

Post Graduate Diploma in Management (Hospital & Health Management)

PGDM – 2023-25 Batch

2nd Year – 4th Semester End Examination

Subject & Code	: Design Thinking and Implementation of Digital Interventions-HIT 716	Reg. No.:
Semester & Batch	: IV, 2023-25	Date : 13-02-2025
Time & Duration	: 10:30 A.M.-01:30 P.M. (3 Hrs.)	Max. Marks : 70

Instructions:

- Budget your time as per the marks given for each question and write your answer accordingly.
 - Don't write anything on the Question Paper except writing your Registration No.
 - Mobile Phones are not allowed even for computations.
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Part A: Q.1 to Q.10 all questions are compulsory (10 X 2 Marks = 20 Marks)
One liner, MCQs, True/False

1. Design Thinking is:
(a) Thinking about Design
(b) Designing ways in which people think
(c) Asking users to solve problems
(d) Defining, framing, and solving problems from users' perspectives
2. What are the steps of the design thinking process?
(a) Understand > Draw > Ideate > Create > Test
(b) Empathise > Define > Ideate > Prototype > Test
(c) Empathise > Design > Implement > Produce > Test
(d) Understand > Define > Ideate > Produce > Try
3. Design Thinking is a Linear Process. True or False
(a) True
(b) False
4. A medical college is redesigning its website. Current students are the main users of the website. Which one of the elements below should be on the website?
(a) College rules and regulations
(b) Information on faculty members
(c) Information about courses
(d) Alumni details

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5. Aravind Eye Care System (AECS), an Indian eye care provider for millions of low-income people, has long used design thinking in its approach. Which of the following statements are examples of design thinking at AECS?

- (a) AECS provides buses from remote locations to the AEC centre to provide transportation to its users, the poor people, as they can't afford these
- (b) AECS has developed a manufacturing facility that enables providing lenses at a fraction of the cost of the market price
- (c) AECS has been using telemedicine trucks to enable expert advice from doctors at hospitals
- (d) All of the above

6. Design Thinking typically helps in _____

- (a) Innovation
- (b) Data Analytics
- (c) Financial Planning
- (d) Operational Efficiency

7. You would interview people to gain an understanding of how they feel during the ... Stage of Design thinking

- (a) Prototype
- (b) Define
- (c) Ideate
- (d) Empathise

8. The “Diverge” phase in Design Thinking is related to:

- a) Analyzing data
- b) Narrowing down ideas
- c) Generating multiple ideas
- d) Testing prototypes

9. In Design Thinking, what does the “Prototype” stage involve?

- a) Finalizing the design for production
- b) Developing a working model of the solution
- c) Conducting user testing
- d) Collecting feedback from stakeholders

10. During the “Test” stage in Design Thinking, what should be evaluated?

- a) The efficiency of the team
- b) The project's timeline and budget
- c) The feasibility of the prototype
- d) The performance of the product in the market

Part B: Q.11 to Q.15 attempt any four questions (4 X 5 Marks = 20 Marks)

Short Notes

11. Describe the empathize stage of design thinking

12. A digital application is proposed by the government for IMNCI monitoring. Which approach user centered design or design thinking, would be suitable and why?

13. Compare and contrast User Centered Design and Design Thinking?

14. Nurses can be crucial contributors to antibiotic stewardship programs (ASPs), interventions aimed at improving antibiotic use, but nurse empowerment in ASPs adds to their job complexity. Nurses work in complex settings with high cognitive loads, which ask for easily accessible information. An information application (app) was developed in Apollo to support nurses in ASPs. The efficiency, effectiveness, and user satisfaction regarding this antibiotic app were tested in a pilot study through scenario-based approach. Provide two scenarios that can help in this case to test the app.

15. The RASCO hospital complex consists of three units in which about 600 thousand procedures are made a year. Most of these are made by the Unified Public Health System (SUS). With around 1000 workers and 260 doctors in its staff the hospital holds 25 thousand chemotherapy procedures, 32 thousand hemodialysis sessions and over 27 thousand pediatric appointments. What steps should be taken by the hospital to create empathy with the users.

Part C: Q.16 to Q.19 attempt any three questions (3 X 10 Marks = 30 Marks)

Long Notes

Case study performed in an Orthopedic Hospital at Nagpur. General information about the hospital is an Orthopedic Hospital having Radiology, pathology, physiotherapy departments and operation hall having 10 bed capacities. Working shifts are three, 6 hrs, 6hrs and 12 hrs. First shifts and second shifts have 4 staff members each and last shift has 2 nurses. Along with this there is one main doctor and an assistant doctor. The hospital as explained above works in three shifts. The lunch breaks as well as other necessary breaks for the working staff are covered by another staff. Total 45 hospital visits happen in a day on average. The process starts with arrival of the patient in the hospital. Before checkup, patient must enter his name and address in the register record. After registration patient waits for the evaluation by the doctor.

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After evaluation by the doctor or if required or to confirm whether bone is fracture or patient send to radiology department for X-Ray. After X-ray process patient is advised for further treatment if fracture occurs, if not then patient gets discharged. The treatment includes plastering of fractured bone or last stage will be surgery.

Processes Cycle.	Time (min)
1. Registration	5
2. Evaluation	15
3. X-Ray & Evaluation	15
4. Plaster	30
5. Physiotherapy	20

Q16. Identify the problem in the current process (Hint do not consider surgery step). Suggest improvements. What is the value in terms of time saved based on the improvements suggested by you.

Q17. Draw a patient journey map for the above case

Q18. The hospital is interested in developing a digital solution to reduce the waiting time of the patients through the entire visit. Draw a prototype for a possible solution using wireframe.

Q19. Visualize yourself as an orthopedic patient with fractured arm. Empathize as a patient going through the journey towards plaster (no surgery). Develop an empathy map with minimum 3 questions in each quadrant.