

**FINAL TERM EXAMINATION SPRING
CS504- SOFTWARE ENGINEERING - I**

Question No: 1 (Marks: 1) Please choose one

The two main documents produced during this phase are Requirement Statement and Requirement Specification. They are also called Requirement Definition and

▶ **Functional Specification**

▶ Mathematical specification

▶ System Specification

▶ None of the given

Question No: 2 (Marks: 1) - Please choose one

A decision table should be used

▶ To document all conditional statements

▶ To guide the development of the project management plan

▶ Only when building an expert system

▶ **when a complex set of conditions and actions appears in a component**

Question No: 3 (Marks: 1) Please choose one

Which of the following is/are tool used in requirement analysis?

▶ Flow Graphs

▶ **Data Flow Diagrams**

▶ Activity Networks

▶ Module Dependency Diagrams

Question No: 4 (Marks: 1) - Please choose one

MVC stands for -----

▶ **Model View Controller**

▶ Modern View Center

▶ Model View Center

▶ Modern View Controller

Question No: 5 (Marks: 1) - Please choose one

A

is a code that explains itself without the need of comments and extraneous documentation

▶ **Self documenting code**

▶ Self telling Code

▶ Self Documenting Design

▶ Non of the above

Question No: 6 (Marks: 1) - Please choose one

Bugs that won't "stand still" (almost random) are the ----- to deal with.

▶ least difficult

▶ **most difficult**

▶ very easy

▶ easy

Question No: 7 (Marks: 1) Please choose one

In refining the DFD during transaction mapping it is unnecessary to create a PSPEC since only the CSPEC is relevant to this type of architectural style.

- ▶ True
- ▶ False

Question No: 8 (Marks: 1) Please choose one

Association is a type _____ of relation

- ▶ Weak
- ▶ Stronger
- ▶ Normal
- ▶ None of above

Question No: 9 (Marks: 1) Please choose one

Variable names must be in mixed case starting with upper case.

- ▶ True
- ▶ False

Question No: 10 (Marks: 1) - Please choose one

Bugs that won't

- ▶ stand still
- ▶ Dynamic
- ▶ Static
- ▶ None of above

(almost random) are the ----- to deal with.

Question No: 11 (Marks: 1) Please choose one

CRUD include following:-

- ▶ Creat
- ▶ Update
- ▶ Read
- ▶ All of above

Question No: 12 (Marks: 1) - Please choose one

Bugs Finding is done by which of the teams in Software Development lifecycle?

- ▶ Development Team
- ▶ Testing Team
- ▶ Analysis & Design Team
- ▶ Process Team

Question No: 13 (Marks: 1) Please choose one

Software Bugs have multiple names, which one of the below is not the name of Software Bugs -----

- ▶ Bugs
- ▶ Defects
- ▶ Errors
- ▶ Mistakes

Question No: 14 (Marks: 1) - Please choose one

In the debugging process a stack trace is a very useful tool.

- ▶ True
- ▶ False

Question No: 15 (Marks: 1) Please choose one

A ----- is a code that explains itself without the need of comments and extraneous documentation

▶ **Self documenting code**

- ▶ Self telling Code
- ▶ Self Documenting Design
- ▶ None of the given

Question No: 16 (Marks: 1) Please choose one

Project -----defines the concept and range of the proposed solution, a limitations identify certain capabilities that the product will not include

▶ **Scope**

- ▶ Agreement
- ▶ Plan
- ▶ None of the given

Question No: 17 (Marks: 1) Please choose one

n the N-TireArchitecture the idea is to enhance scalability and ----- by distributing both the data and the application using multiple server machines.

▶ **Performance**

- ▶ Efficiency
- ▶ Usability
- ▶ non of the all

Question No: 18 (Marks: 1)

The cyclomatic complexity metric provides the designer with information regarding the number of

- ▶ Cycles in the program
- ▶ Errors in the program
- ▶ **Independent logic paths in the program**
- ▶ Statements in the program

Question No: 19 (Marks: 1)

Which of the followings is not a testing type?

- ▶ Subsystem testing
- ▶ Alpha testing
- ▶ Beta Testing
- ▶ **Gamma Testing**

Question No: 20 (Marks: 1)

Which of the items listed below is not one of the software engineering layers?

- ▶ Process
- ▶ **Manufacturing**
- ▶ Methods
- ▶ Tools

Question No: 21 (Marks: 1)

Which piece of code is self-documented?

- ▶ if (x==0) // this is the case when we are allocating a new number
- ▶ if (AllocFlag == 0)
- ▶ **If (AllocFlag == NEW_NUMBER)**
- ▶ None of the given

Question No: 22 (Marks: 2)

Define Modularity.

Question No: 23 (Marks: 2)

Differentiate between Architectural Design and System Architecture in one line.

Question No: 24 (Marks: 2)

What is meant by Software Debugging?

Question No: 25 (Marks: 2)

Five statements were given which required True or False with respect to Equivalence Class (Statements I don't Remember :P)

Question No: 26 (Marks: 3)

Why comments are required to be indented and how it should be done, explain with one example?

Question No: 27 (Marks: 3)

What are the different phases of testing? Draw a diagram. (No write up required)

Question No: 28 (Marks: 5)

Why and how complex expressions should be written in multiple short statements, Explain it with example

Question No: 29 (Marks: 5)

What is the Usefulness of Testing?

Question No: 30 (Marks: 5)

What are the static analyzers, give a check list of the requirements?

FINAL TERM EXAMINATION

Spring 2010

CS504 Software Engineering - I (Session - 2)

Time: 90 min

Marks: 58

Question No: 1 (Marks: 1) - Please choose one

The first step in any OOA process model is to _____

- ▶ build an object-relationship model

- ▶ define collaborations between objects
- ▶ elicit customer requirements
- ▶ select a representation language

Question No: 2 (Marks: 1) - Please choose one

A necessary supplement to transform or transaction mapping needed to create a complete architectural design is _____.

- ▶ entity relationship diagrams
- ▶ the data dictionary
- ▶ processing narratives for each module
- ▶ test cases for each module

Question No: 3 (Marks: 1) - Please choose one

What types of errors are missed by black-box testing and can be uncovered by white-box testing?

- ▶ behavioral errors
- ▶ subtle logic errors
- ▶ performance errors
- ▶ input error

Question No: 4 (Marks: 1) - Please choose one

Which test criteria should be applied in a phase of testing?

- ▶ functional validity
- ▶ interface integrity
- ▶ correctness
- ▶ all of the given

Question No: 5 (Marks: 1) - Please choose one

The hardest single part of building a software system is deciding precisely ----- to build.

- ▶ what
- ▶ How
- ▶ When
- ▶ Why

Question No: 6 (Marks: 1) - Please choose one

In sequence Diagrams objects are organized in a -----line

- ▶ horizontal
- ▶ vertical
- ▶ horizontal and vertical
- ▶ non of the above

Question No: 7 (Marks: 1) - Please choose one

Every view is potentially Hierarchical in this regard which of the view are Hierarchical ?

- ▶ Functionl View
- ▶ Development View
- ▶ Concurrency view
- ▶ All of given

Question No: 8 (Marks: 1) - Please choose one

Like analysis models, many different kinds of -----models are developed

- ▶ Architectural
- ▶ System
- ▶ Design
- ▶ Logical

Question No: 9 (Marks: 1) - Please choose one

idea behind zero install architecture is to develop a system where no installation on the --
----- is needed.

- ▶ Client side
- ▶ Server Side
- ▶ Client & Server Side
- ▶ Non of the all

Question No: 10 (Marks: 1) - Please choose one

The construction is used to avoid ----- errors.

- ▶ compilation
- ▶ runtime
- ▶ design time
- ▶ non of them

Question No: 11 (Marks: 1) - Please choose one

All comments should be written in-----

- ▶ English
- ▶ French
- ▶ C++
- ▶ JAVA

Question No: 12 (Marks: 1) - Please choose one

One of the Guidelines to avoid common mistakes is to never use ----- except for declaration

- ▶ ,
- ▶ ;
- ▶ =
- ▶ ||

Question No: 13 (Marks: 1) - Please choose one

The order in which bytes of one word are stored is ----- dependent

- ▶ Hardware
- ▶ Software
- ▶ language
- ▶ system

Question No: 14 (Marks: 1) - Please choose one

Verification and validation are the processes in which we check a product against its ----- and the ----- of the users who will be using it

- ▶ specifications, expectations
- ▶ statements, expectations
- ▶ specifications , arguments
- ▶ statements, arguments

Question No: 15 (Marks: 1) - Please choose one

Two tests are considered to be equivalent if it is believed that: if one discovers a defect, the other probably will too, and if one does not discover a defect, -----

- ▶ the other probably may
- ▶ non of them
- ▶ the other probably won't either
- ▶ the other probably will

Question No: 16 (Marks: 1) - Please choose one

It was lady named ----- who actually coin the term "bug" for the fiest time.

- ▶ Elisay Chistopher
- ▶ Admiral Grace Hopper
- ▶ Ana Nicholson
- ▶ Jane Hopper

Question No: 17 (Marks: 1) - Please choose one

The first "bug" was actually a moth, which flew through an open window and into one of the Mark ----- 's relays.

- ▶ II
- ▶ I
- ▶ III
- ▶ IV

Question No: 18 (Marks: 1) - Please choose one

Symptoms of logical errors are -----

- ▶ code is misbehaving
- ▶ The program doesn't crash, but akes odd branches through the code.
- ▶ Results are the opposite
- ▶ Output looks strange,
- ▶ all of the given

Question No: 19 (Marks: 1) - Please choose one

First hand accounts of the problem are always useful in Debugging process.

