

# SE Mid-sem Objective Feb 22, 2022

- ☐ There is no negative marking.
- ☐ Questions may have multiple correct answers.
- ☐ Few questions will be of short answer type.

It must be submitted before 9.50 AM manually as auto-submission will not occur.

1

Enter your roll no. \*

119CS0102

2

What will be the max slack time of the activities in critical path?

(1 Point)

- ☒ 0
- ☐ 1
- ☐ Sum of all duration of activities
- ☐ Duration of the previous activity

3

Which one of the following is not a myth regarding software development?

(1 Point)

- ☐ Until the software is coded and is available for testing, there is no way for assessing its quality
- ☐ Once the software is demonstrated, the job is done
- ☒ When my schedule slips, add more software specialists, those with higher skills and longer experience
- ☐ The environment is only one of the several factors that determine the quality of the end software product!

4

Question

(2 Points)

A project consists of six activities. The immediate predecessor of each activity and the estimated duration of each activity are also provided in the table below:

Activity	Immediate Predecessor	Duration(days)
P	-	5
Q	-	1
R	Q	2
S	P,R	4
T	P	6
U	S,T	3

If all activities other than S take the estimated amount of time, the maximum duration (in days) of the project is -- ?

6

5

Which of these is not one of the phase names defined by the Unified Process model for software development?

(1 Point)

- ☐ Inception phase
- ☐ Elaboration phase
- ☐ Construction phase
- ☒ Validation Phase

6

Select the shortcomings of the waterfall model?  
(1 Point)

- ☒ No feedback paths
- ☒ Difficult to accommodate change requests:
- ☒ Inefficient error corrections
- ☒ No overlapping of phases

7

In a DFD, square, circle, arrow and parallel lines are the symbols for  
(1 Point)

- ☒ External entity, Process, Data Flow, Data Store
- ☐ Data Store, Process, Data Flow, External entity
- ☐ External entity, Data Store, Data Flow, Process
- ☐ External entity, Process, Data Flow, Output

8

Among development phases of software life cycle, which phase typically consumes the maximum effort?  
(1 Point)

- ☐ Requirements analysis and specification
- ☐ Design
- ☐ Coding
- ☒ Testing

9

Select the correct rules with respect to DFD  
(1 Point)

- ☒ All data flows must contain data
- ☐ All data flows must begin or end at a process
- ☒ Data flowing into or out of a bubble, must match the data flows at the next level of DFD.
- ☐ None of the above

10

**The unadjusted function point for a software with 4 number of inputs, 5 Number of outputs, 4 Number of inquiries, 10 Number of files, and 10 Number of interfaces will be**  
(2 Points)

227

11

**Activities A, B, and C are the immediate predecessors for Y activity. If the earliest finishing time for the three activities are 12, 15, and 10, then what will be the earliest starting time for Y?**

(1 Point)

☐ 10

☒ 15

☐ 12

☐ 0

12

Which one of the following is not an incremental model

(1 Point)

☐ Evolutionary model

☒ Prototype model

☐ RAD model

☐ Agile model

13

Which one of the following is an example of a multivariable cost estimation model?

(1 Point)

☐ Basic COCOMO

☒ Intermediate COCOMO

☒ Complete COCOMO

☐ Delphi technique

14

Choose the correct statement

(1 Point)

☒ During structured analysis, the SRS document is transformed into a data flow diagram (DFD) model.

☒ During structured design, the DFD model is transformed into a structure chart.

☐ During structured analysis, the DFD model is transformed into a Structure chart.

☐ During structured design, the SRS is transformed into a DFD model.

15

Select the option with correct order of coupling of modules from strongest to weakest

(1 Point)

☒ Content, common, control, stamp, data

☐ Common, content, control, stamp, data

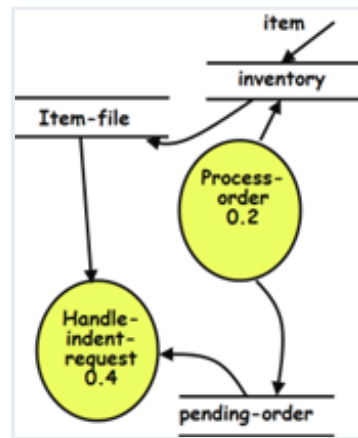
☐ Content, data, common, stamp, control

☐ Data, control, common, stamp, content

16

In the given DFD, following errors are there

(2 Points)



18

Select the shortcomings of the LOC for project size estimation

(1 Point)

- ☒ LOC is a measure of coding activity alone
- ☐ LOC count depends on the choice of specific instructions
- ☒ LOC measure correlates poorly with the quality and efficiency of the code
- ☐ LOC does not include function size complexity

19

Which of these are characteristics of a good design?

