

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Course: Software Engineering and Project Management

Course Code: CSEG2008

Programme: B.Tech-CSE-MFT

Instructions:

Semester: IV

Time: 2-4 PM

Max. Marks: 100

This Test has 18 attempts. For information on editing questions, click **More Help** below. X

Test Canvas: SEPM END SEM JULY 2020

The Test Canvas lets you add, edit and reorder questions, as well as review a test. [More Help](#)

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You can edit, delete or change the point values of test questions on this page. If necessary, test attempts will be regraded after you submit your changes.

Description

Instructions

Total Questions 60

Total Points 60

Number of Attempts 18

Select: All None ; Select by Type: - Question Type - ▾Delete and RegradePoints Update and RegradeHide Question Details

1. Multiple Choice: A company needs to develop digital si...

Points: 1**Question**

A company needs to develop digital signal processing software for one of its newest inventions. The software is expected to have 40000 lines of code. The company needs to determine the effort in person-months needed to develop this software using the basic COCOMO model. The multiplicative factor for this model is given as 2.8 for the software development on embedded systems, while the exponentiation factor is given as 1.20. What is the estimated effort in person-months?

Answer 234.25 932.25 287.5 112.4

2. Multiple Choice: External entities should be identifie...

Points: 1**Question**

External entities should be identified clearly at all levels of DFDs.

Answer

TRUE

FALSE

3. Multiple Choice: Control information should not be rep...

Points: 1

Question

Control information should not be represented in a DFD.

Answer

TRUE

FALSE

4. Multiple Choice: The context diagram should depict the...

Points: 1

Question

The context diagram should depict the system as a single bubble.

Answer

TRUE

FALSE

5. Multiple Choice: The cyclomatic complexity of a module...

Points: 1

Question

The cyclomatic complexity of a module is equal to the maximum number of linearly independent circuits in the graph.

Answer

TRUE

FALSE

6. Multiple Choice: The cyclomatic complexity can also be...

Points: 1

Question

The cyclomatic complexity can also be used as a number of linearly independent paths that should be tested during path coverage testing.

Answer

TRUE

FALSE

7. Multiple Choice: Inflexible partitioning of the projec...

Points: 1

Question	Inflexible partitioning of the project into stages
Answer	<p>Spiral Model</p> <p>.....</p> <p>Prototype Model</p> <p>.....</p> <p><input checked="" type="checkbox"/> Waterfall Model</p> <p>.....</p> <p>RAID Model</p>

8. Multiple Choice: The prototyping model is a method of ...

Points: **1**

Question	The prototyping model is a method of requirements validation.
Answer	<p><input checked="" type="checkbox"/> TRUE</p> <p>.....</p> <p>FALSE</p>

9. Multiple Choice: The requirements document also descri...

Points: **1**

Question	The requirements document also describes how the requirements that are listed in the document are implemented efficiently.
Answer	<p>TRUE</p> <p>.....</p> <p><input checked="" type="checkbox"/> FALSE</p>

10. Multiple Choice: Consistency and completeness of funct...

Points: **1**

Question	Consistency and completeness of functional requirements are always achieved in practice.
Answer	<p>TRUE</p> <p>.....</p> <p><input checked="" type="checkbox"/> FALSE</p>

11. Multiple Choice: Requirements review is carried out to...

Points: **1**

Question	Requirements review is carried out to find the errors in system design
Answer	<p>TRUE</p> <p>.....</p> <p><input checked="" type="checkbox"/> FALSE</p>

12. Multiple Choice: "In the context of modular software d...

Points: 1

Question	"In the context of modular software design, which one of the following combinations is desirable?"
Answer	<input checked="" type="checkbox"/> High cohesion and low coupling <input type="checkbox"/> High cohesion and high coupling <input type="checkbox"/> Low cohesion and high coupling <input type="checkbox"/> Low cohesion and low coupling

