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B.Tech DEGREE EXAMINATION, NOVEMBER 2023

Seventh Semester

18CSC461J - USABILITY DESIGN OF SOFTWARE APPLICATIONS

(For the candidates admitted during the academic year 2020 - 2021 & 2021 - 2022)

Note:

- i. **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
- ii. **Part - B** and **Part - C** should be answered in answer booklet.

Time: 3 Hours

Max. Marks: 100

PART - A (20 × 1 = 20 Marks)

Answer **all** Questions

Marks BL CO

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|--|---|---|---|
| 1. _____ refers to the relationship between controls and their effects in the world. | 1 | 1 | 1 |
| (A) Visibility | | | |
| (B) Affordance | | | |
| (C) Mapping | | | |
| (D) Conceptual | | | |
| 2. _____ tell the user when he has made some mistake. | 1 | 1 | 1 |
| (A) Program crash | | | |
| (B) System stuck | | | |
| (C) Error messages | | | |
| (D) Metadata | | | |
| 3. _____ minimizes errors. | 1 | 1 | 1 |
| (A) Affordance | | | |
| (B) Visibility | | | |
| (C) Constraints | | | |
| (D) Execution | | | |
| 4. What incorporates data, architectural, interface, and procedural representations of the software? | 1 | 1 | 1 |
| (A) design model | | | |
| (B) user's model | | | |
| (C) mental image | | | |
| (D) system image | | | |
| 5. Which one of the following tags is used to insert graphics in the webpage | 1 | 1 | 2 |
| (A) <image> | | | |
| (B) <images> | | | |
| (C) | | | |
| (D) <graphics> | | | |
| 6. URI is the acronym for | 1 | 1 | 2 |
| (A) Universal resource identifier | | | |
| (B) Unified resource identifier | | | |
| (C) Universal reference identifier | | | |
| (D) Unified reference identifier | | | |
| 7. WWW stands for | 1 | 1 | 2 |
| (A) wide world web | | | |
| (B) web world wide | | | |
| (C) world wide web | | | |
| (D) world web wide | | | |
| 8. Which program is used by web clients to view the web pages? | 1 | 1 | 2 |
| (A) Web browser | | | |
| (B) Protocol | | | |
| (C) Web server | | | |
| (D) Search Engine | | | |
| 9. Sub-tasks that work to solve the problem directly | 1 | 1 | 3 |
| (A) Revenue task | | | |
| (B) Excise task | | | |
| (C) Essential task | | | |
| (D) Necessary task | | | |
| 10. _____ engineering fields spend 80% of the time on accidental problems | 1 | 2 | 3 |
| (A) Mature | | | |
| (B) Software | | | |
| (C) Immature | | | |
| (D) Scientific | | | |
| 11. Excise tasks satisfy the needs of the tools or process, not the _____ | 1 | 1 | 3 |
| (A) Developer | | | |
| (B) User | | | |
| (C) Reviewer | | | |
| (D) Software engineer | | | |

12. A good flow chart should be	1	1	3
(A) Bi-directional			
(B) Multi-directional			
(C) Unidirectional			
(D) undirectional			
13. In PC Desktop and laptop keyboard shortcut for undo _____	1	1	4
(A) Control Z			
(B) Control X			
(C) Control Y			
(D) Control w			
14. Forms & Text Input allows visitors of the website or prototype is used	1	1	4
(A) To enter & submit information			
(B) To correct the information			
(C) To validate the information			
(D) To delete the information			
15. _____ is a process or a set of practices that ensure the security.	1	1	4
(A) Data security			
(B) Data integrity			
(C) Data validity			
(D) Data reinforcement			
16. Physical safety ensures	1	2	4
(A) that the devices on which the data is connected to front end.			
(B) that the devices on which the data is stored are safe from weather, fire, theft, and similar events.			
(C) that the devices on which the data is stored in cloud			
(D) that the devices on which the data is validated through third party			
17. Which of the following is not a mobile usability issue.	1	2	5
(A) Unresponsive gestures			
(B) Complex on boarding			
(C) Filling data repeatedly			
(D) Horizontal compatibility			
18. Analytical thinking is not about -----	1	1	5
(A) Practical foresight			
(B) Stagnation			
(C) Growth mindset			
(D) Prioritization			
19. _____ is about assigning leads to sales reps or nurturing lower priority needs.	1	1	5
(A) Process pain points			
(B) Support pain points			
(C) Financial pain points			
(D) Productivity pain points			
20. Which of the following is not a myth of usable security ?	1	1	5
(A) Usability is the same as user interface design			
(B) Usability and security conflict with each other			
(C) Usability is a necessity, not a luxury			
(D) The right process will lead to usable security			

PART - B (5 × 4 = 20 Marks)

Answer any 5 Questions

Marks BL CO

21. Identify, why people expect simplicity?	4	2	1
22. List the principles of psychopathology.	4	1	1
23. Write short notes on the confusion of correlation with causation.	4	1	2
24. Explain the state of mind on flow in user interfaces.	4	1	3
25. Discuss the techniques to avoid Excise.	4	2	3
26. Define data integrity.	4	1	4
27. Examine, Why critical thinking is important as a designer.	4	2	5

PART - C (5 × 12 = 60 Marks)

Answer all Questions

Marks BL CO

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|-----|---|----|---|---|
| 28. | (a) Summarize mental models and different aspects of mental models. | 12 | 2 | 1 |
| | (OR) | | | |
| | (b) Explain the principle of mapping with examples. | | | |
| 29. | (a) Explain the six ways of Scientific test to Acquire Knowledge. | 12 | 3 | 2 |
| | (OR) | | | |
| | (b) Evaluate the Correlation and Causality | | | |
| 30. | (a) Discuss on how user interface must help user's navigation and list the benefits of navigation. | 12 | 3 | 3 |
| | (OR) | | | |
| | (b) Describe in detail about Essential and Accidental problems and given an example problem to narrate the Excise Task. | | | |
| 31. | (a) Illustrate about navigation tools available in design area. | 12 | 2 | 4 |
| | (OR) | | | |
| | (b) Summarize about undo in GUI. | | | |
| 32. | (a) Describe usable security. Explain the need of focusing on usable security. | 12 | 2 | 5 |
| | (OR) | | | |
| | (b) Explain the principles that can be taken into consideration to improve mobile usability. | | | |

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