Class 11 Computer Chapter 1: Introduction to Software Development

MULTIPLE CHOICE QUESTIONS (MCQS) - COMPLETE GUIDE

Section 1: Introduction to Software Development

Q1 **What is the main purpose of software development?**

A To create user manuals
B To transform user needs into software products
C To design hardware
D To produce only code

✓ **Correct Answer:** B) To transform user needs into software products

Q2 **Which of the following is NOT a student learning outcome for this chapter?**

A Understanding SDLC
B Cooking recipes
C Using UML diagrams
D Applying debugging techniques

✓ **Correct Answer:** B) Cooking recipes

Q3 **Which tool is specifically mentioned as useful in software development?**

A Hammer
B Integrated Development Environment (IDE)
C Paintbrush
D Screwdriver

✓ **Correct Answer:** B) Integrated Development Environment (IDE)

1.1 Software Development

Q4 **Software development is primarily about:**

A Designing hardware
B Creating computer programs for specific tasks
C Writing novels
D Building houses

✓ **Correct Answer:** B) Creating computer programs for specific tasks

Q5 **Which activity is NOT part of software development?**

A Writing code
B Testing code
C Addressing issues
D Cooking food

✓ **Correct Answer:** D) Cooking food

1.2 Introduction to Software Development Life Cycle

Q6 **SDLC stands for:**

A Software Data Language Code
B Software Development Life Cycle
C System Design Logical Cycle
D Software Debugging Language Code

✓ **Correct Answer:** B) Software Development Life Cycle

Q7 **The main purpose of SDLC is to:**

A Deliver high-quality software that meets customer expectations
B Increase project costs
C Avoid software testing
D Ignore customer feedback

✓ **Correct Answer:** A) Deliver high-quality software that meets customer expectations

1.2.1 Framework in Software Development

Q8 **In software engineering, a framework is:**

A A set of reusable concepts, practices, and tools
B A physical structure
C A programming language
D A type of hardware

✓ **Correct Answer:** A) A set of reusable concepts, practices, and tools

Q9 **Frameworks help developers by:**

A Making them write everything from scratch
B Providing predefined components and architectures
C Limiting code reuse
D Increasing manual effort

✓ **Correct Answer:** B) Providing predefined components and architectures

Q10 **Which is an example of a web development framework?**

A Django
B Microsoft Word
C Excel
D PowerPoint

✓ **Correct Answer:** A) Django

1.2.2 Stages involved in SDLC

1.2.2.1 Requirement Gathering

Q11 **The first phase of SDLC is:**

A Coding
B Requirement Gathering
C Testing
D Deployment

✓ **Correct Answer:** B) Requirement Gathering

Q12 **Which activity is NOT part of requirement gathering?**

A Interviews and surveys
B Observations
C Document review
D Writing code

✓ **Correct Answer:** D) Writing code

Q13 **Requirement gathering is similar to:**

A Planning a big event
B Cooking dinner
C Building a car
D Drawing a picture

✓ **Correct Answer:** A) Planning a big event

Functional & Non-Functional Requirements

Q14 Functional requirements describe:

A What the system should do
B How the system performs
C The cost of the project
D Only the user interface

✓ **Correct Answer:** A) What the system should do

Q15 Which is a functional requirement for a Library Management System?

A User registration
B System performance
C Security
D Reliability

✓ **Correct Answer:** A) User registration

Q16 Non-functional requirements specify:

A Quality attributes and constraints
B Only user registration
C Only book borrowing
D Only inventory management

✓ **Correct Answer:** A) Quality attributes and constraints

Q17 Which is a non-functional requirement?

A Book borrowing
B Performance
C User registration
D Inventory management

✓ **Correct Answer:** B) Performance

Q18 Functional requirements are directly related to:

A User interactions and system tasks
B System performance
C Usability
D Reliability

✓ **Correct Answer:** A) User interactions and system tasks

Q19 **Non-functional requirements are related to:**

A System performance, usability, and reliability
B Specific system tasks
C User registration
D Inventory management

✓ **Correct Answer:** A) System performance, usability, and reliability

1.2.2.2 Design

Q20 **The design phase includes all EXCEPT:**

A Creating diagrams
B Developing models
C Planning architecture
D Writing code

✓ **Correct Answer:** D) Writing code

Q21 **The purpose of creating diagrams in design is to:**

A Show how software parts connect
B Test software
C Deploy software
D Maintain software

