

<b>Uka Tarsadia University (Diwaliba Polytechnic)</b>
<b>Diploma in Computer Engineering</b>
<b>Assignment (UI and UX design)</b>

### **Unit 1: Introduction to User Experience**

1. What is UX?
2. Difference between UX designer and UI (Graphic) designer.
3. Explain user experience in detail with proper example.
4. Write the advantages of UX.
5. What is the importance of UX?
6. What is the role of UX designer?
7. Explain interaction design and information architecture.
8. What is mental model? Also write down applications of mental model.
9. Explain human computer interaction.
10. Explain UX Deliverables.
11. Explain services of mental model.
12. Explain user interaction with product.
13. Explain five dimensions of interaction design?
14. Which are the services of mental model?
15. Write down elements of UX design? Explain two of them.

### **Unit 2: Elements of UX Design**

1. Draw the figure for core elements of UX.
2. Explain any three core elements of UX.

3. Explain interaction design and information architecture.
4. Write down benefits of good interaction design and good information architecture.
5. What is competition analysis?
6. Explain common methods for user research in UX?
7. What is card sorting?
8. How UX elements work together?
9. Draw the figure of user experience process and methodology.
10. Explain research methods with example.
11. What is Wireframing?
12. What is personas?
13. Explain function requirements and content requirements with example.
14. What is usability testing?
15. What is A/B testing and multivariate testing?
16. List down User research tools.
17. Write down use of Google drive.

### **Unit 3: Process of UX Design**

1. What is Z-Pattern and F-Pattern?
2. What is fold?
3. List out categories of User interface elements.
4. Explain Primary and Secondary button.
5. List out five principle of Visual Design Principle.
6. Explain input controls with example.

7. What is a Storyboard?
8. What is a storyboarding in context of UX design?
9. What is widget? Explain menu widgets with example.
10. Explain data widgets and visualization widgets with example.
11. What is Screen layout? List out different types of layout.
12. Explain following layouts.
  - a. Single column
  - b. Split screen
  - c. Magazine layout
  - d. Fixed sidebar
  - e. Featured image
  - f. Boxes layout
  - g. F-shape layout

#### **Unit: 4 Prototyping and Testing of UX design**

1. What is test case?
2. What is test scenario?
3. Write down test case for Login page.
4. Write down test case for registration page.
5. Which information is included while drafting a test case?
6. Explain Experience based technique.
8. What is User Interface Test case?
9. What is functionality test case?

10. What is performance test case?

11. Explain following terms:

- a. Integration test case
- b. Usability test case
- c. Database test case
- d. Security test case
- e. User acceptance test case

13. Explain the following terms.

- a. Moderated In-person
- b. Moderated person

14. Explain planning of usability testing.

### **Unit 5: UI in the software process**

- 1. Why you should use iterative design?
- 2. Enlist the principles of robustness.
- 3. What exactly is iterative design?
- 4. Explain UI design standard.
- 5. Write a short note on types of user interface.
- 6. Discuss the principles to support usability.
- 7. Give the characteristics of successful user interfaces.
- 8. Explain user interface design process.
- 9. Explain software life cycle with proper diagram.
- 10. Enlist the principles of learnability.

11. What is design rationale? Enlists its types.
12. What is the difference between a UX designer and a usability engineer?

### **Unit 6: Prototyping Models**

1. Write a short on 5-second usability testing.
2. Enlist the test metrics.
3. Explain 5-step process for usability testing.
4. Explain black-box test Case design techniques.
5. Enlist different prototyping tools.
6. Discuss best practice for writing good test case example.
7. Define the following terms.
  - a. Critical error
  - b. Non-Critical error
8. Explain test case design techniques.
9. How to write the usability test report?
10. Write a short note on quantitative data analysis.
11. Explain specification-based techniques.
12. Design a test case for login page.
13. Explain elements of test plan.
14. Define the following terms.
  - a. EP
  - b. BVA