ENT101- INNOVATION QUESTIONS:
30 MCQs.
0.5 marks each.
Negative marks for wrong answers.

1. What is the first stage in the design process?
    a) Ideation
    b) Research
    c) Problem Definition
    d) Prototype Development

2. User personas are primarily used in which stage of the design process?
    a) **Empathize**
    b) Define
    c) Ideate
    d) Test

3. Which method is commonly used for ideation?
    a) Surveys
    b) **Brainstorming**
    c) Usability Testing
    d) Quality Assurance

4. In design thinking, 'empathy' helps to:
    a) Define budget constraints
    b) **Understand the user's needs and experiences**
    c) Develop marketing strategies
    d) Choose suitable materials for production

5. Which of these is not typically a characteristic of a good design?
    a) User-friendly
    b) Aesthetically pleasing
    c) **Complexity for the sake of complexity**
    d) Sustainable

6. In the design process, 'prototyping' is essential for:
    a) Final product launch
    b) **Testing and refining ideas**
    c) Market analysis
    d) Cost estimation

7. SCAMPER is a technique used for:
    a) Cost analysis
    b) **Idea generation and problem-solving**
    c) Quality control
    d) Risk assessment

8. 'Sustainability' in design refers to:
    a) Long-term economic viability
    b) **Creating products that do not deplete resources or harm the environment**
    c) Continual profitability
    d) The ability to keep a product in the market for a long time

9. Which element is not typically included in a design brief?
    a) Target audience
    b) Budget constraints
    c) **Personal opinions**
    d) Project objectives

10. What does 'iteration' mean in the design process?
    a) Using the latest technology in design
    b) **Repeating stages to refine and improve the product**
    c) Starting a new project
    d) Implementing user feedback

11. In design, 'constraints' are:
    a) Always negative impacts on the design process
    b) **Limitations or requirements that must be adhered to**
    c) Only related to budget issues
    d) Ignored in the brainstorming phase

12. Which of the following is a primary purpose of prototyping?
    a) Mass production
    b) **Testing and validating design concepts**
    c) Final product packaging
    d) Long-term usage study

13. 3D printing is an example of which type of prototyping?
    a) Subtractive manufacturing
    b) **Additive manufacturing**
    c) Formative manufacturing
    d) Reactive manufacturing

14. Rapid prototyping is important because it:
    a) Reduces the need for user testing
    b) **Allows quick iteration and feedback**
    c) Always reduces the cost of development
    d) Eliminates the need for design documentation

15. CAD software is typically used for:
    a) Cost analysis
    b) **Creating detailed 3D models for prototyping**
    c) Market research

d) Writing code for software prototypes

16. 'Paper prototyping' is most useful for testing:
    a) Mechanical properties
    b) **User interfaces and user experiences**
    c) Electrical circuits
    d) Aerodynamic properties

17. Which is an advantage of digital prototyping over physical prototyping?
    a) Higher cost
    b) **Faster iteration cycles**
    c) More accurate user testing
    d) Better haptic feedback

18. A 'proof of concept' prototype is used to:
    a) Finalize the product's aesthetic design
    b) **Demonstrate the feasibility of a key functional element**
    c) Conduct extensive user testing
    d) Determine the final cost of production

19. The main purpose of 'mock-ups' in prototyping is to evaluate:
    a) Technical functionality
    b) **Design and aesthetics**
    c) Long-term durability
    d) Cost-effectiveness

20. 'Iterative prototyping' involves:
    a) Using only digital models
    b) Focusing on a single prototype version
    c) **Repeatedly refining prototypes based on feedback**
    d) Outsourcing prototype development

21. Disruptive Innovation is best described as:
    a. Incremental improvements to existing products
    b. **Creating a new market by displacing existing market leaders**
    c. Diversification of a company's product line
    d. Expanding into international markets

22. Radical Innovation typically involves:
    a) Small improvements in existing technology
    b) **Fundamental changes and breakthrough technologies**
    c) Changing the packaging of products
    d) Modifying marketing strategies

23. Tata Nano is an example of which type of innovation?
    a) Sustaining Innovation
    b) Disruptive Innovation

c) **Frugal Innovation**
d) Process Innovation

24. Incremental Innovation in a company usually results in:
    a) Creating a new market segment
    b) **Gradual improvements and refinements of products or services**
    c) Large shifts in technology
    d) Complete overhaul of business models

25. Open Innovation is characterized by:
    a) Keeping R&D processes strictly within the company
    b) **Collaborating with external entities like universities, startups, etc**.
    c) Following traditional innovation methods
    d) Outsourcing the entire R&D process

26. What is the purpose of providing direct instructions in the form of prompts to AI software?
    a) To increase the processing speed of the software
    b) To reduce the software's memory usage
    c) **To influence the output of AI systems and improve performance**
    d) To modify the AI software's basic code

27. In what way does prompt engineering act as a replacement in language model development?
    a) As a replacement for initial programming
    b) **As a replacement for the fine-tuning technique**
    c) As a replacement for graphical user interfaces
    d) As a replacement for database management systems

28. Why is it important for prompts to seek unbiased responses from AI models?
    a) To increase the speed of response
    b) To make the AI system more entertaining
    c) **To prevent the AI from hurting sentiments and remain unbiased**
    d) To simplify the coding process for AI models

29. What does prompt engineering contribute to AI models?
    a) Enhanced storage capacity
    b) **Enhanced manoeuvrability and control over responses**
    c) Faster computation speeds
    d) More visually appealing interfaces

30. How does suitable prompting influence the AI model's understanding of a topic?
    a) It limits the AI's understanding to basic facts
    b) It enhances imaginative and creative skills in the AI
    c) It simplifies the AI's coding structure
    d) It reduces the AI's processing needs