13. Multiple Choice: Equivalence class partitioning is inc...

Points: 1

Question	Equivalence class partitioning is included in
Answer	<input type="checkbox"/> White-box testing <input checked="" type="checkbox"/> Black-box testing <input type="checkbox"/> System testing <input type="checkbox"/> All of the above

14. Multiple Choice: Condition coverage is included in&nbs...

Points: 1

Question	Condition coverage is included in
Answer	<input checked="" type="checkbox"/> White-box testing <input type="checkbox"/> Black-box testing <input type="checkbox"/> System testing <input type="checkbox"/> Alpha Testing

15. Multiple Choice: We can draw CFG for any program /**/...

Points: 1

Question	We can draw CFG for any program
Answer	<input checked="" type="checkbox"/> TRUE

FALSE

16. Multiple Choice: Any node and edge sequence from the s...

Points: 1

Question Any node and edge sequence from the start node to a terminal node of the control flow graph of a program is called

Answer Linearly Independent Path

Path

Walk

Control Flow Graph

17. Multiple Choice: "In the presence of loops, the number...

Points: 1

Question "In the presence of loops, the number of paths can become extremely large in c CFG"

Answer TRUE

FALSE

18. Multiple Choice: "McCabe's cyclomatic complexity metri...

Points: 1

Question "McCabe's cyclomatic complexity metric defines lower bound of "Linearly Independent Path"

Answer TRUE

FALSE

19. Multiple Choice: Testing conducted at the developer's ...

Points: 1

Question Testing conducted at the developer's site by some potential customers is called

Answer Alpha Testing

Beta Testing

Acceptance Testing

None of the above

20. Multiple Choice: The user system requirements are the ...

Points: 1

Question	The user system requirements are the parts of which document ?
Answer	<p>SDD</p> <hr/> <p><input checked="" type="checkbox"/> SRS</p> <hr/> <p>DDD</p> <hr/> <p>SRD</p>

21. Multiple Choice: Which is one of the most import...

Points: 1

Question	Which is one of the most important stakeholder from the following?
Answer	<p>Entry level personnel</p> <hr/> <p>Middle level stakeholder</p> <hr/> <p>Managers</p> <hr/> <p><input checked="" type="checkbox"/> Users of the software</p>

22. Multiple Choice: What is the first step of requirement...

Points: 1

Question	What is the first step of requirement elicitation ?
Answer	<p><input checked="" type="checkbox"/> Identifying Stakeholder</p> <hr/> <p>Listing out Requirements</p> <hr/> <p>Requirements Gathering</p> <hr/> <p>All of the mentioned</p>

23. Multiple Choice: What are the types of requireme...

Points: 1

Question	What are the types of requirements in Quality Function Deployment(QFD)?
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Answer	"Known, Unknown, Undreamed"

	"User, Developer"

	"Functional, Non-Functional"

	<input checked="" type="checkbox"/> " Normal, Expected, Exciting"

24. Multiple Choice: Which of the following property does ...

Points:

Question	Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?
Answer	Verifiable

	<input checked="" type="checkbox"/> Ambiguous

	Complete

	Traceable

25. Multiple Choice: Which of the following property of SR...

Points:

Question	Which of the following property of SRS is depicted by the statement: Conformity to a standard is maintained?
Answer	Correct

	<input checked="" type="checkbox"/> Complete

	Consistent

	Modifiable

26. Multiple Choice: " Consider a system where a heat sens...

Points:

Question	" Consider a system where a heat sensor detects an intrusion and alerts the security company. What kind of a requirement the system is providing?"
Answer	<input checked="" type="checkbox"/> Functional

	Non-Functional

Known Requirement

None of the mentioned

27. Multiple Choice: Which of the following statements abo...

Points: 1

Question Which of the following statements about SRS is/are true?
I SRS is written by the customer
II SRS is written by a developer
III SRS serves as a contract between customer and developer

Answer Only I is true
Both II and III are true
 All are true
None of the mentioned

28. Multiple Choice: The SRS document is also known as____...

Points: 1

Question The SRS document is also known as_____specification.