▶ True

▶ False

Question No: 20 (Marks: 1) - Please choose one

Software architecture elements are further divided into categories which in total are -----

▶ 2

▶ 3

▶ 4

▶ 5

Question No: 21 (Marks: 1) - Please choose one

Establishing responsibilities for objects includes

▶ Generalization Relationships

▶ Specialization Relationships

▶ all of the above

▶ identifying Association relationships

Question No: 22 (Marks: 1) - Please choose one

Source files can have the extension -----

▶ c++ .

▶ .C

▶ .cpp

▶ all of the given

Question No: 23 (Marks: 1) - Please choose one

Be very careful when you use functions with side effects – functions that change the values of the

▶ parameters

▶ variables

▶ constants

▶ None of given

Question No: 24 (Marks: 1) - Please choose one

Which of the following is not a characteristic of software?

▶ Software is tangible

▶ A change to a piece of code may implicitly affect the functions of the rest of the code.

▶ Software is configurable.

▶ Software does not wear and tear.

Question No: 25 (Marks: 1) - Please choose one

Which of the following is a fact finding method?

- ▶ Site visits
- ▶ Prototyping
- ▶ Study of similar systems
- ▶ All of given

Question No: 26 (Marks: 1) - Please choose one

The statements given below are associated with system development, testing and maintenance. Identify the correct statement from among them:

- ▶ Some of the activities in the implementation phase are building individual system components, writing of programs and development of user interfaces.
- ▶ The post implementation review is performed to see that the computer system is working.
- ▶ None of Given
- ▶ System development phase consists of a development phase and an implementation phase.

Question No: 27 (Marks: 2)

What is Software Testing?

Question No: 28 (Marks: 2)

Write unit testing qualitative benefits.

Question No: 29 (Marks: 2)

Where Term Compute can be used in Methods?

Question No: 30 (Marks: 2)

Which of the following is a/are non-functional requirement of an e-learning system?

- (a) User friendliness
- (b) Time taken to download study materials through the system should not be too long.
- (c) On-line assignment submission facility
- (d) On-line chatting facility
- (e) Robustness

Question No: 31 (Marks: 3)

Write unit testing principles.

Question No: 32 (Marks: 3)

The use of do while loops should be avoided. Explain why ?

Question No: 33 (Marks: 3)

Give 3 Equivalence partitioning guidelines

Question No: 34 (Marks: 5)

Discuss the symptoms and an example of memory overrun bug class.

Question No: 35 (Marks: 5)

Write at least 5 General Naming conventions for C++ or Java

Question No: 36 (Marks: 5)

Explain at least 2 code structures.

FINAL TERM EXAMINATION

Spring 2010

CS504- Software Engineering - I (Session - 3)

Time: 90 min

Marks: 58

Question No: 1 (Marks: 1) - Please choose one

Quantitative methods for assessing the quality of proposed architectural designs are readily available.

- ▶ True
- ▶ False

Question No: 2 (Marks: 1) - Please choose one

A decision table should be used _____

- ▶ to document all conditional statements
- ▶ to guide the development of the project management plan
- ▶ only when building an expert system
- ▶ when a complex set of conditions and actions appears in a component

Question No: 3 (Marks: 1) - Please choose one

Test cases should be designed long before testing begins.

- ▶ True
- ▶ False

Question No: 4 (Marks: 1) - Please choose one

Which of the following are characteristics of testable software?

- ▶ observability
- ▶ simplicity

- ▶ stability
- ▶ all of the given

Question No: 5 (Marks: 1) - Please choose one

Comparison testing is typically done to test two competing products as part of customer market analysis prior to product release.

- ▶ True
- ▶ False

Question No: 6 (Marks: 1) - Please choose one

By collecting software metrics and making use of existing software reliability models it is possible to develop meaningful guidelines for determining when software testing is done.

- ▶ True
- ▶ False

Question No: 7 (Marks: 1) - Please choose one

Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

- ▶ True
- ▶ False

Question No: 8 (Marks: 1) - Please choose one

A change becomes ----- because of close presence of data and functions

- ▶ Localized
- ▶ Private
- ▶ Global
- ▶ Accessible

Question No: 9 (Marks: 1) - Please choose one

Requirement engineering mainly deals with the ----- of the system

- ▶ definition phase
- ▶ development phase
- ▶ maintenance
- ▶ non of the above

Question No: 10 (Marks: 1) - Please choose one

40-60% of all defects found in software projects can be traced back to poor -----

- ▶ Requirements
- ▶ Design
- ▶ Coding
- ▶ Testing

Question No: 11 (Marks: 1) - Please choose one

In the N-Tire Architecture the idea is to enhance scalability and ----- by distributing both the data and the application using multiple server machines.

- ▶ Performance
- ▶ Efficiency
- ▶ Usability

- ▶ non of the all

Question No: 12 (Marks: 1) - Please choose one

MVC pattern was based on the ----- pattern.

- ▶ **Observer**
- ▶ Structural
- ▶ Behavioral
- ▶ Non of them

Question No: 13 (Marks: 1) - Please choose one

Classes should be declared in individual header files with the file name matching the ----- name.

- ▶ **class**
- ▶ method
- ▶ object
- ▶ non of the all

Question No: 14 (Marks: 1) - Please choose one

Unit testing is roughly equivalent to ----- testing for hardware in which each chip is tested thoroughly after manufacturing

- ▶ Circuit level
- ▶ **Chip Level**
- ▶ component level
- ▶ system level

Question No: 15 (Marks: 1) - Please choose one

Software should be tested more like hardware, with Built-in self testing: such that each unit can be tested -----

- ▶ freely
- ▶ **independently**
- ▶ dependtly
- ▶ completely

Question No: 16 (Marks: 1) - Please choose one

A system ----- is the period in which tremendous pressure is on developers end to fix the problem and make the system running again

- ▶ Uptime
- ▶ **Downtime**
- ▶ Currentime
- ▶ futuretimr

Question No: 17 (Marks: 1) - Please choose one

Which one of the given below is not a symptom of memory overrun?

▶ Program crashes quite regularly after a given routine is called, that routine should be examined for a possible overrun condition.

▶ If the routine in question does not appear to have any such problem the most likely cause is that another routine, called in the prior sequence, has already trashed variables or memory blocks.

▶ Checking the trace log of the called routines leading up to one with the problem will often show up the error.

▶ **Compiler warnings.**

Question No: 18 (Marks: 1) - Please choose one

Software architecture elements are further divided into categories which in total are -----

- ▶ 2
- ▶ 3
- ▶ 4
- ▶ 5

Question No: 19 (Marks: 1) - Please choose one

Three tier architecture contains ----- layers

- ▶ Presentation
- ▶ Application
- ▶ Database
- ▶ **All of the above**

Question No: 20 (Marks: 1) - Please choose one

1. Variables should be initialized where they are declared and they should be declared in the ----- scope possible.

- ▶ **Smallest**
- ▶ largest
- ▶ medium
- ▶ None of the given

Question No: 21 (Marks: 1) - Please choose one

----- are two important tools that can help in managing and mastering the complexity of a program.

- ▶ **abstraction and encapsulation**

- ▶ abstraction and Inheritance
- ▶ abstraction and Polymorphism

- ▶ None of given

Question No: 22 (Marks: 1) - Please choose one

Which of the following is a/are tool used in requirement analysis?

- ▶ Flow Graphs
- ▶ **Data Flow Diagrams**
- ▶ Activity Networks
- ▶ Module Dependency Diagrams

Question No: 23 (Marks: 1) - Please choose one

Consider the following comment. "The software which I bought won't run on windows and when it runs I can't use WORD at the same time". Which of the following do you think are violated by the newly bought software?

- ▶ dependability, interchangeability
- ▶ **platform independence, interoperability**
- ▶ reliability, dependency
- ▶ interoperability, reliability

Question No: 24 (Marks: 1) - Please choose one

..... is a diagramming technique used to identify the types of objects in the system and the static relationships that exist among them.

- ▶ Class Diagram
- ▶ Document flow diagrams
- ▶ Data flow diagrams
- ▶ **Flow charts**

Question No: 25 (Marks: 1) - Please choose one

Which of the following interaction style best suit the design of an interface for visually impaired users?

- ▶ **direct manipulation**
- ▶ direct manipulation
- ▶ natural language
- ▶ command line

Question No: 26 (Marks: 1) - Please choose one

Which of the following testing involve purely black box testing?

- ▶ unit testing, beta testing
- ▶ acceptance testing, interface testing

- ▶ beta testing, acceptance testing
- ▶ integration testing, interface testing

Question No: 27 (Marks: 2)

what does this mean” Object Creation and Life Time”?

Question No: 28 (Marks: 2)

How one can avoid hazards caused by side effects while writing code. List the two guidelines.

Question No: 29 (Marks: 2)

What is the greatest advantage of exception handling?

Question No: 30 (Marks: 2)

Give 2 Unit Testing Tips.

Question No: 31 (Marks: 3)

Write unit testing quantitative benefits.

Question No: 32 (Marks: 3)

How Comments should be indented relative to their position in the code? Give an example

Question No: 33 (Marks: 3)

Consider the following code fragment.

```
while a
{
while b
c
d
}
```

If you were to test this code, what would be the test technique to adopt?

Question No: 34 (Marks: 5)

Narrate the manner for the organization of Class and Interface declarations

Question No: 35 (Marks: 5)

Discus the symptoms and an example of coding error bug class.

Question No: 36 (Marks: 5)

Why Code portability is so important ? Give out 3 ways / Guide lines to improve the code portability with examples
(5+5)

FINALTERM EXAMINATION**Spring 2010****CS504- Software Engineering - I (Session - 4)****Time: 90 min****Marks: 58****Question No: 1 (Marks: 1) - Please choose one**

What are the three generic phases of software engineering?

- ▶ **definition, development, support**
- ▶ what, how, where
- ▶ programming, debugging, maintenance
- ▶ analysis, design, testing

Question No: 2 (Marks: 1) - Please choose one

In the context of requirements analysis, partitioning results in the elaboration of data, function, or behavior.