✓ **Correct Answer:** A) Show how software parts connect

Q22 **Planning the architecture in design helps to:**

A Decide the overall structure and component interaction
B Write code
C Perform testing
D Deploy software

✓ **Correct Answer:** A) Decide the overall structure and component interaction

1.2.2.3 Coding / Development

Q23 **The coding phase is where:**

A Programmers write code based on design specifications
B Requirements are gathered
C Testing is done
D Deployment occurs

✓ **Correct Answer:** A) Programmers write code based on design specifications

Q24 **Coding translates specifications into:**

A Programming language
B Hardware
C Diagrams
D Surveys

✓ **Correct Answer:** A) Programming language

1.2.2.4 Testing

Q25 **Testing is the process of:**

A Checking software for bugs and issues
B Writing code
C Gathering requirements
D Creating diagrams

✓ **Correct Answer:** A) Checking software for bugs and issues

Q26 **Functionality testing ensures:**

A All features work as specified
B Software is installed
C Diagrams are created
D None of the above

✓ **Correct Answer:** A) All features work as specified

Q27 **Performance testing checks:**

A Software performance under different conditions
B Only user interface
C Only diagrams
D Only deployment

✓ **Correct Answer:** A) Software performance under different conditions

Q28 **Compatibility testing ensures:**

A Software works on various devices and operating systems
B Only one device
C Only one OS
D Only in design phase

✓ **Correct Answer:** A) Software works on various devices and operating systems

1.2.2.5 Deployment

Q29 **Deployment is the process of:**

A Making software available for users
B Writing code
C Gathering requirements
D Creating diagrams

✓ **Correct Answer:** A) Making software available for users

Q30 **Which of the following is NOT part of deployment?**

A Installation
B Configuration
C Coding
D Testing in the real world

✓ **Correct Answer:** C) Coding

1.2.2.6 Maintenance

Q31 **Maintenance involves:**

A Ongoing updates and fixes
B Only deployment
C Only requirement gathering
D Only coding

✓ **Correct Answer:** A) Ongoing updates and fixes

Q32 **The main purpose of maintenance is to:**

A Ensure software continues to function correctly
B Only test software
C Only gather requirements
D Only design software

✓ **Correct Answer:** A) Ensure software continues to function correctly

1.3 Software Development Methodologies

Q33 **Software development methodologies are:**

A Structured approaches to software development
B Types of hardware
C Types of databases
D Types of programming languages

✓ **Correct Answer:** A) Structured approaches to software development

1.3.1 Introduction to Software Process Models

Q34 **Software process models provide:**

A A framework for planning, structuring, and controlling development
B Only coding
C Only deployment
D Only testing

✓ **Correct Answer:** A) A framework for planning, structuring, and controlling development

Q35 **A benefit of using process models is:**

A Predictability
B Uncertainty
C Increased risk
D Less efficiency

✓ **Correct Answer:** A) Predictability

1.3.1.1 Waterfall Model

Q36 **The Waterfall Model is:**

A Linear and sequential
B Circular
C Random
D Only for hardware

✓ **Correct Answer:** A) Linear and sequential

Q37 **Which is NOT a phase in the Waterfall Model?**

A Requirement
B Design
C Gardening
D Implementation

✓ **Correct Answer:** C) Gardening

Q38 **A benefit of the Waterfall Model is:**

A Simple and easy to understand
B High flexibility
C Suitable for evolving requirements
D None of the above

✓ **Correct Answer:** A) Simple and easy to understand

Q39 **A limitation of the Waterfall Model is:**

A Inflexibility
B Too flexible
C No sequential process
D Not suitable for small projects

✓ **Correct Answer:** A) Inflexibility

1.3.1.2 Agile Methodology

Q40 **Agile methodology is:**

A Flexible and adaptive
B Linear and sequential
C Inflexible
D Only for small projects

✓ **Correct Answer:** A) Flexible and adaptive

Q41 **Agile works in short cycles called:**

A Iterations or sprints
B Waterfalls
C Phases
D Deployments

✓ **Correct Answer:** A) Iterations or sprints

Q42 **A benefit of Agile is:**

A High flexibility
B Inflexibility
C No customer feedback
D No updates

✓ **Correct Answer:** A) High flexibility

Q43 **A limitation of Agile is:**

A Scaling challenges
B No feedback
C No testing
D No coding

✓ **Correct Answer:** A) Scaling challenges

Q44 **Agile requires:**

A Active participation from stakeholders
B No stakeholder involvement
C No feedback
D No changes