(1 Point)

- ☐ Exhibits strong coupling between its modules
- ☒ Implements all requirements in the analysis model
- ☐ Includes test cases for all components
- ☒ Provides a complete picture of the software

20

Critical path method

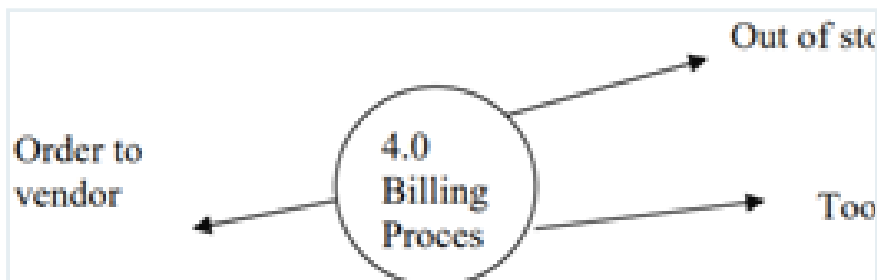
(1 Point)

- ☒ Helps in ascertaining time schedules
- ☐ Makes better and detailed planning possible

17

The following portion of a DFD is not correct as

(1 Point)



- ☐ there are many data flows out of the process
- ☒ there are no input data flows to the process
- ☐ the output does not go to an external entity
- ☐ there is no data store

- ☐ Provides a standard method for communicating project plans schedules and to time and cost performance
- ☐ Provides a probabilistic completion time of each activity

21

Question  
(2 Points)

Identify the class of cohesion in the following examples	
(p) <u>Module_issue_book</u> { Print-inventory(); Register-Student(); Issue-Book(); };	(q) <u>Module_print</u> { void print-grades(student void print-certificates(stu void print-salary(teacher-
(r) <u>Module_init</u> () { Check-memory(); Check-Hard-disk(); Initialize-Ports(); Display-Login-Screen(); }	(s) <u>Module_handle-Student-Data</u> Static Struct Student-dat Store-student-data(); Search-Student-data(); Print-all-students(); };

- ☒ p-coincidental, q-logical, r-temporal, s-communicational
- ☐ p-logical, q-temporal, r-sequential, s-communicational
- ☐ p-coincidental, q-temporal, r-logical, s-communicational
- ☐ p-sequential, q-logical, r-temporal, s-coincidental

22

Which one of the following is a functional requirement?

(1 Point)

- ☐ Maintainability
- ☐ Portability
- ☐ Robustness

- ☒ None of above

23

A software is composed of

(1 Point)

- ☒ Programs
- ☒ Data
- ☒ Document
- ☒ Code
- ☒ Algorithms

24

SRS is used as a specification for

(1 Point)

- ☐ White box testing
- ☐ Stress Testing
- ☒ Black box testing
- ☐ Integrated testing

25

The desired level of coupling is

(1 Point)

- ☐ No coupling

- ☐ Control coupling
- ☐ Common coupling
- ☒ Data coupling

26

Functional independence in software design provides

(1 Point)

- ☒ Error isolation
- ☒ Scope of code reuse
- ☒ Better understandability
- ☒ Ease of maintenance

27

Following are the problem of requirement elicitation

(1 Point)

- ☐ Lack of proper standard to document the requirements.
- ☒ Stakeholders don't know what they really want.
- ☒ Different stakeholders may have conflicting requirements.
- ☐ Lack of diligence of the engineers

28

Select the activities included in project planning

(1 Point)

- ☒ Risk management

- ☐ Product service management
- ☒ Cost and effort management
- ☒ Schedule management

29

Which class of cohesion exists if module A and B process the same input and output data?

(1 Point)

- ☒ Sequential
- ☐ Procedural
- ☐ Communicational
- ☐ Logical

30

A data cannot flow between a store and

(1 Point)

- ☒ A store
- ☐ A process
- ☐ An external entity
- ☐ An output

31

**A pert network has 9 activities on its critical path. The standard deviation of each activity on the critical path is 3. The standard deviation of the critical path is**

(2 Points)

9

32

Select the major responsibility of a software project manager

(1 Point)

- ☒ Project planning
- ☐ Project Test suite design
- ☐ Implementation and maintenance
- ☒ Project monitoring and control

33

The main objective behind preparing a SRS is to

(1 Point)

- ☒ Let client and developers agree that they understand each other
- ☐ Formally note down the design parameters
- ☐ Estimate the cost of development
- ☐ To judge whether the project could be undertaken

34

Select the correct statement with respect to Software Engineering

(1 Point)

- ☒ A Requirement gathering is to fully understand the user requirements.
- ☒ Requirement analysis is performed to remove inconsistencies, anomalies, etc. from requirements.
- ☒ Requirement specification is document requirements properly in an SRS document.
- ☒ Requirement review is used to further gathering and analysis of requirements.

