

**(20 Marks)**

1. .... is a group of interdependent components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process.
  - a) System
  - b) Network
  - c) Team
  - d) Collection
2. Which of the following is not a characteristic of a system?
  - a) operates for some purpose
  - b) has homogeneous components
  - c) operates within a boundary
  - d) None of the above
3. Consider the following skills.
  - A. Working knowledge of Information Technologies
  - B. Specialized knowledge of database languages and technology
  - C. Character & ethics
  - D. Interpersonal communication skillsWhich of the above is/are skills needed by systems analysts?
  - a) Only (A), (B) and (C)
  - b) Only (A), (C) and (D)
  - c) Only (C)
  - d) Only (B), (C) and (D)
4. Which of the following are characteristics of a project?
  - A. Temporary
  - B. On-going
  - C. Repeated
  - D. Progressive Elaboration
  - a) A & C Only.
  - b) A, B & C Only.
  - c) A & D Only
  - d) A, B & D Only
5. Which of the following is not a property of a system?
  - a) Independent
  - b) Has a purpose
  - c) Interactive
  - d) Interrelated

6. Under which of the following criteria, a Feasibility Study can be performed?
- A. Operational Feasibility
  - B. Economical Feasibility
  - C. Cultural Feasibility
  - D. Technical Feasibility
- a) A, B & C Only.    b) B & D Only    c) A, B & D Only    d) A & B Only
7. Which of the following is not true about a project?
- a) The result of a project can be a unique service.
  - b) Two projects cannot be same.
  - c) A project can be started without an end date.
  - d) The result of a project can be tangible or intangible.
8. Waterfall model is not suitable for?
- a) Small Projects
  - b) Complex Projects
  - c) Accommodating changes
  - d) Both b) & c)
9. Which of the following is not true regarding the waterfall method?
- a) Fairly rigid approach
  - b) Can easily go back to previous phases
  - c) Not so good for many of the new types of interactive and highly complex applications
  - d) This approach is used less now
10. Kevin is a systems analyst who is determining business requirements. What would most likely be the SDLC phase for him?
- a) Planning    b) Analysis    c) Design    d) Implementation

11. Prototyping aims at
- a) End-user understanding and approval      b) Program logic
  - c) Planning of dataflow organization      d) None of the above
12. .... system is a representation or model of a real system.
- a) Static      b) Physical      c) Dynamic      d) Abstract
13. The primary goal of a system analyst is to .....
- a) Establish the three phases of the SDLC      b) Acquire a working tool
  - c) Develop a wonderful system      d) Make a significant business impact
14. Which of the following are the shortcomings of Prototyping Development Model?
- A. Leading users to overestimate the capabilities of a software product.
  - B. Difficulties in project management and control.
  - C. Provide a tangible or visual expression of proposed system.
  - D. Increase the complexity of the system as scope of the system.
- a) A, B & C only      b) B, C & D only      c) A, B & D only      d) All the above
15. Which of the following statement(s) is/are true?
- a) Waterfall Development Methodology originates in the manufacturing and construction companies.
  - b) One of the advantages of the Waterfall Development Methodology is the availability of the working system in the early stage.
  - c) The Evolutionary and Throwaway Prototyping are the approaches to prototyping
  - d) Both (a) & (c)
  - e) All the above
16. In which phase of the software design and development project would you build a blueprint of the proposed system?
- a) Analysis phase      b) Design phase
  - c) Requirement phase      d) Development phase

17. What is a prototype?
- a) Working model of existing system.
  - b) Mini model of existing system
  - c) Mini model of proposed system
  - d) All the above
18. Selection of a particular life cycle model is based on,
- a) Requirements
  - b) Technical knowledge of development team
  - c) Project types and associated risks
  - d) All the above
19. This phase of the SDLC is known as the "ongoing phase" where the system is periodically evaluated and updated as needed.
- a) Preliminary Investigation
  - b) System Maintenance
  - c) System Design
  - d) System Implementation
20. The prototyping model of software development is
- a) A reasonable approach when requirements are well defined.
  - b) A useful approach when a customer cannot define requirements clearly.
  - c) The best approach to use for projects with larger development teams.
  - d) A risky model that rarely produces a meaningful product.

**Question 02****(15 marks)**

**a) Choose the most suitable phrase/term from those given in the bracket and fill in the blanks to make the following sentences meaningful. One phrase/term should be used only once. (10 marks)**

- i. A system may consist of a set of interacting smaller systems, known as \_\_\_\_\_.
- ii. \_\_\_\_\_ is concerned with how system components are connected together.
- iii. The output is taken to improve the system and to make it achieve the laid standards is called \_\_\_\_\_.
- iv. The \_\_\_\_\_ is the “super system” within which a system operates.
- v. The arrangement of components that helps to achieve predetermined objectives in a system is known as \_\_\_\_\_.
- vi. \_\_\_\_\_ provide the justification for the system and determine policies for its use.
- vii. A \_\_\_\_\_ is a formalized approach to implementing the SDLC.
- viii. The document prepared at the planning stage is called \_\_\_\_\_.
- ix. A \_\_\_\_\_ is an initial version of a system used to demonstrate concepts and try out design options.
- x. In project initiation at planning, all possible alternate solutions are chalked out and they are known as \_\_\_\_\_.

**Phrases**

procedures, feedback, standards, subsystems, stakeholders, methodology, system analyst, system sponsors, system users, SRS, prototype, feasibility report, integration, interaction, environment, candidate systems, proposed systems, organization

**b) State whether the following statements are True(T) / False(F).**

**(5 marks)**

i. RAD methodology is much concerned on detailed specification & documentation.	
ii. If it is highly necessary, we can bypass the stages in Waterfall methodology and come back to it later.	
iii. Having unstable, uncertain requirements are considered as a risk itself.	
iv. The throw-away prototype is considered as a part of the final system.	
v. Waterfall methodology is a RAD methodology.	

**Question 03****(15 marks)**

1. Differentiate between a **system** and a **collection**. Provide suitable examples.

2. **“Having the working knowledge of Information Technology & programming is a skill required by a System Analyst.”**

Do you agree with this statement? Explain your answer.

3. **There're 2 steps in Planning stage of SDLC. Project Initiation & Project Management.**

Explain the importance of Feasibility Study in the Project Initiation.

4. **“Prototyping Methodology can be used when the requirements are unstable & when a quick delivery of the system is needed.”**

Explain the above statement.

5. **“Waterfall Methodology is not suitable for the projects with vague and ambiguous requirements.”**

Explain why.

-----End of the Question Paper-----