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DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF YEAR TWO SEMESTER TWO EXAMINATIONS, 2022/2023

B.ED. PROGRAMME

COURSE CODE: TEJS 208

COURSE TITLE: APPLICATION DEVELOPMENT IN EDUCATION

Instruction: Answer **all** questions in Section A and any **three** in Section B.

Time: 2 hours

SECTION A

[25 Marks]

Answer all the questions in this section

1. Which of the following is the first step of SDLC?
 - a. Coding
 - b. Design
 - c. Preliminary Investigation and Analysis
 - d. Testing
2. SDLC stands for _____.
 - a. System development life cycle
 - b. secure development life cycle
 - c. Software development life cycle
 - d. Both a and b
3. What is the purpose of the Software Development Life Cycle (SDLC)?
 - a. To design user interfaces
 - b. To provide a structured approach to software development
 - c. To manage project finances
 - d. To create marketing strategies

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4. By whom is unit testing done?
 - A. Users
 - B. Customers
 - C. Developers
 - D. None
5. Identify the term which is used to define testing?
 - a. A stage of all projects
 - b. Evaluating deliverables to find errors
 - c. Finding broken code
 - d. None of the above
6. Identify the environment in which we can perform alpha testing?
 - a. Developer's end
 - b. User's end
 - c. Both a and b are correct
 - d. None of the above
7. Choose the option which does not apply to agile software development?
 - a. Abolishing the project planning and testing
 - b. Producing only the essential work products.
 - c. Recent Application Development
 - d. None
8. A freely navigate through an interactive application by clicking from the links provided without following a linear (or any specific) order is
 - a. MultiLink
 - b. Hypermedia link
 - c. Hyperlink
 - d. Navigationlink
9. In which phase of the SDLC does Systems Analysis and Requirements gathering occur?
 - a. Systems Design
 - b. Integration and Testing
 - c. Systems Analysis and Requirements
 - d. Operations and Maintenance
10. Which SDLC methodology is known for its flexibility and adaptability, with iterations and frequent feedback?
 - a. Waterfall Model
 - b. Agile Model
 - c. V-Model
 - d. Spiral Model
11. What is the purpose of a Feasibility Study in system development?
 - a. To determine if the system can be developed within budget
 - b. To evaluate the technical aspects of the system
 - c. To identify potential risks and challenges
 - d. All of the above

12. What is a characteristic of the Waterfall Model?
- Iterative development
 - Continuous feedback
 - Phases overlap
 - Sequential phases
13. In Agile development, what is a key characteristic of the methodology?
- Sequential phases
 - Limited customer involvement
 - Fixed and rigid project requirements
 - Iterative and flexible approach
14. The purpose of having specifications is to provide the production team with detailed and accurate information to develop an application that fulfills the objectives and requirements of the targeted.....
- audience
 - Broadcast
 - Beneficiaries
 - Stakeholders
15. A represents (usually in the form of sketches) what will be shown on each Screen and how each screen is related to each other.
- storyboard
 - traceboard
 - typeface
 - none of above
16. Which phase of the Software Development Life Cycle (SDLC) involves understanding user requirements?
- Systems Design
 - Development
 - Systems Analysis
 - Integration and Testing
17. Which of the following is internal testing?
- Beta test
 - Unit test
 - Continues test
 - Alpha test
18. Thestage is where you actually begin to write the code for the "final" version of app.
- development
 - Design
 - Testing
 - Troubleshooting

19. All the following are Application Development methodologies except
- a. Incremental
 - b. Prototype
 - c. Spear
 - d. Waterfall
20. Which of the steps of Add development can methodologies such as waterfall or agile can be implemented?
- a. Development
 - b. Design
 - c. Implementation
 - d. Testing
21. _____ is a step in which design is translated into machine-readable form.
- a. Coding
 - b. Conversion
 - c. Debugging
 - d. Design
22. Which of the following is not a software development life cycle model?
- a. Agile Model
 - b. Autonomous Model
 - c. Prototype Model
 - d. RAD Model
23. Which of the following is not a phase in the classical waterfall model?
- a. Feasibility Study
 - b. Building Prototype
 - c. Maintenance
 - d. Requirement Analysis
24. Which of the following is a characteristic of the Agile development model?
- a. Minimal customer involvement
 - b. Fixed project requirements
 - c. Emphasis on comprehensive documentation
 - d. Adaptive to changing requirements.
25. What is an essential step in software deployment?
- a. Ignoring user feedback
 - b. Developing new features post-deployment
 - c. Establishing an Operational Support Plan
 - d. Reducing testing efforts

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SECTION B

[75 Marks]

Answer **only three** questions in this section

1. Define software development life cycle and explain any of the **four** phases involved **(25 MARKS)**
2. Explain the waterfall model and state **four** advantages. **(25 MARKS)**
3. Explain the following terms **(25 MARKS)**
 - a. Alpha testing
 - b. Beta Testing
 - c. UML
 - d. Prototype
 - e. Hyperlink
4. Examine the Agile Model and State **five** advantages and **five** disadvantages of Agile Model **(25 MARKS)**
5. a) What is UML Relationship? **(25 MARKS)**
b) Explain the following UML relationship types. Support your explanations with diagrams.
 - i. Dependency
 - ii. Association
 - iii. Generalization
 - iv. Realization