35

Select the options which are not the type of maintenance

(1 Point)

- ☐ Corrective Maintenance
- ☐ Perfective Maintenance
- ☐ Adaptive Maintenance
- ☒ Regression Maintenance

36

Select the correct statement with respect to DFD

(1 Point)

- ☒ Context diagram should represent the system as a single bubble
- ☐ Context diagram should include all the external entities in the system
- ☐ Context diagram should contain 3-7 bubbles to incorporate major functions of the system

- ☒ Control information should be incorporated in a DFD to improve readability

37

A module is said to have coincidental cohesion if

(1 Point)

- ☒ it performs a set of tasks that relate to each other very loosely
- ☐ if all elements of the module perform similar operations
- ☐ If all functions are executed in the same time span
- ☐ If the set of functions are executed one after the other

38

Which of the following is not a standard software development process model?

(1 Point)

- ☐ Waterflow Model
- ☒ Lean Model
- ☐ RAD Model
- ☐ V-Model

39

Select the correct options with respect to programing vs product

(1 Point)

- ☐ Program are generally developed using the existing programs
- ☒ Products are generally developed using the existing products

- ☒ Program is meant for few stakeholders while the product may have a number of stakeholders

- ☐ Program has long life span while the product has short life span

40

Key stakeholders are the one who

(1 Point)

- ☒ Significant influence upon or importance within an organization
- ☐ Those ultimately most affected by an organization's actions
- ☐ Persons or organizations that are indirectly affected by an organization's actions
- ☐ Those who will be impacted the least

41

Select the factors contributing to the complexity of managing a software project

(1 Point)

- ☒ Invisibility
- ☒ Changeability
- ☒ Uniqueness
- ☒ Team-oriented and intellect-intensive work

42

The SRS is said to be consistent if and only if \_\_\_\_\_

(1 Point)

- ☐ Its structure and style are such that any changes to the requirements can be made easily while retaining the style and structure



- ☐ Every requirement stated therein is one that the software shall meet
- ☐ Every requirement stated therein is verifiable
- ☒ Requirement does not conflict with other requirements in the requirement specification

43

What is the typical relationship between coupling and cohesion?

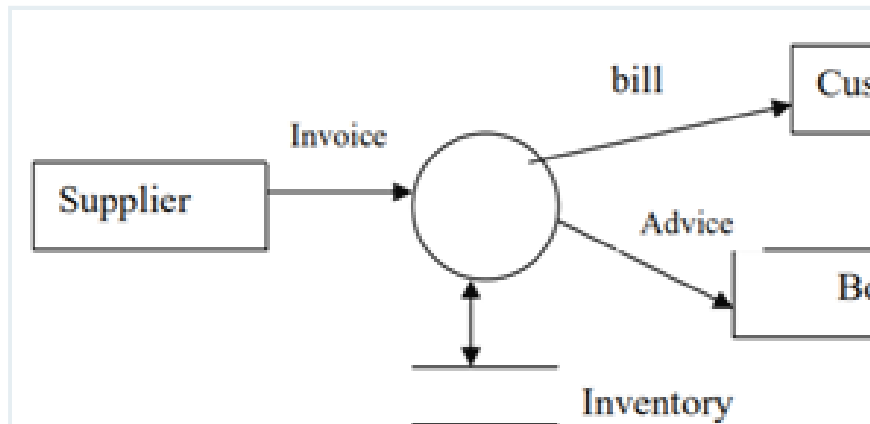
(1 Point)

- ☐ There is no relationship between coupling and cohesion.
- ☐ As cohesion increases, coupling increases.
- ☒ As cohesion increases, coupling decreases
- ☐ none of them

44

The following portion of DFD is wrong as

(1 Point)



- ☐ it has only one input

- ☐ it writes and reads from the same data store
- ☒ the process name is missing
- ☐ output data flows to two external entities

45

Two modules are stamp couples if

(1 Point)

- ☐ they communicate using an elementary data item that is passed as a parameter between the two
- ☒ they communicate using a composite data item
- ☐ data from one module is used to direct the order of instruction execution in another
- ☐ they share some global data items

46

COCOMO stands for \_\_\_\_ .

(1 Point)

- ☐ Consumed COst MOdel
- ☒ COnstructive COst MOdel
- ☐ COmmon COntrol MOdel
- ☐ COmposition COst MOdel