- ▶ True
- ▶ **False**

Question No: 3 (Marks: 1) - Please choose one

Quantitative methods for assessing the quality of proposed architectural designs are readily available.

- ▶ True
- ▶ **False**

Question No: 4 (Marks: 1) - Please choose one

In refining the DFD during transaction mapping it is unnecessary to create a PSPEC since only the CSPEC is relevant to this type of architectural style.

- ▶ True
- ▶ **False**

Question No: 5 (Marks: 1) - Please choose one

In transaction mapping the first level factoring results in the _____

- ▶ creation of a CFD
- ▶ **derivation of the control hierarchy**
- ▶ distribution of worker modules
- ▶ refinement of the module view

Question No: 6 (Marks: 1) - Please choose one

Variable names must be in mixed case starting with upper case.

- ▶ True
- ▶ **False**

Question No: 7 (Marks: 1) - Please choose one

Class variables should be declared public. This concept violates which of the following.

- ▶ **Information hiding**
- ▶ Encapsulation
- ▶ Information hiding and Encapsulation
- ▶ None of given

Question No: 8 (Marks: 1) - Please choose one

Real-time applications add a new and potentially difficult element to the testing mix

- ▶ performance

▶ reliability

▶ security

▶ **time**

Question No: 9 (Marks: 1) - Please choose one

Top-down integration testing has as it's major advantage(s) that

▶ low level modules never need testing

▶ major decision points are tested early

▶ no stubs need to be written

▶ **none of the given**

Question No: 10 (Marks: 1) - Please choose one

Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

▶ **True**

▶ False

Question No: 11 (Marks: 1) - Please choose one

isAuthorized, assess Performance, get item for UPC, get cashier for number, are the examples of

▶ Services

▶ Attributes

▶ Links

▶ **Non of the above**

Question No: 12 (Marks: 1) - Please choose one

the development view describes the -----organization of the software in its development environment,

▶ **Static**

- ▶ Dynamic
- ▶ Still
- ▶ Static & Dynamic

Question No: 13 (Marks: 1) - Please choose one

----- being the first pure Object Oriented language in which observer pattern was used in implementing its Model View Controller

- ▶ Smalltalk
- ▶ PASCAL
- ▶ **JAVA**
- ▶ C++

Question No: 14 (Marks: 1) - Please choose one

Hungarian Notation was first discussed by Charles Simonyi of-----

- ▶ **Microsoft.**
- ▶ Oracle
- ▶ Apple Macintosh
- ▶ Non of the all

Question No: 15 (Marks: 1) - Please choose one

The language does not specify whether----- is signed or unsigned.

- ▶ **char**
- ▶ integer
- ▶ double
- ▶ constant

Question No: 16 (Marks: 1) - Please choose one

A number of invisible execution paths can exist in simple code in a language that allows-----

- ▶ **exceptions**
- ▶ defects
- ▶ errors
- ▶ all of them

Question No: 17 (Marks: 1) - Please choose one

Bugs Fixing is done by which of the teams in Software Development lifecycle?

- ▶ **Development Team**

- ▶ Testing Team
- ▶ Analysis & Design Team
- ▶ Process Team

Question No: 18 (Marks: 1) - Please choose one

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- ▶ Mistakes

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Symptoms of logical errors are -----

- ▶ code is misbehaving
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- ▶ Results are the opposite
- ▶ Output looks strange,

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Question No: 20 (Marks: 1) - Please choose one

First hand accounts of the problem are always useful in Debugging process.

▶ True

- ▶ False

Question No: 21 (Marks: 1) - Please choose one

In the debugging process a stack trace is a very useful tool.

▶ True

- ▶ False

Question No: 22 (Marks: 1) - Please choose one

Establishing responsibilities for objects includes

- ▶ Generalization Relationships
- ▶ Specialization Relationships
- ▶ all of the above
- ▶ **identifying Association relationships**

Question No: 23 (Marks: 1) - Please choose one

Stakeholders are different people who would be interested in the -----

- ▶ Software
- ▶ System
- ▶ Product
- ▶ **All of the given**

Question No: 24 (Marks: 1) - Please choose one

A ----- is a code that explains itself without the need of comments and extraneous documentation

- ▶ **Self documenting code**
- ▶ Self telling Code
- ▶ Self Documenting Design
- ▶ None of the given

Question No: 25 (Marks: 1) - Please choose one

1. Variables should be initialized where they are declared and they should be declared in the ----- scope possible.

- ▶ **Smallest**
- ▶ largest
- ▶ medium
- ▶ None of the given

Question No: 26 (Marks: 1) - Please choose one

Which of the following is an/are advantage(s) of object oriented analysis & design over structured system analysis & design?

- ▶ Ease of modeling real world events
- ▶ Reusability
- ▶ Maintainability
- ▶ **All of given**

Question No: 27 (Marks: 2)

what is called **self documenting code**.

Question No: 28 (Marks: 2)

what is an Inspection Checklist.

Question No: 29 (Marks: 2)

Give 2 examples of exceptional code pathes.

Question No: 30 (Marks: 2)

The following written statement depicts which requirement from the requirement engineering process

“Constraints on the services or functions offered by the system such as timing constraints, constraints on the development process, standards, etc.”

Question No: 31 (Marks: 3)

Write unit testing quantitative benefits.

Question No: 32 (Marks: 3)

Give three general rules for avoiding split lines.

Question No: 33 (Marks: 3)

Expalin about 3 coverage schemes in white box testing.

Question No: 34 (Marks: 5)

List five guidelines that can help you in writing portable code.

Question No: 35 (Marks: 5)

Below is the chunk of code :

```
result = squareRoot(argument);  
assert (abs (result * result - argument) < epsilon);
```

Write the Contract for square root routine keeping in view unit testing.

Question No: 36 (Marks: 5)

Parentheses should always be used as they reduce complexity. Explain it with the help of a single example.

Question No: 1 (Marks: 1) - Please choose one

Object-oriented domain analysis is concerned with the identification and specification of reusable capabilities within an application domain.

- True
- False

Question No: 2 (Marks: 1) - Please choose one

Fourth generation techniques

- Allow software to be developed without any testing.
- Eliminate the need for costly requirements gathering activities.
- Can reduce the time required to develop software.
- Are best used by non-programmers to build small systems.

Question No: 3 (Marks: 1) - Please choose one

Data design actually begins during the creation of the analysis model, not the architectural model.

- True
- False

Question No: 4 (Marks: 1) - Please choose one

The states shown in a state transition diagram do not necessarily correspond to the processes shown in a control flow diagram for the same system.

- True
- False

Question No: 5 (Marks: 1) - Please choose one

The criteria used to assess the quality of an architectural design should be based on system

- accessibility and reliability
- data and control
- functionality
- implementation details

Question No: 6 (Marks: 1) - Please choose one

A useful technique for evaluating the overall complexity of a proposed architecture is to look at the component

- number and size of components
- flow dependencies and sharing dependencies
- size and cost
- none of the given

Question No: 7 (Marks: 1) - Please choose one

The three basic principles that guide maintainability are: simplicity, clarity, and _____ .

- Generality
- Reliability

- All of the given choices
- None of the Given choices

Question No: 8 (Marks: 1) - Please choose one

In order to make a program self documented a number of attributes required. Which one

is the attribute/s of self documented program

- All of the given choices
- Size of each function
- Choice of variable
- Modularity

Question No: 9 (Marks: 1) - Please choose one

Floating point constants should always be written with decimal point and at least

- one decimal
- two decimal
- three decimal
- none of the given

Question No: 10 (Marks: 1) - Please choose one

The code becomes self explanatory with the help of proper use of parentheses. Select the right one.

- `leapYear = year % 4 == 0 && year % 100 != 0 || year % 400 == 0 ;`
- `leapYear = ((year % 4 == 0) && (year % 100 != 0) || (year % 400 == 0));`
- `leapYear = ((year % 4 == 0) && (year % 100 != 0)) || (year % 400 == 0);`
- `leapYear = (year % 4 == 0) && (year % 100 != 0) || (year % 400 == 0);`
- none of the given options

Question No: 11 (Marks: 1) - Please choose one

Graph-based testing methods can only be used for object-oriented systems

- True
- False

Question No: 12 (Marks: 1) - Please choose one

Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

- True
- False

Question No: 13 (Marks: 1) - Please choose one

A class is a ----- of objects

- Template
- Stereotype
- Collection
- Non of the above

Question No: 14 (Marks: 1) - Please choose one

A public Interface provides a way for with other Classes.

- Communication
- Accessibility
- Reaching
- All of the above

Question No: 15 (Marks: 1) - Please choose one

Flow Charts represents

- sequence Activity
- random activity
- parallel activity
- non of the above

Question No: 16 (Marks: 1) - Please choose one

Software architecture defines the high level structure of the software by putting together a number of architectural ----- in an organized fashion.

- elements
- parts
- components
- non of the all

Question No: 17 (Marks: 1) - Please choose one

Patterns are devices that allow programs to share knowledge about their -----.

- Design
- Code
- Analysis
- Non of the all

Question No: 18 (Marks: 1) - Please choose one

MVC stands for -----

- Model View Controller
- Modern View Center
- Model View Center
- Modern View Controller

Question No: 19 (Marks: 1) - Please choose one

A ----- is a code that explains itself without the need of comments and extraneous documentation

- Self documenting code
- Self telling Code
- Self Documenting Design
- Non of the them

Question No: 20 (Marks: 1) - Please choose one

Type conversions must always be done -----

- explicitly
- implicitly
- simultaneously
- non of them

Question No: 21 (Marks: 1) - Please choose one

Types that are -----to one file only can be declared inside that file.

- Local
- Global
- Private
- General

Question No: 22 (Marks: 1) - Please choose one

The use of *d*, *while* loops should be -----

- avoided
- encouraged
- practiced
- non of them

Question No: 23 (Marks: 1) - Please choose one

one of the causes of the portability issues is the order of ----- varies from one

implementation
to other.