Answer black-box
white-box
grey-box
none of the mentioned

29. Multiple Choice: What kind of approach was introduced ...

Points: 1

Question What kind of approach was introduced for elicitation and modelling to give a functional view of the system?

Answer Object Oriented Design (by Booch)
 Use Cases (by Jacobson)
Fusion (by Coleman)

30. Multiple Choice: Why is Requirements Elicitation a dif...

Points: 1

Question Why is Requirements Elicitation a difficult task?

Answer

Problem of scope

Problem of understanding

Problem of volatility

All of the mentioned

 31. Multiple Choice: In dataflow diagram process is repres...

Points: 1

Question In dataflow diagram process is represented by a _____

Answer

circle

rectangle

triangle

parallelogram

 32. Multiple Choice: A Data Flow Diagram (DFD) is composed...

Points: 1

Question A Data Flow Diagram (DFD) is composed of which elements?

Answer

Data sources and destinations

Data flows

Transformation processes

All of the above

 33. Multiple Choice: Many documentation tools are availabl...

Points: 1

Question

Many documentation tools are available to explain how a system works. Which tool provides a graphical description of the sources and destinations of data as well as data flow within the organization and the processes that transform and store that data?

- Answer**
- Data flow diagram
 - Document flowchart
 - Program flowchart
 - System flowchart

34. Multiple Choice: Which of the following is not a guide...

Points: 1

- Question** Which of the following is not a guideline for drawing a Data Flow Diagram (DFD)?
- Answer**
- Develop a context diagram
 - Subdivide the DFD
 - Determine system boundaries
 - Display the physical location of data files

35. Multiple Choice: "A project has cashflows of -100000...

Points: 1

- Question** "A project has cashflows of -100000, 10000, 10000, 10000, 20000, 100000 (all in dollars) for year 0, 1, 2, 3, 4 and 5 respectively. The Payback period is estimated as _____ years"
- Answer**
- 3.5
 - 4.25
 - 4.8
 - 4.5

36. Multiple Choice: "A project has cashflows of -100000...

Points: 1

- Question** "A project has cashflows of -100000, 10000, 10000, 10000, 20000, 100000 (all in dollars) for year 0, 1, 2, 3, 4 and 5 respectively. The ROI for the project is _____ percent"
- Answer**
- 9.5
 - 10
 - 10.5
 - 11.5

37. Multiple Choice: The average staff size for a 200 KLOC...

Points: 1

Question	The average staff size for a 200 KLOC project using COCOMO Model is____persons
Answer	<input checked="" type="checkbox"/> 38.67
	<input type="checkbox"/> 36.63
	<input type="checkbox"/> 35.33
	<input type="checkbox"/> 30.88

38. Multiple Choice: The effort for a project of size 500 ...

Points: 1

Question	The effort for a project of size 500 KLOC using COCOMO Model is_____PM
Answer	<input type="checkbox"/> 6328
	<input type="checkbox"/> 6350
	<input type="checkbox"/> 6268
	<input checked="" type="checkbox"/> 6238

39. Multiple Choice: "A program has 5 Els of simple type, ...

Points: 1

Question	"A program has 5 Els of simple type, 4 EOs of average type, 4 EQs of complex type, 3 ILFs of average type and 4 EIFs of complex type. The complexity adjustment factors are to be taken as average. The FP for this program is_____"
Answer	<input type="checkbox"/> 128
	<input type="checkbox"/> 131
	<input checked="" type="checkbox"/> 138
	<input type="checkbox"/> 145

40. Multiple Choice: "A program has 5 Els of simple type, ...

Points: 1

Question	"A program has 5 Els of simple type, 4 EOs of average type, 4 EQs of complex type, 3 ILFs of average type and 4 EIFs of complex type. The complexity adjustment factors are to be taken as average. The UFP for this program is_____"
Answer	<input type="checkbox"/> 125
	<input type="checkbox"/> 129

