | BCSE415L - Human Computer Interaction | Class Number | : | CH2024250502029 CH2024250502036 |
| Faculty | : | Dr. J. Prassanna Dr. Vidhya Lakshmi M | Slot | : | C2+TC2 |
| Duration | : | 1½ Hours | Max. Mark | : | 50 |

General Instructions:

- Write only your registration number on the question paper in the box provided and do not write other information.

Answer all questions

| Q. No | Description | Marks |
|-------|--|-------|
| 1 | It is commonly stated that the human mind can remember 7 (\pm 2) chunks of information. Discuss the validity of this claim and provide two examples where it has been misapplied in computer interface design. | 10 |
| 2 | Assume that Indian Railways plans to develop 'Rail Yatri Guide,' a touchscreen kiosk serving as a single-point inquiry station for passengers. It will provide navigation assistance and access to various railway station facilities. As a user interface (UI) designer for this kiosk, develop a hierarchical task analysis (HTA) diagram for your UI design plan. Additionally, critically analyze the implications of Fitts' Law on the interface design. | 10 |
| 3 | <p>You are designing a user interface (UI) for an interactive learning platform that simulates a virtual science lab for high school students. The platform allows students to conduct experiments, analyze results, and collaborate in a virtual environment. In a chemistry experiment, students mix compounds, observe reactions, and record outcomes within the virtual lab.</p> <p>Design a suitable UI to meet these requirements and identify the essential input and output devices for an immersive and accessible learning experience. Justify your choices.</p> | 10 |

4



10

Examine the above provided website screenshot and identify the Norman's principles violated in its design. Explain how following these principles can improve user productivity and overall experience

5

In a dynamic travel website, users interact with the application for travel planning and booking. The interface should allow travelers to explore destinations, search based on preferences, plan itineraries, and complete bookings seamlessly. Users should also be able to browse flights, accommodations, and activities to create personalized travel experiences.

10

Considering the human problem-solving model, design and illustrate the hierarchical planning of the interface for this scenario.

***** All the best *****