- evaluation
- numbers
- variables
- symbols

Question No: 24 (Marks: 1) - Please choose one

----- is a powerful technique that separates error-handling code from normal code.

- Exception handling
- Code handling
- variable handling
- pointer handling

Question No: 25 (Marks: 1) - Please choose one

The goal of testing is to expose ----- defects in a software system before it is put to use.

- latent
- already present
- current
- runtime

Question No: 26 (Marks: 1) - Please choose one

Static analyzers are software tools for ----- processing.

- analysis text
- source text
- design text
- non of the given

Question No: 27 (Marks: 1) - Please choose one

The first bug was actually a moth, which flew through an open window and into one of the Mark ----- 's relays.

- II
- I
- III
- IV

Question No: 28 (Marks: 1) - Please choose one

Which one of the given below is not a symptom of memory overrun?

- Program crashes quite regularly after a given routine is called, that routine should be examined for a possible overrun condition.
- If the routine in question does not appear to have any such problem the most likely cause is that another routine, called in the prior sequence, has already trashed variables or memory blocks.
- Checking the trace log of the called routines leading up to one with the problem will often show up the error.
- Compiler warnings.

Question No: 29 (Marks: 1) - Please choose one

Holistic medicine, concerns itself with the state of the body as a whole, not the ----- that is currently attacking it.

- reason

- disease
- source
- non of the given

Question No: 30 (Marks: 1) - Please choose one

Bugs that won't "stand still" (almost random) are the ----- to deal with.

- least difficult
- most difficult
- very easy
- easy

ALL Papers Longs question some of them solved.....

FINALTERM EXAMINATION

Spring 2009

CS504- Software Engineering _ I

Question No: 31 (Marks: 1)

Write the procedure how names representing Abbreviations and acronyms should be describe in coding style guide.

Abbreviations and acronyms should not be uppercase when used as name.

`exportHtmlSource(); // NOT: xportHTMLSource();`
`openDvdPlayer(); // NOT: openDVDPlayer();`

Question No: 32 (Marks: 1)

Define a system downtime.

A system downtime is the period in which tremendous pressure is on developers end to fix the problem and make the system running again.

Question No: 33 (Marks: 2)

What is layered architecture

As the name suggests, a layered architecture has many different layers. One typical example of a layered architecture is an operating system where different layers are used to provide services and functionality and the inner layers are closer to the machine hardware than the outer layers. In this way, each layer isolates the outer layer from inner complexities. In order to work properly, the outer layer only needs to know the interface provided by the inner layer. If there are any changes in the inner layer, as long as the interface does not change, the outer layer is not affected. This scheme tremendously portability of the system. The basic layered architecture is depicted in the following diagram.

Question No: 34 (Marks: 2)

What is Infeasible path?

Infeasible path is a path through a program which is never traversed for any input data.

Question No: 35 (Marks: 3)

List three guidelines that can help you in writing portable code.

Question No: 36 (Marks: 3)

Describe three coverage schemes related to white box testing.

Question No: 37 (Marks: 3)

Write the General Form for documenting patterns.

The motivation or context that this pattern applies to.

Prerequisites that should be satisfied before deciding to use a pattern.

A description of the program structure that the pattern will define.

A list of the participants needed to complete a pattern.

Consequences of using the pattern...both positive and negative.

Examples!

Question No: 38 (Marks: 5)

Discuss any five the General naming conventions for an object oriented language

General naming conventions for Java and C++

1. Names representing types must be nouns and written in mixed case starting with upper case.

Line, FilePrefix

2. Variable names must be in mixed case starting with lower case.

line, filePrefix

This makes variables easy to distinguish from types, and effectively resolves potential naming collision as in the declaration `Line line`;

3. Names representing constants must be all uppercase using underscore to separate words.

`MAX_ITERATIONS, COLOR_RED`

In general, the use of such constants should be minimized. In many cases

implementing the value as a method is a better choice. This form is both easier to read, and it ensures a uniform interface towards class values.

`int getMaxIterations()// NOT: MAX_ITERATIONS = 25`

```
{
return 25;
}
```

4. Names representing methods and functions should be verbs and written in mixed case starting with lower case.

`getName(), computeTotalWidth()`

5. Names representing template types in C++ should be a single uppercase letter.

`template<class T> ...`

`template<class C, class D> ...`

6. Global variables in C++ should always be referred to by using the `::` operator.

`::mainWindow.open() , ::applicationContext.getName()`

7. Private class variables should have `_` suffix.

`class SomeClass`

```
{
private int length_;
```

```
...
}
```

Apart from its name and its type, the scope of a variable is its most important feature. Indicating class scope by using `_` makes it easy to distinguish class variables from local scratch variables.

8. Abbreviations and acronyms should not be uppercase when used as name.

```
exportHtmlSource(); // NOT: xportHTMLSource();
```

```
openDvdPlayer(); // NOT: openDVDPlayer();
```

Using all uppercase for the base name will give conflicts with the naming conventions given above. A variable of this type would have to be named `dVD`, `hTML` etc. which obviously is not very readable.

9. Generic variables should have the same name as their type.

```
void setTopic (Topic topic) // NOT: void setTopic (Topic value)
```

```
// NOT: void setTopic (Topic aTopic)
```

```
// NOT: void setTopic (Topic x)
```

```
void connect (Database database) // NOT: void connect (Database db)
```

```
// NOT: void connect (Database oracleDB)
```

Non-generic variables have a role. These variables can often be named by combining role and type:

```
Point startingPoint, centerPoint;
```

```
Name loginName;
```

10. All names should be written in English.

```
fileName; // NOT: filNavn
```

11. Variables with a large scope should have long names, variables with a small scope can have short names. Scratch variables used for temporary storage or indices are best kept short. A programmer reading such variables should be able to assume that its value is not used outside a few lines of code. Common scratch variables for integers are `i`, `j`, `k`, `m`, `n` and for characters `c` and `d`.

12. The name of the object is implicit, and should be avoided in a method name.

```
line.getLength(); // NOT: line.getLineLength();
```

The latter seems natural in the class declaration, but proves superfluous in use.

Question No: 39 (Marks: 5)

What are the Software testing objective? Also define a successful test.

Software testing objective

„h The correct approach to testing a scientific theory is not to try to verify it, but to seek to refute the theory. That is to prove that it has errors. (Popper 1965)

„h The goal of testing is to expose latent defects in a software system before it is put to use.

„h A software tester tries to break the system. The objective is to show the presence of a defect not the absence of it.

„h Testing cannot show the absence of a defect. It only increases your confidence in the software.

„h This is because exhaustive testing of software is not possible – it is simply too

expansive and needs virtually infinite resources.

Successful Test

From the following sayings, a successful test can be defined

“If you think your task is to find problems then you will look harder for them than if you think your task is to verify that the program has none” – Myers 1979.

“A test is said to be successful if it discovers an error” – doctor’s analogy.

The success of a test depends upon the ability to discover a bug not in the ability to prove that the software does not have one. As, it is impossible to check all the different scenarios of a software application, however, we can apply techniques that can discover potential bugs from the application. Thus a test that helps in discovering a bug is a successful test. In software testing phase, our emphasis is on discovering all the major bugs that can be identified by running certain test scenarios. However it is important to keep in mind that testing activity has certain limitations.

Question No: 40 (Marks: 10)

What should be the sets of inputs that should be used to test the system effectively and efficiently? Give an example.

To answer these questions, we divide a problem domain in different classes. These are called Equivalence Classes.

Question No: 41 (Marks: 10)

Discuss Art and Science of Debugging.

Debugging is taken as an art but in fact it is a scientific process. As people learn about different defect types and come across situations in which they have to debug the code, they develop certain heuristics. Next time they come across a similar situation, they apply those heuristics and solve the problem in lesser time and with a lesser effort. While discussing the debugging process we discuss the phenomenon of “you miss the obvious”. When a person writes a code, he develops certain impression about that code. One can term this impression as a personal bias that the developer builds towards his creation the **“code” and when he has to check this code, he can potentially miss out obvious mistakes**

due to this impression or bias. Therefore, it is strongly recommended that in order to reach to a defect in the code, one needs “another pair of eyes”. That is, start discovering the defect by applying your own heuristics and if you could reach to the problem, fine, otherwise ask a companion to help you in this process. We shall further elaborate this idea based on the following example.

Final Term Examination - February 2005

Time Allowed: 150 Minutes

Question No. 1

Marks : 6

What are Loop Errors? Describe briefly. What are symptoms of Loop Errors?

Question No. 2 Marks : 15

Loop Errors

„h Loop errors break down into several different subtypes.

„h They occur around a loop construct in a program.

„h Infinite loops, off-by-one loops, and improperly exited loops.

Symptoms

„h If your program simply locks up, repeatedly displays the same data over and over, or infinitely displays the same message box, you should immediately suspect an infinite loop error.

„h Off-by-one loop errors are quite often seen in processes that perform calculations.

„h If a hand calculation shows that the total or final sum is incorrect by the last data point, you can quickly surmise that an off-by-one loop error is to blame.

„h Likewise, if you were using graphics software and saw all of the points on the screen, but the last two were unconnected, you would suspect an off-by-one error.

Watching for a process that terminates unexpectedly when it should have continued.

Q- 4

Marks: 6

What are Boolean Bugs? Describe briefly. What are symptoms of Boolean Bugs?

Boolean bugs

Boolean bugs occur because the mathematical precision of Boolean algebra has virtually nothing to do with equivalent English words.

When we say "and", we really mean the boolean "or" and vice versa.

Symptoms

„h When the program does exactly the opposite of what you expect it to. For example, you might have thought you needed to select only one entry from a list in order to proceed. Instead, the program will not continue until you select more than one. Worse, it keeps telling you to select only one value.

„h For true/false problems, you will usually see some sort of debug output indicating an error in a function, only to see the calling function proceed as though the problem had not occurred.

