

9628-01 Level 4 Diploma in Software Development Methodologies (for the Level 4 Software Developer Apprenticeship)
9628-401 Software Development Methodologies

Sample question paper

Duration: 60 minutes

Candidate's name:

Candidate's enrolment number:

Centre name:

Centre number:

Date:

- 1 The **most** important input into the 'analysis stage' is
 - a. customer requirements
 - b. development tools
 - c. required project roles
 - d. cost-benefit results.
- 2 What is the **main** purpose of using 'High Level' design in application development?
 - a. To determine the communication processes between entities.
 - b. To ensure the requirements are achievable.
 - c. To determine the enhanced user experience.
 - d. To identify all issues associated with the system.
- 3 Which one of the following is viewed as a 'benefit' when using prototyping as a development method?
 - a. The level of documentation is thorough.
 - b. The pace of development is fast.
 - c. A formal test strategy is implemented.
 - d. All non-functional requirements are implemented.
- 4 An important consideration when choosing a suitable programming language can be the
 - a. end users' preference
 - b. developers' preference
 - c. clients' non-functional requirements
 - d. testing of functional requirements.
- 5 What is the purpose of 'functional testing'?
 - a. Establish the ability of the system to perform under load.
 - b. Confirm the speed of system response.
 - c. Establish that the application runs on a specific operating system.
 - d. Confirm the ability to perform intended tasks.
- 6 What is the **main** purpose of carrying out end to end testing?
 - a. To make sure that the database integrity is not compromised.
 - b. To make sure all other tests have been completed.
 - c. To validate the performance of the system under load.
 - d. To confirm the functionality of the system as a whole.
- 7 Which one of the following activities takes place during the 'software deployment stage' of application development?
 - a. System tested with no failures.
 - b. Functionality validated by end users.
 - c. Implementation in a live environment.
 - d. Creation of high level design documentation.
- 8 What is the **main** purpose of raising faults with the development team during the 'maintenance stage' of application development?
 - a. To allow the usability of the system to be measured.
 - b. To enable integration with bespoke software.
 - c. To ensure that platform specific skills are retained.
 - d. To identify critical issues affecting system availability.
- 9 Which one of the following statements **always** applies to the 'maintenance stage' in an application development lifecycle?
 - a. At the end of the stage, all faults will have been fixed.
 - b. This stage can last as long as possible.
 - c. During this stage, testing is no longer beneficial.
 - d. At the end of the stage, the product is no longer supported.
- 10 Which one of the following is an organisational policy providing a framework dictating the guidelines to be followed by software development teams?
 - a. Formulation.
 - b. Regression.
 - c. Standardisation.
 - d. Examination.

