Question Paper Code	13175

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024

Seventh Semester

Computer Science and Business Systems

20CBPC701 - USABILITY DESIGN OF SOFTWARE APPLICATIONS

Regulations - 2020

Duration: 3 Hours   Max. Marks: 100

PART - A (MCQ) (20 × 1 = 20 Marks)
Answer ALL Questions

		Marks	K – Level	CO
1.	Which phase in the design thinking process involves defining the problem and understanding the user's needs?	1	K1	CO1
	(a) Ideation (b) Prototyping (c) Empathize (d) Test			
2.	What does the term "Prototype" mean in design thinking?	1	K1	CO1
	(a) Final product (b) Preliminary model (c) Project documentation (d) User feedback			
3.	Which of the following factors is holistically responsible for the economic success of a business?	1	K1	CO1
	(a) marketing (b) design (c) manufacturing (d) Product development			
4.	There are _____ specific dimensions which are commonly used to assess the performance of a product development effort.	1	K1	CO1
	(a) Five (b) Six (c) Seven (d) eight			
5.	What allows designs to be refined based on feedback?	1	K1	CO2
	(a) focus (b) iteration (c) Usability (d) experience			
6.	When testing designs with users who should you use?	1	K1	CO2
	(a) management (b) Family & Friends (c) Typical users (d) Most critical users			
7.	Which of the following tells us that how the system actually works?	1	K1	CO2
	(a) System image (b) User model (c) Design model (d) Evaluation			
8.	What are the notations for the use case Diagram?	1	K1	CO2
	(a) Use case (b) Actor (c) Prototype (d) Use case and Actor			
9.	Identify the term which is used to define testing?	1	K1	CO3
	(a) Finding broken code (b) Stage of all projects			
	(c) Evaluating deliverables to find errors (d) Finding the use case			
10.	Identify the correct measure for correctness.	1	K1	CO3
	(a) Errors per KLOC (b) $ per KLOC (c) Defects per KLOC (d) & per KLOC			
11.	The latest HTML standard is _____	1	K1	CO3
	(a) XML (b) SGML (c) HTML 4.0 (d) HTML 5.0			
12.	Which window in VBA Is used to write code?	1	K1	CO3
	(a) Property window (b) Code editor window (c) Frame window (d) Form window			
13.	"UX" Stands for _____	1	K1	CO4
	(a) User Exchange (b) User Expression (c) User Engine (d) User Experience			
14.	UX designer is like an _____	1	K1	CO4
	(a) architect (b) engineer (c) developer (d) Decorator			
15.	What is the term for a low-fidelity representation of a product's layout and functionality?	1	K1	CO4
	(a) Prototype (b) User persona (c) Wireframe (d) Interface design			
16.	_____ determines the visual form on the screen.	1	K1	CO4
	(a) Strategy (b) Scope (c) Skeleton (d) Surface			
17.	Which of the model is based on prototyping and iterative development?	1	K1	CO5
	(a) Waterfall model (b)Spiral mode (c)V- Shaped model (d) RAD model			

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **13175**

18. Rapid application development (RAD) which phase is used for adding, modifying, deleting, or retrieving a data object? | 1 | K1 | CO5
   (a) Business modeling   (b)data modeling   (c) process modeling   (d) testing
19. A sharing of meanings defines _____ | 1 | K1 | CO5
   (a) promotion   (b) information   (c) noise   (d) interference
20. Which of the following is not the stage of new product development? | 1 | K1 | CO5
   (a) idea generation   (b) Business analysis   (c) Test marketing   (d) Positioning

PART - B (10 × 2 = 20 Marks)
Answer ALL Questions

21. Define User Centered Design.	2	K1	CO1
22. List out few examples of successful Human-Centered Design.	2	K1	CO1
23. Why Heuristic evaluation is considered as a valuable method in the design process?	2	K1	CO2
24. What are the limitations of heuristic evaluation?	2	K1	CO2
25. What are the main goals of web based user centered design?	2	K1	CO3
26. Define Construction.	2	K1	CO3
27. Compare User interview and Usability Testing.	2	K2	CO4
28. Name some common challenges faced in UX research.	2	K1	CO4
29. How can scenarios help identify user needs and pain points?	2	K1	CO5
30. How do you create a realistic scenario for a specific user group?	2	K1	CO5

PART - C (6 × 10 = 60 Marks)
Answer ALL Questions

31.	a)	Explain about the different process analysis tools with example.	10	K2	CO1

OR

	b)	Elaborate the different scenarios and personas of different use cases with an example	10	K2	CO1

32.	a)	Compare and contrast inspection, analysis, and models as methods of evaluation in interactive design.	10	K2	CO2

OR

	b)	Infer heuristic evaluation with main purpose in usability testing and explain its limitations.	10	K2	CO2

33.	a)	Develop an application in E-Commerce and its related website or mobile app to redesign.	10	K3	CO3

OR

	b)	Select any one web application for developing prototyping model.	10	K3	CO3

34.	a)	Relate the Research Techniques involved in UX design.	10	K2	CO4

OR

	b)	Explain the user experience goals UI team has to prioritize. How would achieving these goals impact user satisfaction?	10	K2	CO4

35.	a)	Explain the five stages of Design Thinking: Empathize, Define, Ideate, Prototype, and Test. For each stage, explain how you would apply it in your project, including specific activities or methods you would use.	10	K2	CO5

OR

b)	Compare the advantages and disadvantages of using low-fidelity vs. high-fidelity prototypes in usability testing with personas?	10 K2 CO5

36. a) i) Rephrase the Competitive Analysis framework for evaluating the strengths and weaknesses of three fitness apps.   5   K2   CO4

     ii) Summarize the key principles of effective design techniques, such as simplicity, functionality, and user engagement.   5   K2   CO5

OR

b) i) Classify the different methods to understand how users interact with the app in their daily environment.   5   K2   CO4

     ii) Relate the steps involved in the brainstorming phase of design thinking and how it contributes to innovation.   5   K2   CO5