2. Write a short note on Data Flow or Pipes and Filter Architecture Configuration.(3 Pts)

This architecture is very similar to data flow diagrams. This is used when the input data is processed through a series of transformations to yield the desired output. It is also known as pipes and filters architecture where each processing step is called a filter and the connecting link from one process to the other is called the pipe through which the information flows from one process to the other. An important aspect of this model is that each filter works independently of others and does not require knowledge of the working of any of the other filters including its neighbours.

If the dataflow has only a single sequence of processes with no alternative or parallel paths, then it is called batch sequential. These models are depicted in the following diagrams.

3. How do you differentiate between the responsibilities of Developer and Tester? (3 Pts)

Development is a creative activity Testing is a destructive activity

Objective of development is to show that the program works. Objective of testing is to show that the program does not work

Final Term Examination - August 2004

QuestionNo.3

Marks:6

What are the symptoms of pointer errors?

Pointer errors

„h A pointer error is any case where something is being used as an indirect pointer to another item.

„h Uninitialized pointers: These are pointers that are used to point at something, but we fail to ever assign them something to point at.

„h Deleted pointers, which continue to be used.

„h An Invalid pointer is something that is pointing to a valid block of memory, but that memory does not contain the data you expect it to.

Symptoms

„h The program usually crashes or behaves in an unpredictable and baffling way.

„h You will generally observe stack corruptions, failure to allocate memory, and odd changing of variable values.

„h Changing a single line of code can change where the problem occurs.

„h If the problem "goes away" when you place a print statement or new variable into the code that you suspect contains the problem.

What are the differences between Thin Client and Fat Client architecture?

(Q 9)

Thin Client Model

This model was initially used to migrate legacy systems to client server architectures. In this case the legacy system may act as a server in its own right and the GUI may be implemented on a client. Its chief disadvantage is that it places a heavy processing load on both the server and the network.

Fat Client Model

With advent of cheaper and more powerful hardware, people thought of using the processing power of client side machines. So the fat client model came into being. In this model, more processing is delegated to the client as the application processing is locally extended. It is suitable for new client/server systems when the client system capabilities are known in advance. It however is more complex than thin client model with respect to management issues. Since the client machine now also has a significant part of the application resident on it, new versions of each application need to be installed on every client.

Following is the list of bugs' symptoms; identify the bug classes in each case.

a) System slowdowns. Memory Leakage

b) The program doesn't crash, but the flow of the program takes odd branches through the code. Logical Error

c) If your program simply locks up, repeatedly displays the same data over and over, or infinitely displays the same message box. Loop Error

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FINAL TERM EXAMINATION Spring 2010 CS504- Software Engineering - I (Session - 2)

Question No: 1 (Marks: 1) - Please choose one

The first step in any OOA process model is to _____

- ▶ build an object-relationship model
- ▶ define collaborations between objects
- ▶ **elicit customer requirements** (A PRACTITIONER'S APPROACH Page603)
- ▶ select a representation language

Question No: 2 (Marks: 1) - Please choose one

A necessary supplement to transform or transaction mapping needed to create a complete architectural design is _____.

- ▶ entity relationship diagrams
- ▶ the data dictionary
- ▶ **processing narratives for each module** (A PRACTITIONER'S APPROACH Page422)
- ▶ test cases for each module

Question No: 3 (Marks: 1) - Please choose one

What types of errors are missed by black-box testing and can be uncovered by white-box testing?

- ▶ behavioral errors
- ▶ **subtle logic errors** [Click here for detail](#)
- ▶ performance errors
- ▶ input error

Question No: 4 (Marks: 1) - Please choose one

Which test criteria should be applied in a phase of testing?

- ▶ functional validity
- ▶ interface integrity
- ▶ correctness
- ▶ **all of the given** (A PRACTITIONER'S APPROACH Page522)

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Question No: 5 (Marks: 1) - Please choose one

The hardest single part of building a software system is deciding precisely ----- to build.

▶ **what (Page 17)**

- ▶ How
- ▶ When
- ▶ Why

Question No: 6 (Marks: 1) - Please choose one

In sequence Diagrams objects are organized in a -----line

▶ **horizontal (Page 106)**

- ▶ vertical
- ▶ horizontal and vertical
- ▶ non of the above

Question No: 7 (Marks: 1) - Please choose one

Every view is potentially Hierarchical in this regard which of the view are Hierarchical ?

- ▶ Functionl View
- ▶ Development View
- ▶ *Concurrency view*
- ▶ **All of given (Page 125)**

Question No: 8 (Marks: 1) - Please choose one

Like analysis models, many different kinds of -----models are developed

▶ **Architectural (Page 126)**

- ▶ System
- ▶ Design
- ▶ Logical

Question No: 9 (Marks: 1) - Please choose one

Idea behind zero install architecture is to develop a system where no installation on the ----- is needed.

▶ **Client side (Page 130)**

- ▶ Server Side
- ▶ Client & Server Side
- ▶ Non of the all

Question No: 10 (Marks: 1) - Please choose one

The construction is used to avoid ----- errors.

▶ **compilation (Page 157)**

- ▶ runtime
- ▶ design time
- ▶ non of them

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Question No: 11 (Marks: 1) - Please choose one
All comments should be written in-----

- ▶ **English (Page 162)**
- ▶ French
- ▶ C++
- ▶ JAVA

Question No: 12 (Marks: 1) - Please choose one
One of the Guidelines to avoid common mistakes is to never use ----- except for declaration

- ▶ **, (Page 176)**
- ▶ ;
- ▶ =
- ▶ ||

Question No: 13 (Marks: 1) - Please choose one
The order in which bytes of one word are stored is ----- dependent

- ▶ **Hardware (Page 181)**
- ▶ Software
- ▶ language
- ▶ system

Question No: 14 (Marks: 1) - Please choose one
Verification and validation are the processes in which we check a product against its ----- and the ----
----- of the users who will be using it

- ▶ **specifications, expectations (Page 192)**
- ▶ statements, expectations
- ▶ specifications , arguments
- ▶ statements, arguments

Question No: 15 (Marks: 1) - Please choose one
Two tests are considered to be equivalent if it is believed that: if one discovers a defect, the other probably will too, and if one does not discover a defect, -----.

- ▶ the other probably may
- ▶ non of them
- ▶ **the other probably won't either (Page 199)**
- ▶ the other probably will

Question No: 16 (Marks: 1) - Please choose one

It was lady named ----- who actually coin the term “bug” for the fiest time.

- ▶ Elisay Chistopher
- ▶ **Admiral Grace Hopper (Page 213)**
- ▶ Ana Nicholson
- ▶ Jane Hopper

Question No: 17 (Marks: 1) - Please choose one

**The first “bug” was actually a moth, which flew through an open window and into one of the Mark -----
--’s relays.**

- ▶ **II (Page 213)**
- ▶ I
- ▶ III
- ▶ IV

Question No: 18 (Marks: 1) - Please choose one

Symptoms of logical errors are -----

- ▶ code is misbehaving
- ▶ The program doesn't crash, but the flow of program takes odd branches through the code.
- ▶ Results are the opposite
- ▶ Output looks strange,
- ▶ **all of the given (Page 218)**

Question No: 19 (Marks: 1) - Please choose one

First hand accounts of the problem are always useful in Debugging process.

- ▶ **True (Page 225)**
- ▶ False

Question No: 20 (Marks: 1) - Please choose one

Software architecture elements are further divided into categories which in total are -----

- ▶ 2
- ▶ **3 (Page 122)**
- ▶ 4
- ▶ 5

Question No: 21 (Marks: 1) - Please choose one

Establishing responsibilities for objects includes

- ▶ Generalization Relationships
- ▶ Specialization Relationships
- ▶ all of the above
- ▶ **identifying Association relationships (Page 101)**

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Question No: 22 (Marks: 1) - Please choose one
Source files can have the extension -----

- ▶ `c++ .`
- ▶ `.C`
- ▶ `.cpp`
- ▶ **all of the given (Page 155)**

Question No: 23 (Marks: 1) - Please choose one
Be very careful when you use functions with side effects – functions that change the values of the -----

- ▶ **parameters (Page 176)**
- ▶ variables
- ▶ constants
- ▶ None of given

Question No: 24 (Marks: 1) - Please choose one
Which of the following is not a characteristic of software?

- ▶ **Software is tangible**
- ▶ A change to a piece of code may implicitly affect the functions of the rest of the code.
- ▶ Software is configurable.
- ▶ Software does not wear and tear.

Question No: 25 (Marks: 1) - Please choose one
Which of the following is a fact finding method?

- ▶ Site visits
- ▶ **Prototyping**
- ▶ Study of similar systems
- ▶ All of given

Seven common fact-finding methods (Sampling, Research, Observation, Questionnaires, Interviews, Prototyping, Joint Requirements Planning) are introduced as a means to discover requirements.

Question No: 26 (Marks: 1) - Please choose one
The statements given below are associated with system development, testing and maintenance. Identify the correct statement from among them:

- ▶ Some of the activities in the implementation phase are building individual system components, writing of programs and development of user interfaces.
- ▶ The post implementation review is performed to see that the computer system is working.
- ▶ None of Given
- ▶ System development phase consists of a development phase and an implementation phase.

FINAL TERM EXAMINATION
Spring 2010

Question No: 1 (Marks: 1) - Please choose one

Quantitative methods for assessing the quality of proposed architectural designs are readily available.

- ▶ True
- ▶ **False** http://highered.mcgraw-hill.com/sites/0072853182/student_view0/chapter10/multiple_choice_quiz.html

Question No: 2 (Marks: 1) - Please choose one

A decision table should be used _____

- ▶ to document all conditional statements
- ▶ to guide the development of the project management plan
- ▶ only when building an expert system
- ▶ **when a complex set of conditions and actions appears in a component** [Click here for detail](#)

Question No: 3 (Marks: 1) - Please choose one

Test cases should be designed long before testing begins.