✓ **Correct Answer:** A) Active participation from stakeholders

1.4 Project Planning and Management

Q45 **Project planning in software development is like:**

A Planning a trip
B Cooking
C Gardening
D Painting

✓ **Correct Answer:** A) Planning a trip

Q46 **Setting project timelines helps to:**

A Keep the project on track
B Increase costs
C Skip testing
D Avoid coding

✓ **Correct Answer:** A) Keep the project on track

Q47 **Estimating costs is important for:**

A Budgeting and resource allocation
B Only coding
C Only deployment
D Only testing

✓ **Correct Answer:** A) Budgeting and resource allocation

Q48 **A key factor in cost estimation is:**

A Development team expertise
B Gardening tools
C Painting skills
D None of the above

✓ **Correct Answer:** A) Development team expertise

Q49 **Risk assessment in project management is for:**

A Identifying and managing potential risks
B Ignoring problems
C Increasing costs
D Avoiding planning

✓ **Correct Answer:** A) Identifying and managing potential risks

Q50 **Quality assurance costs are part of:**

A Project cost estimation
B Only coding
C Only deployment
D Only requirement gathering

✓ **Correct Answer:** A) Project cost estimation

1.5 Unified Modeling Language (UML) Diagrams

Q51 **What does UML stand for?**

A Universal Modeling Language
B Unified Modeling Language
C Unique Modeling Language
D Unified Management Language

✓ **Correct Answer:** B) Unified Modeling Language

Q52 **The main purpose of UML diagrams in software development is to:**

A Write code
B Visually represent software systems
C Test hardware
D Encrypt data

✓ **Correct Answer:** B) Visually represent software systems

Q53 **Which of the following is NOT a benefit of using UML diagrams?**

A Improving communication among stakeholders
B Visualizing system structure and behavior
C Automatically generating all source code
D Documenting system requirements

✓ **Correct Answer:** C) Automatically generating all source code

Q54 **Which UML diagram shows the static structure of a system?**

A Sequence diagram
B Class diagram
C Activity diagram
D Use case diagram

✓ **Correct Answer:** B) Class diagram

Q55 **Use case diagrams are mainly used to:**

A Show user interactions with the system
B Show program flow
C Show database tables
D Show hardware layout

✓ **Correct Answer:** A) Show user interactions with the system

Q56 **Which UML diagram models the flow of activities or processes?**

A Class diagram
B Activity diagram
C Sequence diagram
D Use case diagram

✓ **Correct Answer:** B) Activity diagram

Q57 **Sequence diagrams are used to:**

A Model the interaction between objects over time
B Show the static structure
C Show user roles
D Show deployment

✓ **Correct Answer:** A) Model the interaction between objects over time

Q58 **Who can benefit from UML diagrams?**

A Only programmers
B Only end-users
C Developers, designers, and stakeholders
D Only testers

✓ **Correct Answer:** C) Developers, designers, and stakeholders

Q59 **In a use case diagram, an "actor" represents:**

A A class
B A user or external system
C A database table
D A programming language

✓ **Correct Answer:** B) A user or external system

Q60 **UML diagrams are most useful during which phase?**

A Coding
B Design
C Deployment
D Maintenance

✓ **Correct Answer:** B) Design

1.6 Software Design Patterns

Q61 **What is a software design pattern?**

A A specific algorithm
B A reusable solution to a common design problem
C A programming language
D A debugging tool

✓ **Correct Answer:** B) A reusable solution to a common design problem

Q62 **Design patterns help software developers by:**

A Forcing them to write code from scratch
B Providing proven solutions to recurring problems
C Preventing code reuse
D Making code less maintainable

✓ **Correct Answer:** B) Providing proven solutions to recurring problems

Q63 **Which of the following is NOT a benefit of design patterns?**

A Improving code maintainability
B Increasing code duplication
C Promoting best practices
D Enhancing communication among developers

✓ **Correct Answer:** B) Increasing code duplication

Q64 **The Singleton pattern ensures:**

A Multiple instances of a class
B Only one instance of a class exists
C No instances of a class
D Unlimited instances

✓ **Correct Answer:** B) Only one instance of a class exists

Q65 **The Observer pattern is useful for:**

A Creating a single object
B Notifying multiple objects about changes
C Sorting data
D Encrypting data

✓ **Correct Answer:** B) Notifying multiple objects about changes

Q66 **Which pattern provides a way to access elements of a collection without exposing its structure?**

