

SAMPLE PAPERS
DIPLOMA FIFTH SEMESTER EXAMINATION 2025 (JUT)
DESIGN THINKING
DIPLOMA WALLAH

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(MADE WITH ❤️ BY SANGAM)

Full Marks: 70 marks | Time: 3 Hours

Instructions:

- Question No. 1 is compulsory.
- Answer any **FOUR** questions from the remaining (Q.2 to Q. 7 marks).

Q.1 Multiple Choice Questions (Compulsory)

(7 Questions × 2 Marks = 14 Marks)

1. Which design rule states that "all design activity is fundamentally social"?
 - A) The Ambiguity Rule
 - B) The Human Rule
 - C) The Re-design Rule
 - D) The Tangibility Rule
2. In Design Thinking, "Empathy" is best defined as:
 - A) Sympathizing with the user's financial status
 - B) The ability to understand and share the feelings of others
 - C) Analyzing statistical data about populations
 - D) Marketing a product effectively
3. Scenario Planning involves creating stories about:
 - A) Past failures
 - B) Competitor history
 - C) Multiple potential futures (e.g., Best-Case, Worst-Case)
 - D) Employee performance
4. Which tool is specifically used to visualize the user's process, touchpoints, and pain points over time?
 - A) Empathy Map
 - B) Journey Map

- C) Mind Map
 - D) Affinity Diagram
5. "Frog Design" in the context of this syllabus relates to:
- A) Biological studies
 - B) Prototyping and creating tangible rough versions
 - C) Financial auditing
 - D) Human resource management
6. Which skill involves the belief that a solution is possible despite constraints?
- A) Optimism
 - B) Skepticism
 - C) Rationalism
 - D) Analysis
7. "Integrative Thinking" allows a Design Thinker to:
- A) Ignore contradictory ideas
 - B) Focus on one solution only
 - C) See all aspects of a problem and create novel solutions
 - D) Separate the team into isolated units
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Q.2

- (A) Explain the Basis for Design Thinking. Discuss the essential Design Thinking Skills required for an individual or a team. (7 Marks)
- (B) Define Design Thinking and explain in detail the Principles of Design Thinking. (7 Marks)

Q.3

- (A) Elaborate on the Design Thinking Frameworks used in the industry. Explain the complete process flow. (7 Marks)
- (B) What are Ideation Tools? Explain the techniques of Brainstorming and Innovation Heuristics in detail. (7 Marks)

Q.4

- (A) Define and explain the practical application of Empathy Map, Affinity Diagram, and Journey Map. (7 Marks)
- (B) Explain the process of Listening and Empathizing in Design Thinking. Describe the difference between Structured and Open-Ended Approaches. (7 Marks)

Q.5

- (A) Explain the core function and output of Frog Design (in the context of prototyping). (7 Marks)

(B) What are the key characteristics of a successful Design Thinking Workshop or Meeting? (7 Marks)

Q.6

(A) Write a short note on the importance of identifying and mitigating bias when assessing developer and user perspectives. (7 Marks)

(B) Explain the role of Storytelling in communicating innovation concepts and the process of Scenario Planning. (7 Marks)

Q.7 Short Notes (Answer Any FOUR)

(4 × 3.5 Marks = 14 Marks)

- A) Difference between Empathy Map and Journey Map
- B) Evaluation Tools used after scenario development
- C) Combining ideas into complex innovation concepts
- D) Role of a Design Thinking Team
- E) Cognitive Fixedness



SOLUTIONS: SAMPLE PAPER 2**Q.1 MCQ Answer Key**

1. **B** (The Human Rule)
2. **B** (The ability to understand and share the feelings of others)
3. **C** (Multiple potential futures)
4. **B** (Journey Map)
5. **B** (Prototyping and creating tangible rough versions)
6. **A** (Optimism)
7. **C** (See all aspects of a problem and create novel solutions)

Theory Solutions (Hints/Model Content)**Q.2 (A) Basis & Skills:**

- See Paper 1 Q3(A). Focus on Feasibility/Viability/Desirability and Empathy/Optimism.

Q.2 (B) Principles:

- See Paper 1 Q2(A). Focus on Human, Ambiguity, Re-design, Tangibility rules.

Q.3 (A) Frameworks:

- 5 Stages: Empathize -> Define -> Ideate -> Prototype -> Test. Explain inputs/outputs of each.

Q.3 (B) Ideation Tools:

- Brainstorming (Volume, No judgment). Heuristics (Rules of thumb for novelty).

Q.4 (A) Maps:

- *Empathy*: User internal state. *Affinity*: Organizing data. *Journey*: Timeline of experience.

Q.4 (B) Listening/Observation:

- Structured (Validation) vs Open-Ended (Discovery).

Q.5 (A) Frog Design:

- Relates to prototyping; creating tangible/rough versions to test assumptions early³⁹.

Q.5 (B) Workshops:

- Collaborative sessions, exercises, case-based discussions to identify new models⁴¹.

Q.6 (A) Bias:

- Developer (Feasibility focus) vs User (Desirability focus). Mitigate via maps/diagrams/testing.

Q.6 (B) Storytelling:

- Contextualizes the solution. Scenario planning tests the solution against future contexts.

Q.7 Short Notes:

- (A) Empathy = Attitude/State (Say/Think). Journey = Process/Time.
- (B) Test robustness against scenarios (e.g., market shifts).
- (C) Maps help identify patterns to create holistic solutions.
- (D) Cross-functional, collaborative.
- (E) Mental block; breaking assumptions.