- ▶ **True** (APRACTITIONER'S APPROACH Page 467)
- ▶ False

Question No: 4 (Marks: 1) - Please choose one

Which of the following are characteristics of testable software?

- ▶ observability
- ▶ simplicity
- ▶ stability
- ▶ **all of the given** (APRACTITIONER'S APPROACH Page 469)

Question No: 5 (Marks: 1) - Please choose one

Comparison testing is typically done to test two competing products as part of customer market analysis prior to product release.

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 6 (Marks: 1) - Please choose one

By collecting software metrics and making use of existing software reliability models it is possible to develop meaningful guidelines for determining when software testing is done.

- ▶ **True** [Click here for Detail](#)
- ▶ False

Question No: 7 (Marks: 1) - Please choose one

Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 8 (Marks: 1) - Please choose one

A change becomes ----- because of close presence of data and functions

- ▶ **Localized** (Page 81)
- ▶ Private
- ▶ Global
- ▶ Accessible

Question No: 9 (Marks: 1) - Please choose one

Requirement engineering mainly deals with the ----- of the system

- ▶ **definition phase** (Page 16)
- ▶ development phase
- ▶ maintenance
- ▶ non of the above

Question No: 10 (Marks: 1) - Please choose one

40-60% of all defects found in software projects can be traced back to poor -----

- ▶ **Requirements** (Page 17)
- ▶ Design
- ▶ Coding
- ▶ Testing

Question No: 11 (Marks: 1) - Please choose one

In the N-Tier Architecture the idea is to enhance scalability and ----- by distributing both the data and the application using multiple server machines.

- ▶ **Performance** (Page 131)
- ▶ Efficiency
- ▶ Usability
- ▶ non of the all

Question No: 12 (Marks: 1) - Please choose one

MVC pattern was based on the ----- pattern.

- ▶ **Observer** (Page 140)
- ▶ Structural
- ▶ Behavioral
- ▶ Non of them

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Question No: 13 (Marks: 1) - Please choose one

Classes should be declared in individual header files with the file name matching the ----- name.

- ▶ **class (Page 155)**
- ▶ method
- ▶ object
- ▶ non of the all

Question No: 14 (Marks: 1) - Please choose one

Unit testing is roughly equivalent to ----- testing for hardware in which each chip is tested thoroughly after manufacturing

- ▶ Circuit level
- ▶ **Chip Level (Page 207)**
- ▶ component level
- ▶ system level

Question No: 15 (Marks: 1) - Please choose one

Software should be tested more like hardware, with Built-in self testing: such that each unit can be tested -----

- ▶ freely
- ▶ **independently (Page 207)**
- ▶ dependtly
- ▶ completely

Question No: 16 (Marks: 1) - Please choose one

A system ----- is the period in which tremendous pressure is on developers end to fix the problem and make the system running again

- ▶ Uptime
- ▶ **Downtime (Page 214)**
- ▶ Currentime
- ▶ futuretimr

Question No: 17 (Marks: 1) - Please choose one

Which one of the given below is not a symptom of memory overrun?

- ▶ Program crashes quite regularly after a given routine is called, that routine should be examined for a possible overrun condition.
- ▶ If the routine in question does not appear to have any such problem the most likely cause is that another routine, called in the prior sequence, has already trashed variables or memory blocks.
- ▶ Checking the trace log of the called routines leading up to one with the problem will often show up the error.
- ▶ **Compiler warnings. (Page 220)**

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Question No: 18 (Marks: 1) - Please choose one
Software architecture elements are further divided into categories which in total are -----

- ▶ 2
- ▶ **3 (Page 122) rep**
- ▶ 4
- ▶ 5

Question No: 19 (Marks: 1) - Please choose one
Three tier architecture contains ----- layers

- ▶ Presentation
- ▶ Application
- ▶ Database
- ▶ **All of the above (Page 131)**

Question No: 20 (Marks: 1) - Please choose one
1. Variables should be initialized where they are declared and they should be declared in the ----- scope possible.

- ▶ **Smallest (Page 158)**
- ▶ largest
- ▶ medium
- ▶ None of the given

Question No: 21 (Marks: 1) - Please choose one
----- are two important tools that can help in managing and mastering the complexity of a program.

- ▶ **abstraction and encapsulation (Page 170)**
- ▶ abstraction and Inheritance
- ▶ abstraction and Polymorphism
- ▶ None of given

Question No: 22 (Marks: 1) - Please choose one
Which of the following is a/are tool used in requirement analysis?

- ▶ Flow Graphs
- ▶ **Data Flow Diagrams (not sure)**
- ▶ Activity Networks
- ▶ Module Dependency Diagrams

Question No: 23 (Marks: 1) - Please choose one

Consider the following comment. “The software which I bought won’t run on windows and when it runs I can’t use WORD at the same time”. Which of the following do you think are violated by the newly bought software?

- ▶ dependability, interchangeability
- ▶ **platform independence, interoperability**
- ▶ reliability, dependency
- ▶ interoperability, reliability

Question No: 24 (Marks: 1) - Please choose one

..... is a diagramming technique used to identify the types of objects in the system and the static relationships that exist among them?

- ▶ Class Diagram
- ▶ Document flow diagrams
- ▶ Data flow diagrams
- ▶ **Flow charts**

Question No: 25 (Marks: 1) - Please choose one

Which of the following interaction style best suit the design of an interface for visually impaired users?

- ▶ **direct manipulation** (A PRACTITIONER’S APPROACH Page 469)
- ▶ direct manipulation
- ▶ natural language
- ▶ command line

Question No: 26 (Marks: 1) - Please choose one

Which of the following testing involve purely black box testing?

- ▶ unit testing, beta testing
- ▶ acceptance testing, interface testing
- ▶ beta testing, acceptance testing
- ▶ **integration testing, interface testing**

**FINAL TERM EXAMINATION
Spring 2010**

Question No: 1 (Marks: 1) - Please choose one

What are the three generic phases of software engineering?

- ▶ **definition, development, support** (A PRACTITIONER’S APPROACH Page 96)
- ▶ what, how, where
- ▶ programming, debugging, maintenance
- ▶ analysis, design, testing

Question No: 2 (Marks: 1) - Please choose one

In the context of requirements analysis, partitioning results in the elaboration of data, function, or behavior.

- ▶ **True** [Click here for detail](#)
- ▶ False

Question No: 3 (Marks: 1) - Please choose one

Quantitative methods for assessing the quality of proposed architectural designs are readily available.

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 4 (Marks: 1) - Please choose one

In refining the DFD during transaction mapping it is unnecessary to create a PSPEC since only the CSPEC is relevant to this type of architectural style.

- ▶ True
- ▶ **False** [click here for detail](#)

Question No: 5 (Marks: 1) - Please choose one

In transaction mapping the first level factoring results in the_____

- ▶ creation of a CFD
- ▶ **derivation of the control hierarchy** [Click here for detail](#)
- ▶ distribution of worker modules
- ▶ refinement of the module view

Question No: 6 (Marks: 1) - Please choose one

Variable names must be in mixed case starting with upper case.

- ▶ True
- ▶ **False** (Page 150)

Question No: 7 (Marks: 1) - Please choose one

Class variables should be declared public. This concept violates which of the following.

- ▶ Information hiding
- ▶ Encapsulation
- ▶ **Information hiding and Encapsulation** (Page 158)
- ▶ None of given

Question No: 8 (Marks: 1) - Please choose one

Real-time applications add a new and potentially difficult element to the testing mix

- ▶ performance
- ▶ reliability
- ▶ security
- ▶ **time** (Page 498)

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Question No: 9 (Marks: 1) - Please choose one
Top-down integration testing has as it's major advantage(s) that

- ▶ low level modules never need testing
- ▶ **major decision points are tested early** [Click here for detail](#)
- ▶ no stubs need to be written
- ▶ none of the given

Question No: 10 (Marks: 1) - Please choose one
Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 11 (Marks: 1) - Please choose one
isAuthorized, assess Performance,get item for UPC, get cashier for number, are the examples of

- ▶ **Services (Page 102)**
- ▶ Attributes
- ▶ Links
- ▶ Non of the above

Question No: 12 (Marks: 1) - Please choose one
the *development* view describes the -----organization of the software in its development environment,

- ▶ **Static (Page 122)**
- ▶ Dynamic
- ▶ Still
- ▶ Static & Dynamic

Question No: 13 (Marks: 1) - Please choose one
----- being the first pure Object Oriented language in which observer pattern was used in implementing its Model View Controller

- ▶ **Smalltalk (Page 140)**
- ▶ PASCAL
- ▶ JAVA
- ▶ C++

Question No: 14 (Marks: 1) - Please choose one
Hungarian Notation was first discussed by Charles Simonyi of-----

- ▶ **Microsoft. (Page 149)**
- ▶ Oracle
- ▶ Apple Macintosh
- ▶ Non of the all

Question No: 15 (Marks: 1) - Please choose one

The language does not specify whether ----- is signed or unsigned.

- ▶ **char (Page 181)**
- ▶ integer
- ▶ double
- ▶ constant

Question No: 16 (Marks: 1) - Please choose one

A number of invisible execution paths can exist in simple code in a language that allows -----

- ▶ **exceptions (Page 185)**
- ▶ defects
- ▶ errors
- ▶ all of them

Question No: 17 (Marks: 1) - Please choose one

Bugs Fixing is done by which of the teams in Software Development lifecycle?

- ▶ **Development Team (Page 196)**
- ▶ Testing Team
- ▶ Analysis & Design Team
- ▶ Process Team

Question No: 18 (Marks: 1) - Please choose one

Software Bugs have multiple names, Which one of the below is not the name of Software Bugs -----

- ▶ Bugs
- ▶ Defects
- ▶ Errors
- ▶ **Mistakes (Page 213)**

Question No: 19 (Marks: 1) - Please choose one

Symptoms of logical errors are -----

- ▶ code is misbehaving
- ▶ The program doesn't crash, but akes odd branches through the code.
- ▶ Results are the opposite
- ▶ Output looks strange,
- ▶ **all of the given (Page 218)**

Question No: 20 (Marks: 1) - Please choose one

First hand accounts of the problem are always useful in Debugging process.