- 11 Which one of the following is a benefit of a procedural approach in a software development lifecycle?
- Initial analysis at project inception.
 - Allows adoption of a prototype model.
 - Development driven design.
 - Standardisation of stages.
- 12 Which one of the following **best** describes the Agile software development methodologies?
- A lightweight process for quick application development.
 - A senior management driven concentric process.
 - Results only reviewed on completion of each stage.
 - Applications created by a single large team of programmers.
- 13 At which point in the Waterfall software development methodology does the 'testing stage' occur?
- During every stage.
 - On completion of deployment.
 - As part of the design stage.
 - Following development.
- 14 Which one of the following is the **main** benefit of the Agile software development methodology?
- Responsiveness to requirements.
 - Emphasis on high quality control.
 - Micro managed team.
 - Exhaustive testing is undertaken.
- 15 Which one of the following is a disadvantage of using the 'Waterfall' lifecycle for software development?
- It requires minimal documentation.
 - The process follows a rigid framework.
 - There is a flexible approach to implementing each stage.
 - Rigorous testing is conducted to ensure requirements are met.
- 16 Why can a project to deliver a highly secure military system benefit from using the 'Waterfall' software development methodology?
- The system will be delivered quickly.
 - The level of control is exceptionally high.
 - The stages follow encryption protocols.
 - The procurement of resources is detailed.
- 17 Which one of the following is the **most** likely consequence if a poor choice of development method is made?
- Project team dissatisfaction.
 - Incurring financial penalties.
 - Failure to meet client requirements.
 - Increased system documentation.
- 18 How can a software development team ensure that it complies with an imposed budget constraint?
- Adopt a different development methodology.
 - Limit the system functionality to essential project requirements.
 - Implement a new management reporting structure.
 - Review the financial implications of the project.
- 19 Which one of the following is an example of a 'high level' organisational change control constraint?
- All decisions must be approved by the CEO.
 - Any alterations must be recorded in project documents.
 - A commissioning board will be appointed.
 - All risks will be prioritised by the team leader.
- 20 Which business constraint will necessitate the use of 'rapid prototyping' as the development methodology?
- The system must include a particular function.
 - The system must be compatible with other systems.
 - The system must be accessible for disabled users.
 - The system must be delivered by a fixed date.
- 21 Which one of the following is the **best** way of tracking identified risks?
- Discussions at a centralised project team meeting.
 - Formal discussions at the change board.
 - A centralised register used to record information.
 - A formal report compiled on a monthly basis.

- 22 How can a project manager identify a requirement for additional technical resources for a project?
- Through quality assurance discussions.
 - By analysing the latest approved change requests.
 - Through analysis of the planned budget.
 - By reviewing the latest organisational structure.
- 23 Which one of the following is a software developer's **main** contribution to the initial project cost estimation?
- Providing an assessment of required time.
 - Forecasting of testing requirements.
 - Identifying the deployment platform.
 - Impact assessment of project changes.
- 24 Which one of the following is commonly used to forecast the time required to complete a project?
- Analysing similar projects.
 - Estimating lines of code.
 - Available budget.
 - Client expectation.
- 25 Which role of the development team is responsible for capturing non-functional requirements?
- System engineer.
 - Software designer.
 - Business analyst.
 - Project manager.
- 26 Which role of the development team is responsible for checking that all requirements have been correctly implemented in the final product?
- Project manager.
 - Software tester.
 - Business analyst.
 - System engineer.
- 27 Which one of the following is a responsibility of a designer?
- Implementation of choices.
 - Quality assurance.
 - Requirements tracking.
 - Use of diagrammatic tools.
- 28 Which one of the following is a responsibility of a software developer?
- Implementation of design choices.
 - Writing specifications.
 - Conducting black box testing.
 - Using static analysis tools.
- 29 Which one of the following is a responsibility of a software tester?
- Ensuring the quality of the final product.
 - Carrying out the separation of requirements.
 - Managing the resources of the project.
 - Implementing debugging methodologies.
- 30 Which one of the following is **essential** information for an individual undertaking white box testing?
- Non-functional requirements.
 - Changes made during the project.
 - Knowledge of the implementation code.
 - Understanding of system architecture being deployed.
- 31 What is the **main** purpose of configuration management?
- Ensuring all proposed changes are tracked until closure.
 - Maintaining consistency of a product's performance throughout its life.
 - Verifying that each requirement for the system is valid.
 - Enabling the system design to be implemented exactly as specified.
- 32 Which role in a software development team maintains responsibility to elicit requirements from the stakeholder?
- Test Director.
 - Project Manager.
 - Business Analyst.
 - Technical Architect.

- 33 Which one of the following factors is **most** beneficial in helping a multi-site team work together effectively?
- Good communications.
 - Flexible resources.
 - Individual responsibility.
 - Technical know-how.
- 34 To which one of the following areas is the project manager able to **most** quickly bring about change?
- Team maturity.
 - Organisational environment.
 - Leadership style.
 - Interpersonal relationships.

NOW GO BACK AND CHECK YOUR WORK

- **IMPORTANT -**
Are the details at the top of the answer sheet correct