

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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First / Second Semester B.E. Degree Summer Semester Examinations, September/October 2025

INNOVATION AND DESIGN THINKING

Duration: 1 hr

Max. Marks: 50

Instructions to the Candidates:

- All questions are compulsory
- Each question carries 1 mark
- Use only black ball point pen
- Darkening two circles for the same question makes the answer invalid
- Damaging/overwriting, using whiteners on the OMR are strictly prohibited.

Q.NoQuestion

- 1 What is the first step in the design process?
A. Ideation B. Conceptualization C. Planning D. Research
- 2 What is the ultimate goal of the design thinking process?
A. To create visually appealing designs B. To solve complex problems
C. To make a profit D. To gain a large following
- 3 What is gamification in the context of design thinking?
A. the use of game design principles in non-game contexts
B. the use of design thinking principles in game development
C. the use of virtual reality in design thinking
D. the use of agile methodology in game design
- 4 What is the purpose of the Define stage in design thinking?
A. To generate new ideas B. To understand the user's needs
C. To finalize the design D. To gather feedback
- 5 How does a shared model benefit the team?
A. It promotes individual ownership of ideas B. It eliminates the need for collaboration
C. It allows for better communication and understanding D. It hinders the design process
- 6 What is the benefit of a non-linear process in design thinking?
A. It allows for flexibility and adaptability B. It speeds up the design process
C. It ensures a consistent outcome D. It eliminates the need for iteration
- 7 Which of the following is not a design principle?
A. Balance B. Contrast C. Emphasis D. Financial
- 8 Which of the following companies is known for using design thinking in its product development process?
A. Apple B. Walmart C. Exxon Mobil D. Coca-Cola
- 9 What is the primary goal of applying design thinking to business process modeling?
A. To simplify and streamline processes B. To add more complexity to processes
C. To change the way processes are performed D. To make processes more time-consuming
- 10 Who wrote the book "Change by Design", which helped popularize design thinking in the business world?
A. Tim Brown B. David Kelley C. Roger Martin D. John Maeda

- 11 Why is a shared model important in team-based design?
A. It allows for individual ownership of ideas
B. It promotes competition among team members
C. It encourages collaboration and shared ownership of ideas
D. It eliminates the need for communication
- 12 What is the role of a shared model in the design process?
A. To identify issues and opportunities for improvement
B. To speed up the design process
C. To ensure a consistent outcome
D. To provide a visual representation of the design solution
- 13 What tools are commonly used in assumption testing in design thinking?
A. Surveys and user interviews
B. Mind mapping and brainstorming
C. Gantt charts and project management software
D. A/B testing and usability testing
- 14 What are some examples of asynchronous communication tools?
A. Email
B. Instant messaging
C. Video conferencing
D. Face-to-face meetings
- 15 What is low material abstraction in research vehicle design?
A. The use of expensive materials in the vehicle
B. The simplification of the vehicle design
C. The complexity of the vehicle design
D. The use of materials that are not traditionally used in vehicle design
- 16 Which of the following is a key element of design thinking
A. Planning
B. Analysis
C. Empathy
D. Advertising
- 17 How can collaborative creation of hand drawings be used to communicate design concepts to non-designers?
A. By using technical jargon
B. By using simple, easy-to-understand visual aids
C. By relying on verbal explanations
D. By using complex design software
- 18 Which of the following is not a tool for enabling collaboration in digital design spaces?
A. Virtual reality
B. Online project management software
C. Email
D. Face to face meetings
- 19 Which of the following is not a stage in the design thinking process?
A. Ideation
B. Testing
C. Implementation
D. Documentation
- 20 What are some common methods for conducting user research in the empathize stage?
A. Surveys and questionnaires
B. Interviews and observations
C. Focus groups
D. All of these
- 21 What are some common pitfalls to avoid in the empathize stage?
A. Making assumptions about the user
B. Not asking enough questions
C. Not observing the user's behavior
D. All of these
- 22 What tool is used to generate and organize ideas in design thinking?
A. Empathy mapping
B. Mind mapping
C. Storyboarding
D. Sketching
- 23 What activities does a value chain analysis typically include in design thinking?
A. Inbound logistics
B. Operations
C. Outbound logistics
D. All of these
- 24 What is the most critical success factor for Agile in virtual collaboration environment?
A. Adherence to processes
B. Clear communication
C. Empowerment of team members
D. Trust and transparency
- 25 What are some common methods for testing solutions in design thinking?
A. Surveys
B. User interviews
C. Focus groups
D. All of these
- 26 What are the two main components of a hypothesis in design thinking?
A. Problem statement and solution
B. Assumptions and predictions
C. Data and analysis
D. Ideation and implementation