A Iterator
B Singleton
C Observer
D Factory

✓ **Correct Answer:** A) Iterator

Q67 Factory pattern is used to:

A Create objects without specifying the exact class
B Destroy objects
C Manage memory
D Encrypt data

✓ **Correct Answer:** A) Create objects without specifying the exact class

Q68 Design patterns are especially useful for:

A Reinventing solutions
B Solving common design challenges
C Avoiding code reuse
D Writing documentation

✓ **Correct Answer:** B) Solving common design challenges

1.7 Debugging and Testing Strategies

Q69 Debugging is the process of:

A Writing code
B Identifying and fixing errors in code
C Designing diagrams
D Deploying software

✓ **Correct Answer:** B) Identifying and fixing errors in code

Q70 Which of the following is NOT a debugging technique?

A Using print statements
B Using a debugger tool
C Ignoring errors
D Reviewing code

✓ **Correct Answer:** C) Ignoring errors

Q71 Testing ensures that:

A Software meets requirements and works as expected
B Software is never released

C Only the user interface is correct
D Only the code is readable

✓ **Correct Answer:** A) Software meets requirements and works as expected

Q72 Unit testing focuses on:

A Testing the entire system
B Testing individual components or functions
C Testing hardware
D Testing only the user interface

✓ **Correct Answer:** B) Testing individual components or functions

Q73 Integration testing checks:

A How different modules work together
B Only individual functions
C Only documentation
D Only deployment

✓ **Correct Answer:** A) How different modules work together

Q74 System testing involves:

A Testing the complete application
B Only testing code snippets
C Only testing diagrams
D Only testing documentation

✓ **Correct Answer:** A) Testing the complete application

Q75 Regression testing is done to:

A Check if new changes have affected existing functionality
B Only test new features
C Only test the user interface
D Only test hardware

✓ **Correct Answer:** A) Check if new changes have affected existing functionality

1.8 Software Development Tools

Q76 Which of the following is a software development tool?

A Compiler
B Hammer
C Screwdriver
D Printer

✓ **Correct Answer:** A) Compiler

Q77 An Integrated Development Environment (IDE) is used for:

A Writing, testing, and debugging code
B Cooking food
C Drawing pictures
D Printing documents

✓ **Correct Answer:** A) Writing, testing, and debugging code

Q78 A source code repository is used to:

A Store and manage code versions
B Store food
C Store images
D Store hardware

✓ **Correct Answer:** A) Store and manage code versions

Q79 Which tool translates code into machine language?

A Compiler
B Text editor
C Browser
D Scanner

✓ **Correct Answer:** A) Compiler

Q80 Version control systems help developers to:

A Track and manage changes to code
B Cook food
C Print documents
D Draw diagrams

✓ **Correct Answer:** A) Track and manage changes to code

Answer Key Summary

Q.No.	Answer	Q.No.	Answer	Q.No.	Answer	Q.No.	Answer
1	B	21	A	41	A	61	B
2	B	22	A	42	A	62	B
3	B	23	A	43	A	63	B
4	B	24	A	44	A	64	B
5	D	25	A	45	A	65	B
6	B	26	A	46	A	66	A
7	A	27	A	47	A	67	A
8	A	28	A	48	A	68	B
9	B	29	A	49	A	69	B
10	A	30	C	50	A	70	C
11	B	31	A	51	B	71	A
12	D	32	A	52	B	72	B
13	A	33	A	53	C	73	A
14	A	34	A	54	B	74	A
15	A	35	A	55	A	75	A
16	A	36	A	56	B	76	A
17	B	37	C	57	A	77	A
18	A	38	A	58	C	78	A
19	A	39	A	59	B	79	A
20	D	40	A	60	B	80	A

Topic-wise Distribution of MCQs

Topic	Question Numbers	Total Questions
Introduction to Software Development	1-5	5
SDLC & Framework	6-10	5
Requirement Gathering	11-13	3
Functional & Non-Functional Requirements	14-19	6
Design Phase	20-22	3
Coding Phase	23-24	2
Testing Phase	25-28	4
Deployment Phase	29-30	2
Maintenance Phase	31-32	2
Software Development Methodologies	33-35	3
Waterfall Model	36-39	4
Agile Methodology	40-44	5
Project Planning and Management	45-50	6
UML Diagrams	51-60	10
Software Design Patterns	61-68	8
Debugging and Testing Strategies	69-75	7
Software Development Tools	76-80	5
Total		80

End of Chapter 1 Multiple Choice Questions