PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2023 - 24 Examination

Semester: 2
Subject Code: 303105152
Subject Name: Design thinking

Date: 07/06/2024
Time: 2:00 pm to 4:30 pm
Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Q1 to Q5 are MCQ , Q6 to Q9 are Fill in the Blanks, Q10 to Q15 are   (15)
very short answers type questions.All are compulsory and Each of one mark)

1. Which of the following stages is not typically part of the Design Thinking process?
   (a) Ideation
   (b) Implementation
   (c) Prototyping
   (d) Evaluation

2. A person with a growth mindset believes that:
   (a) Intelligence and abilities are fixed and unchangeable.
   (b) Effort and practice can lead to improvement in skills and abilities.
   (c) Success is solely determined by natural talent.
   (d) Challenges are best avoided.

3. Which testing technique focuses on finding defects by executing the software with various inputs?
   (a) White-box testing
   (b) Black-box testing
   (c) Regression testing
   (d) Unit testing

4. Which of the following is NOT a best practice for conducting a successful ideation session?
   (a) Criticizing ideas during the brainstorming stage.
   (b) Encouraging a playful and creative atmosphere.
   (c) Setting a clear problem statement or challenge.
   (d) Building on and combining ideas from others.

5. What is the role of prototyping in the product design process?
   (a) To finalize product specifications
   (b) To identify and address design flaws early
   (c) To mass-produce the product
   (d) To market the product to potential customers

6. A(n) _____ is a fictional character representing a target user group with detailed information about their demographics, needs, goals, and behaviors.

7. Effective communication is key to building strong _____ and fostering trust within teams and organizations.

8. _____ is a prototyping tool which would be most suitable for quickly capturing the basic layout and user flow of a mobile app.

9. Effective problem statements clearly define the _____ of the problem and its significance or impact.

10. What is a fixed mindset?

11. How does empathy play a role in design thinking?

12. What is the core principle of sustainable development?

13. What are the key components of a project management plan?

14. What do you understand by term Design for disassembly (DFD)

15. What are the benefits of effective resource planning for an organization?

Q.2 Answer the following questions. (Attempt any three) (15)

A)How does the growth mindset contribute to the problem-solving approach?

B)Why it is beneficial to involve multiple people in creating an empathy map?

C) How can design for disassembly benefit the environment?

D) What are some key characteristics of an innovation management culture that fosters design thinking?

Q.3 A) Explain in detail the overview of Design Thinking Phases. (07)

B) Explain the role of a business plan in fostering a culture of innovation within a project. How can a (08) business plan be adapted to accommodate the iterative nature of the Design Thinking process?

OR

B) Discuss the potential future trends and developments within the field of Design Thinking and (08) Innovation Management. How can these approaches be used to address complex challenges in various industries?

Q.4 A) Briefly explain the role of prototyping in design thinking and how it helps in developing innovative (07) solutions.

OR

A) Explain Role of Effective Communication and its importance? (07)

B) What is Sustainable Development and why is it crucial in Today's World? (08)