- 27 Who is the primary audience for an MVP?
A. Early adopters B. Mainstream consumers C. Industry experts D. Investors
- 28 What is the most important aspect of design thinking in agile software development?
A. Speed B. Control C. User-centered approach D. Quality
- 29 What is the importance of collaboration in a non-linear design process?
A. It ensures a perfect solution B. It eliminates the need for feedback
C. It speeds up the design process D. It allows for different perspectives and ideas
- 30 Which of the following is not a common method for gathering information about a business Challenge?
A. surveys B. interviews C. observations D. guesswork
- 31 How can intense discussion be used to communicate design concepts to non-designers?
A. By using technical jargon B. By using simple, easy-to-understand visual aids
C. By relying on verbal explanations D. By using complex design software
- 32 Which design thinking method is most closely related to storytelling?
A. mind mapping B. brainstorming C. visualization D. story boarding
- 33 How can regular real-time collaboration moments be scheduled and managed?
A. By relying on a shared calendar B. By having regular virtual meetings
C. By having a designated project manager D. All of the above
- 34 What is the main goal of gamification in design thinking?
A. to make the design process more fun and engaging
B. to create games that are visually appealing
C. to increase user engagement and motivation
D. to make the design process more efficient
- 35 What is the relationship between motivation and job satisfaction?
A. Positive correlation B. Negative correlation
C. No correlation D. It depends on the individual
- 36 What is strategic foresight in design thinking?
A. A method of predicting future trends B. A technique for generating new ideas
C. A process for creating prototypes D. A tool for conducting user research
- 37 What is the main objective of growth design thinking?
A. to improve user experience B. to develop new products and services
C. to drive business growth and expansion D. to reduce operational costs
- 38 Which of the following is a potential benefit of standardization?
A. increased flexibility B. reduced quality control C. cost savings D. customized solutions
- 39 What is the impact of design thinking on the user experience in IT?
A. Improved user engagement B. Enhanced user satisfaction
C. Increased user adoption D. All of the above
- 40 Which of the following is a common type of rapid prototyping?
A. low-fidelity prototyping B. high-fidelity prototyping
C. mid-fidelity prototyping D. none of the above
- 41 Which of the following is not a common tool used in experience design?
A. wireframes B. storyboards C. mood boards D. spreadsheets
- 42 What is the role of iteration in the design thinking process?
A. To repeat the same step multiple times B. To finalize the design quickly
C. To test the design only once D. To improve the design
- 43 How many hypotheses can be tested during a single design thinking project?
A. One B. Two C. Three D. Multiple
- 44 What can be included in a mind map in design thinking?
A. Text B. Images C. Links and notes D. All of these

- 45 What are some common methods for generating ideas in the Ideate stage?
A. Brainstorming B. Mind mapping C. SCAMPER D. All of these
- 46 What is the main goal of design thinking in information technology?
A. Efficiency B. Innovation C. Cost-effectiveness D. All of these
- 47 Who is known as the "father of design thinking"?
A. Tim Brown B. David Kelley C. Roger Martin D. Richard Buchanan
- 48 What is the most important aspect of Agile in virtual collaboration environment?
A. Process B. Tools C. People D. Technology
- 49 What tool is used to visually organize and brainstorm ideas in design thinking?
A. Mind maps B. Empathy maps C. Journey D. PEST analysis
- 50 In the context of growth design thinking, what is a "Minimum viable product"?
A. a product that has every feature and function that customer might want
B. a product that is only partially developed and lacks many key features
C. a product that is fully developed and optimized for launch
D. a product that has been discontinued due to lack of customer interest