- ▶ **True (Page 225)**
- ▶ False

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Question No: 21 (Marks: 1) - Please choose one
In the debugging process a stack trace is a very useful tool.

- ▶ **True (Page 226)**
- ▶ False

Question No: 22 (Marks: 1) - Please choose one
Establishing responsibilities for objects includes

- ▶ Generalization Relationships
- ▶ Specialization Relationships
- ▶ all of the above
- ▶ **identifying Association relationships (Page 101)**

Question No: 23 (Marks: 1) - Please choose one
Stakeholders are different people who would be interested in the -----

- ▶ **Software (Page 24)**
- ▶ System
- ▶ Product
- ▶ All of the given

Question No: 24 (Marks: 1) - Please choose one
A ----- is a code that explains itself without the need of comments and extraneous documentation

- ▶ **Self documenting code (Page 147)**
- ▶ Self telling Code
- ▶ Self Documenting Design
- ▶ None of the given

Question No: 25 (Marks: 1) - Please choose one
1. Variables should be initialized where they are declared and they should be declared in the ----- scope possible.

- ▶ **Smallest (Page 158)**
- ▶ largest
- ▶ medium
- ▶ None of the given

Question No: 26 (Marks: 1) - Please choose one
Which of the following is an/are advantage(s) of object oriented analysis & design over structured system analysis & design?

- ▶ Ease of modeling real world events
- ▶ Reusability
- ▶ Maintainability
- ▶ **All of given [Click here for detail](#)**

FINAL TERM EXAMINATION SPRING 2010

Question No: 1 (Marks: 1) - Please choose one

The two main documents produced during this phase are Requirement Statement and Requirement Specification. They are also called Requirement Definition and -----

▶ **Functional Specification (Page 25)**

- ▶ Mathematical specification
- ▶ System Specification
- ▶ None of the given

Question No: 2 (Marks: 1) - Please choose one

A decision table should be used _____

- ▶ To document all conditional statements
- ▶ To guide the development of the project management plan
- ▶ Only when building an expert system
- ▶ **when a complex set of conditions and actions appears in a component [Click here for detail](#)**

Question No: 3 (Marks: 1) - Please choose one

Which of the following is a/are tool used in requirement analysis?

- ▶ Flow Graphs
- ▶ **Data Flow Diagrams (not sure)**
- ▶ Activity Networks
- ▶ Module Dependency Diagrams

Question No: 4 (Marks: 1) - Please choose one

MVC stands for -----

- ▶ **Model View Controller (Page 140)**
- ▶ Modern View Center
- ▶ Model View Center
- ▶ Modern View Controller

Question No: 5 (Marks: 1) - Please choose one

A ----- is a code that explains itself without the need of comments and extraneous documentation

- ▶ **Self documenting code (Page 147)**
- ▶ Self telling Code
- ▶ Self Documenting Design
- ▶ Non of the above

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Question No: 6 (Marks: 1) - Please choose one

Bugs that won't "stand still" (almost random) are the ----- to deal with.

- ▶ least difficult
- ▶ **most difficult (Page 226)**
- ▶ very easy
- ▶ easy

Question No: 7 (Marks: 1) - Please choose one

In refining the DFD during transaction mapping it is unnecessary to create a PSPEC since only the CSPEC is relevant to this type of architectural style.

- ▶ True
- ▶ **False**

Question No: 8 (Marks: 1) - Please choose one

Association is a type _____ of relation

- ▶ **Weak (OOP, 49)**
- ▶ Stronger
- ▶ Normal
- ▶ None of above

Question No: 9 (Marks: 1) - Please choose one

Variable names must be in mixed case starting with upper case.

- ▶ True
- ▶ **False (Page 150)**

Question No: 10 (Marks: 1) - Please choose one

Bugs that won't (almost random) are the ----- to deal with.

- ▶ **stand still (Page 226)**
- ▶ Dynamic
- ▶ Static
- ▶ None of above

Question No: 11 (Marks: 1) - Please choose one

CRUD include following:-

- ▶ Creat
- ▶ Update
- ▶ Read
- ▶ **All of above (Page 53)**

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Question No: 12 (Marks: 1) - Please choose one

Bugs Finding is done by which of the teams in Software Development lifecycle?

- ▶ Development Team
- ▶ **Testing Team (Page 196)**
- ▶ Analysis & Design Team
- ▶ Process Team

Question No: 13 (Marks: 1) - Please choose one

Software Bugs have multiple names, which one of the below is not the name of Software Bugs -----

- ▶ Bugs
- ▶ Defects
- ▶ Errors
- ▶ **Mistakes (Page 213)**

Question No: 14 (Marks: 1) - Please choose one

In the debugging process a stack trace is a very useful tool.

- ▶ **True (Page 226)**
- ▶ False

Question No: 15 (Marks: 1) - Please choose one

A ----- is a code that explains itself without the need of comments and extraneous documentation

- ▶ **Self documenting code (Page 147)**
- ▶ Self telling Code
- ▶ Self Documenting Design
- ▶ None of the given

Question No: 16 (Marks: 1) - Please choose one

Project ----- defines the concept and range of the proposed solution, and limitations identify certain capabilities that the product will not include

- ▶ **Scope (Page 30)**
- ▶ Agreement
- ▶ Plan
- ▶ None of the given

Question No: 17 (Marks: 1) - Please choose one

In the N-Tire Architecture the idea is to enhance scalability and ----- by distributing both the data and the application using multiple server machines.

- ▶ **Performance (Page 131)**
- ▶ Efficiency
- ▶ Usability
- ▶ non of the all

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Question No: 18 (Marks: 1)

The cyclomatic complexity metric provides the designer with information regarding the number of

- ▶ Cycles in the program
- ▶ Errors in the program
- ▶ **Independent logic paths in the program** [Click here for detail](#)
- ▶ Statements in the program

Question No: 19 (Marks: 1)

Which of the followings is not a testing type?

- ▶ Subsystem testing
- ▶ Alpha testing
- ▶ Beta Testing
- ▶ **Gamma Testing** (Page 198)

Question No: 20 (Marks: 1)

Which of the items listed below is not one of the software engineering layers?

- ▶ Process
- ▶ **Manufacturing** [Click here for detail](#)
- ▶ Methods
- ▶ Tools

Question No: 21 (Marks: 1)

Which piece of code is self-documented?

- ▶ if (x==0) // this is the case when we are allocating a new number
- ▶ if (AllocFlag == 0)
- ▶ **If (AllocFlag == NEW_NUMBER)** (Page 148)
- ▶ None of the given

**FINALTERM EXAMINATION
Spring 2010**

Question No: 1 (Marks: 1) - Please choose one

UML (unified modeling language) analysis modeling focuses on the _____ .

- ▶ behavioral model and environment model.
- ▶ behavioral model and implementation model.
- ▶ user model and environmental model
- ▶ **user model and structural model** (A PRACTITIONER'S APPROACH Page 604)

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Question No: 2 (Marks: 1) - Please choose one
What makes requirements elicitation difficult?

- ▶ bounding scope
- ▶ understanding user needs
- ▶ requirements volatility
- ▶ **all of the above** (APRACTITIONER'S APPROACH Page 285)

Question No: 3 (Marks: 1) - Please choose one
In the architecture trade-off analysis method the architectural style should be described using the

- ▶ module view
- ▶ process view
- ▶ **all of the given** (APRACTITIONER'S APPROACH Page 403)
- ▶ data flow view

Question No: 4 (Marks: 1) - Please choose one
In refining the DFD during transaction mapping it is unnecessary to create a PSPEC since only the CSPEC is relevant to this type of architectural style.

- ▶ True
- ▶ **False** [click here for detail](#)

Question No: 5 (Marks: 1) - Please choose one
A decision table should be used_____

- ▶ to document all conditional statements
- ▶ to guide the development of the project management plan
- ▶ only when building an expert system
- ▶ **when a complex set of conditions and actions appears in a component** [Click here for detail](#)

Question No: 6 (Marks: 1) - Please choose one
Variable names must be in mixed case starting with upper case.

- ▶ True
- ▶ **False** (Page 150)

Question No: 7 (Marks: 1) - Please choose one
Which of these are objectives for software testing?

- ▶ determine the productivity of programmers
- ▶ eliminate the need for future program maintenance
- ▶ eliminate every error prior to release
- ▶ **uncover software errors** (APRACTITIONER'S APPROACH Page 467)

Question No: 8 (Marks: 1) - Please choose one

Comparison testing is typically done to test two competing products as part of customer market analysis prior to product release.

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 9 (Marks: 1) - Please choose one

In software quality assurance work there is no difference between software verification and software validation

- ▶ True
- ▶ **False** [Click here for detail](#)

Question No: 10 (Marks: 1) - Please choose one

Top-down integration testing has as its major advantage(s) that

- ▶ low level modules never need testing
- ▶ major decision points are tested early
- ▶ **no stubs need to be written** [Click here for detail](#)
- ▶ none of the given

Question No: 11 (Marks: 1) - Please choose one

Rooko mut jane do depicts one of risks associated with inadequate requirements gathering, the name of that risk is -----

- ▶ **Ambiguous requirements** (Page 20)
- ▶ Creeping Requirements
- ▶ Minimal Specification
- ▶ Non of the above

Question No: 12 (Marks: 1) - Please choose one

Interaction Diagrams depict the ----- Behavior of the system

- ▶ Static
- ▶ **Dynamic** (Page 106)
- ▶ Active
- ▶ Non of the above

Question No: 13 (Marks: 1) - Please choose one

In Sequence Diagrams events are organized in a-----time line

- ▶ Vertical
- ▶ **Horizontal** (Page 106)
- ▶ Vertical & Horizontal
- ▶ Non of the above

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Question No: 14 (Marks: 1) - Please choose one
the development view describes the -----organization of the software in its development environment,

- ▶ **Static (Page 122)**
- ▶ Dynamic
- ▶ Still
- ▶ Static & Dynamic

Question No: 15 (Marks: 1) - Please choose one
Every view is potentially Hierarchical in this regard which of the view are Hierarchical ?

