USN ☐☐☐☐☐☐☐☐☐☐

First Semester B.E./B.Tech./B.Arch./B.Planning Degree Examination, Feb./Mar. 2022
Innovation and Design Thinking
(COMMON TO ALL BRANCHES)

Time: 1 hr]   [Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. In design thinking process, in the delivery phase we
   a) Iterate   b) Test
   c) Prototype   d) All of the above.

2. The goal of prototype phase is _____
   a) To understand what component of your idea did not work
   b) To understand what component of your idea work
   c) Both of them
   d) None of them

3. What does MVP stands for in Agile
   a) Minimum viable product
   b) Marks variable product
   c) My valuable product
   d) None of the above

4. What question did the designer forget to ask in the Fig. Q4 below?

Fig. Q4

a) How many urinals are needed
b) How much space is needed per person?
c) What is the purpose of urinals?
d) What will the toilet look like once the floor plan is complete

5. Which is not a good interview strategy for the empathy step?
a) Encourage person to talk about experiences
b) Encourage short answers that get right to the point
c) Ask-follow up questions to get more information
d) All of the above.

6. Which of the following principles are not considered for design thinking?
a) Embrace experimentation
b) Human – centric design
c) Profit centric
d) Pattern identification for problem solving

7. To empathize, one has to
a) Observe
b) Engage
c) Listen
d) All of the above.

8. Which of the following are not tools of visualization?
a) Maps
b) Images
c) Stories
d) Videos.

9. _____ Storytelling is the most compelling type of story.
a) Aural
b) Visual
c) Textual
d) All of the above.

10. Mind maps are used to _____ ideas
a) Generate
b) Visualize
c) Structure
d) All of the above.

11. Design thinking is also known as
    a) Adaptable Enquiry
    b) Strategic design thinking
    c) Transformation by design
    d) All of the above.

12. _____ is the way to narrow down the thoughts to reach at the final solution.
    a) Convergent thinking
    b) Divergent thinking
    c) None of them
    d) Both a and b.

13. Design thinking follows
    a) Waterfall model
    b) Agile methodology
    c) Both of these
    d) None of these.

14. _____ is an iterative and incremental method of managing development and design.
    a) Waterfall model
    b) Agile methodology
    c) Cyclic methodology
    d) All of the above.

15. BPM stands for
    a) Building Product Management
    b) Business Product Management
    c) Business Process Management
    d) Basic Product Management.

16. A Hypothesis is _____
    a) a wished for result that the researcher concludes the research with
    b) a complicated set of sentence that pulls variables into sponsored complex relationships
    c) a conjecture that is grounded in support background originating from secondary research
    d) None of the above.

17. _____ is an analysis of persons, groups, events, decisions, periods, policies, institutions or other systems that are studied holistically by one or more methods.
    a) Literature study   b) Case study   c) Co-creation   d) Prototyping.

18. The purpose of MVP is not
    a) be able to test a product hypothesis with maximum resources
    b) Accelerate learning
    c) Reduce wasted Engineering hours
    d) Get the product to early customers as soon as possible.

19. Which of the following is an innovation model?
    a) Employee innovation
    b) Customer innovation
    c) Partner/Supplier/Competitor/Public innovations
    d) All of the above.

20. Which of the following is an example of innovation.
    a) Wheel
    b) Compass
    c) Telephone
    d) All of the above.

21. Which of these are not components of a mind map?
   a) Branches
   b) Arrows
   c) Central idea
   d) All of the above.

22. Journey mapping is also called _____ mapping.
   a) Path
   b) Experience
   c) Conduct
   d) Feedback

23. Journey mapping maps which phase of activity of service for a customer?
   a) Before a service
   b) During a service
   c) After a service
   d) All of the above.

24. Which of the following are not tools of Design thinking?
   a) Co-creation
   b) Prototyping
   c) Mind mapping
   d) Online marketing.

25. _____ is used with the objective of identifying needs that customers are often unable to articulate.
   a) Mind mapping
   b) Experience mapping
   c) Story telling
   d) Rapid concept development.

26. What is your first model/design of product called?
   a) Draft
   b) Rough draft
   c) Prototype
   d) Practice design.

27. The three I's of Design thinking do not include
   a) Interest
   b) Implementation
   c) Inspiration
   d) Ideation.

28. Frank Robinson defined and coined the term
   a) Design thinking
   b) Mind mapping
   c) MVP
   d) Hypothesis.

29. Collaborative team work is essential in design thinking for
   a) Equal importance to all members
   b) Solving multifaceted problems
   c) Unbiased selection of ideas
   d) Better failure management.

30. Design thinking process began with the following 3 steps.
   a) Understand - Improve - Apply
   b) Define – Ideate – Build
   c) Study – Solve – Create
   d) Understand – Ideate - Create.

31. Majority of the top executives regarded _____ as one of the top three leadership qualities?
   a) Empathy   b) Creativity   c) Humanity   d) Qualification

32. In design thinking, where does the information used to put together a problem statement come from?
    a) The design stage
    b) The Define stage
    c) The empathize stage
    d) The testing stage

33. What is wrong with this product design? (Refer Fig.Q33).

Fig.Q33

    a) Color cannot be identified
    b) If does not function as a chair should
    c) It will not be comfortable for the user
    d) The design takes more years.

34. Is prototyping a step in the design thinking process?
    a) True
    b) False
    c) Can't Say
    d) None of the above

35. Prototype should only be demonstrated and tested within the team
    a) True
    b) False
    c) Both
    d) None

36. At what step do you want to complete the POV-Point of view?
    a) Empathy
    b) Prototype
    c) Define
    d) Ideate.

37. The initial design brief/specifications are provided by
    a) Designer
    b) User
    c) Both of them
    d) Client.

38. When defining a problem, your problem statement should include a solution
    a) True
    b) False
    c) Do not know
    d) All of the above.

39. Design thinking process can be applied in any profession/any area/ any field.
    a) True
    b) False
    c) Cannot say
    d) None of the above.

40. User persons are created during which phase of design thinking process.
    a) Design stage
    b) Discover stage
    c) Develop stage
    d) None of the above.

41. The first step in the design thinking process is to _____
    a) Test
    b) Define
    c) Ideate
    d) Empathize

42. The final step in the design thinking process is to
    a) Test
    b) Define
    c) Ideate
    d) Empathize

43. Design thinking typically helps in
    a) Innovation
    b) Data analytics
    c) Financial planning
    d) Operational efficiency

44. Design thinking is a process of _____
    a) Thinking about design
    b) Designing ways in which people think
    c) Asking users to solve problems
    d) Defining, framing and solving problems from user's prospective

45. What are the steps in design thinking process
    a) Understand → Draw → Ideate → Create → Test
    b) Empathize → Define → Ideate → Prototype → Test
    c) Empathize → Design → Implement → Produce → Test
    d) Understand → Define → Ideate → Produce → Try

46. Design thinking is a linear process
    a) True
    b) False
    c) Cannot say
    d) None of the above

47. Which of the following is not one of the profiles of design thinkers?
    a) Empathy
    b) Simplicity
    c) Integrative thinking
    d) Optimism

48. During which stage would you consult experts to learn more about the areas of concern and to gain an understanding of other people's experiences?
    a) Prototype
    b) Define
    c) Ideate
    d) Empathize

49. Collecting _____ is an important portion of testing a prototype in the test stage of design thinking.
    a) Pictures
    b) Money
    c) Feedback
    d) E-mails

50. Which of the firm mentioned is associated the most with design thinking?
    a) Ikea
    b) Ideo
    c) Idea
    d) Ikei

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