- ▶ Functionl View
- ▶ Development View
- ▶ *Concurrency view*
- ▶ **All of given (Page 125)**

Question No: 16 (Marks: 1) - Please choose one
object-oriented framework that is a set of cooperative classes that make up reusable ----- of a system

- ▶ Code
- ▶ **Design (Page 138)**
- ▶ Analysis
- ▶ non of the all

Question No: 17 (Marks: 1) - Please choose one
When planning for performance, one should always remember the ----- rule

- ▶ **80/20 (Page 177)**
- ▶ 20/80
- ▶ 80/22
- ▶ 80/90

Question No: 18 (Marks: 1) - Please choose one
In order to make a code more portable, Instead of using vendor specific language extensions, use -----
- as much as possible

- ▶ **STL (Page 179)**
- ▶ ANSI
- ▶ ISO
- ▶ CMMI

Question No: 19 (Marks: 1) - Please choose one
Performance & Usability are examples of ----- requirements

- ▶ Business

- ▶ Functionail
- ▶ **Non-Functionail (Page 39)**
- ▶ User

Question No: 20 (Marks: 1) - Please choose one
Static analyzers are software tools for ----- processing.

- ▶ analysis text
- ▶ **source text (Page 211)**
- ▶ design text
- ▶ non of the given

Question No: 21 (Marks: 1) - Please choose one
Software Bugs have multiple names, Which one of the belw is not the name of Software Bugs -----

- ▶ Bugs
- ▶ Defects
- ▶ Errors
- ▶ **Mistakes (Page 213)**

Question No: 22 (Marks: 1) - Please choose one
According to a survey, when a software application is in the maintenance phase, ----- of its lifecycle cost is attributed towards the defects which are found in the software application after installation

- ▶ **20 % (Page 214)**
- ▶ 25 %
- ▶ 30%
- ▶ 35%

Question No: 23 (Marks: 1) - Please choose one
Bugs that won't "-----" (almost random) are the most difficult to deal with.

- ▶ **stand still (Page 226)**
- ▶ dynamic
- ▶ running
- ▶ stand tall

Question No: 24 (Marks: 1) - Please choose one
1. Variables should be initialized where they are declared and they should be declared in the ----- scope possible.

- ▶ **Smallest (Page 158)**
- ▶ largest
- ▶ medium
- ▶ None of the given

Question No: 25 (Marks: 1) - Please choose one

If you are initializing a variable at the time of declaration, do not declare another ----- in the same statement.

- ▶ **variable (Page 176)**
- ▶ object
- ▶ class
- ▶ None of given

Question No: 26 (Marks: 1) - Please choose one

During Requirement Engineering process which of the following is/are document(s) used for fact finding?

- ▶ Company's employee list
- ▶ Samples of the company databases
- ▶ The company's mission statement and plan
- ▶ **All of given**

**FINAL TERM EXAMINATION
Fall 2008**

Question No: 1 (Marks: 1) - Please choose one

Object-oriented domain analysis is concerned with the identification and specification of reusable capabilities within an application domain.

- **True [Click here for detail](#)**
- False

Question No: 2 (Marks: 1) - Please choose one

Fourth generation techniques

- Allow software to be developed without any testing.
- Eliminate the need for costly requirements gathering activities.
- **Can reduce the time required to develop software.**

(APRACTITIONER'S APPROACH Page 73)

- Are best used by non-programmers to build small systems.

Question No: 3 (Marks: 1) - Please choose one

Data design actually begins during the creation of the analysis model, not the architectural model.

- **True (APRACTITIONER'S APPROACH Page 397)**
- False

Question No: 4 (Marks: 1) - Please choose one

The states shown in a state transition diagram do not necessarily correspond to the processes shown in a control flow diagram for the same system.

- **True** (APRACTITIONER'S APPROACH Page 397)
- False

Question No: 5 (Marks: 1) - Please choose one

The criteria used to assess the quality of an architectural design should be based on system

- **accessibility and reliability** (APRACTITIONER'S APPROACH Page 404)
- data and control
- functionality
- implementation details

Question No: 6 (Marks: 1) - Please choose one

A useful technique for evaluating the overall complexity of a proposed architecture is to look at the component

- number and size of components
- **flow dependencies and sharing dependencies** (APRACTITIONER'S APPROACH Page 406)
- size and cost
- none of the given

Question No: 7 (Marks: 1) - Please choose one

The three basic principles that guide maintainability are: simplicity, clarity, and _____ .

- **Generality** (Page 146)
- Reliability
- All of the given choices
- None of the Given choices

Question No: 8 (Marks: 1) - Please choose one

In order to make a program self documented a number of attributes required. Which one is the attribute/s of self documented program

- **All of the given choices** (Page 147)
- Size of each function
- Choice of variable
- Modularity

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Question No: 9 (Marks: 1) - Please choose one

Floating point constants should always be written with decimal point and at least

- **one decimal (Page 161)**
- two decimal
- three decimal
- none of the given

Question No: 10 (Marks: 1) - Please choose one

The code becomes self explanatory with the help of proper use of parentheses. Select the right one.

- `leapYear = year % 4 == 0 && year % 100 != 0 || year % 400 == 0 ;`
- `leapYear = ((year % 4 == 0) && (year % 100 != 0) || ((year % 400 == 0)));`
- **`leapYear = ((year % 4 == 0) && (year % 100 != 0) || (year % 400 == 0));` (Page 164)**
- `leapYear = (year % 4 == 0) && (year % 100 != 0) || (year % 400 == 0);`
- none of the given options

Question No: 11 (Marks: 1) - Please choose one

Graph-based testing methods can only be used for object-oriented systems

- True
- **False** [Click here for detail](#)

Question No: 12 (Marks: 1) - Please choose one

Configuration reviews are not needed if regression testing has been rigorously applied during software integration.

- True
- **False** [Click here for Detail](#)

Question No: 13 (Marks: 1) - Please choose one

A class is a ----- of objects

- **Template (Page 85)**
- Stereotype
- Collection
- Non of the above

Question No: 14 (Marks: 1) - Please choose one

A public Interface provides a way for with other Classes.

- **Communication**
- Accessibility
- Reaching
- All of the above

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Question No: 15 (Marks: 1) - Please choose one
Flow Charts represents

- **sequence Activity (Page 50)**
- random activity
- parallel activity
- non of the above

Question No: 16 (Marks: 1) - Please choose one
Software architecture defines the high level structure of the software by putting together a number of architectural ----- in an organized fashion.

- **Elements (Page 122)**
- parts
- components
- non of the all

Question No: 17 (Marks: 1) - Please choose one
Patterns are devices that allow programs to share knowledge about their -----.

- **Design (Page 137)**
- Code
- Analysis
- Non of the all

Question No: 18 (Marks: 1) - Please choose one
MVC stands for -----

- **Model View Controller (Page 140)**
- Modern View Center
- Model View Center
- Modern View Controller

Question No: 19 (Marks: 1) - Please choose one
A ----- is a code that explains itself without the need of comments and extraneous documentation

- **Self documenting code (Page 147)**
- Self telling Code
- Self Documenting Design
- Non of the them

Question No: 20 (Marks: 1) - Please choose one
Type conversions must always be done -----

- **Explicitly (Page 158)**
- implicitly
- simultaneously
- non of them

Question No: 21 (Marks: 1) - Please choose one
Types that are -----to one file only can be declared inside that file.

- **Local (Page 158)**
- Global
- Private
- General

Question No: 22 (Marks: 1) - Please choose one
The use of do while loops should be -----

- **Avoided (Page 159)**
- encouraged
- practiced
- non of them

Question No: 23 (Marks: 1) - Please choose one
One of the causes of the portability issues is the order of ----- varies from one implementation to other.

- **Evaluation (Page 181)**
- numbers
- variables
- symbols

Question No: 24 (Marks: 1) - Please choose one
----- is a powerful technique that separates error-handling code from normal code.

- **Exception handling (Page 184)**
- Code handling
- variable handling
- pointer handling

Question No: 25 (Marks: 1) - Please choose one

The goal of testing is to expose ----- defects in a software system before it is put to use.

- **Latent (Page 193)**
- already present
- current
- runtime

Question No: 26 (Marks: 1) - Please choose one

Static analyzers are software tools for ----- processing.

- analysis text
- **source text (Page 211)**
- design text
- non of the given

Question No: 27 (Marks: 1) - Please choose one

The first bug was actually a moth, which flew through an open window and into one of the Mark -----'s relays.

- **II (Page 213)**
- I
- III
- IV

Question No: 28 (Marks: 1) - Please choose one

Which one of the given below is not a symptom of memory overrun?

- Program crashes quite regularly after a given routine is called, that routine should be examined for a possible overrun condition.
- If the routine in question does not appear to have any such problem the most likely cause is that another routine, called in the prior sequence, has already trashed variables or memory blocks.
- Checking the trace log of the called routines leading up to one with the problem will often show up the error.
- **Compiler warnings. (Page 220)**

Question No: 29 (Marks: 1) - Please choose one

Holistic medicine, concerns itself with the state of the body as a whole, not the ----- that is currently attacking it.

- reason
- **disease (Page 224)**
- source
- non of the given

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Question No: 30 (Marks: 1) - Please choose one

Bugs that won't "stand still" (almost random) are the ----- to deal with.

- least difficult
- **most difficult (Page 226)**
- very easy
- easy