121

119

41. Multiple Choice: "A system has 15 user inputs (Average...

Points: 1

Question	"A system has 15 user inputs (Average), 10 user outputs (High), 5 user inquiries (High), 8 internal logical files (Low) and 4 external interface (High). The UFP Count is_____"
Answer	236
	248
	244
	<input checked="" type="checkbox"/> 256

42. Multiple Choice: "Assume that the size of an organic t...

Points: 1

Question	"Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code. Assume that the average salary of software engineers be Rs. 15,000/- per month. Determine the effort required to develop the software product and the nominal development time.From the basic COCOMO estimation formula for organic software:From the basic COCOMO estimation formula for organic software: Nominal Development Time is"
Answer	<input checked="" type="checkbox"/> 14 months
	12 months
	15 months
	19 months

43. Multiple Choice: "A company wants to start a Project a...

Points: 1

Question	"A company wants to start a Project and to calculate its feasibility,There is another method which states that there is some models which are often based on equation (i), they actually depend on several variables representing various aspects of the software development environment, for example method used, user participation, customer oriented changes, memory constraints, etc.Company deduced that the project they are using is of size 500 KLOC, Based on the data given what will be the duration of the project"
Answer	67.1234
	89.5678
	651.8901
	<input checked="" type="checkbox"/> 38.4072

44. Multiple Choice: "A project has expenditure of 180 lac...

Points: 1

Question	"A project has expenditure of 180 lacs and the revenues at the end of each year are 64, 80, 100, 125 and 105 lacs. The ROI for the project is _____percent"
Answer	<input checked="" type="checkbox"/> 32.67 <input type="checkbox"/> 35.67 <input type="checkbox"/> 25.67 <input type="checkbox"/> 33.33

45. Multiple Choice: "A project has expenditure of 180 lac...

Points: 1

Question	"A project has expenditure of 180 lacs and the revenues at the end of each year are 64, 80, 100, 125 and 105 lacs. The NPV assuming 12.5 percent discount rate is _____lacs"
Answer	<input type="checkbox"/> 141.89 <input type="checkbox"/> 143.37 <input checked="" type="checkbox"/> 146.63 <input type="checkbox"/> 151.89

46. Multiple Choice: The value of a and b in $E=a(KLOC)^b$ f...

Points: 1

Question	The value of a and b in $E=a(KLOC)^b$ for basic COCOMO (Organic) having 2-50 KLOC is
Answer	<input checked="" type="checkbox"/> "a=2.4,b=1.05" <input type="checkbox"/> "a=3.0,b=1.12" <input type="checkbox"/> "a=2.4,b=1..12" <input type="checkbox"/> "a=3.0,b=1.05"

47. Multiple Choice: The value of a and b in $E=a(KLOC)^b$ f...

Points: 1

Question	The value of a and b in $E=a(KLOC)^b$ for basic COCOMO (Embedded) having 400 KLOC is
Answer	<input type="checkbox"/> "a=2.4,b=1.05" <input type="checkbox"/> "a=3.0,b=1.12" <input type="checkbox"/> "a=2.4,b=1.12" <input checked="" type="checkbox"/> "a=3.6,b=1.20"

48. Multiple Choice: A project having 200 KLOC will require...

Points: 1

Question	A project having 200 KLOC will require Effort _____ using basic COCOMO
Answer	<input checked="" type="checkbox"/> 626 PM

	1133 PM

	2077 PM

	none of given

49. Multiple Choice: A project having 200 KLOC will require...

Points: 1

Question	A project having 200 KLOC will require Duration of _____ using basic COCOMO
Answer	<input checked="" type="checkbox"/> 29 months

	28 months

	26 months

	24months

50. Multiple Choice: Which model is popular for developmen...

Points: 1

Question	Which model is popular for development of the user interface part of projects?
Answer	Classical Waterfall Model

	<input checked="" type="checkbox"/> Prototyping Model

	RAD Model

	Spiral Model

51. Multiple Choice: The most complex model is /**/ docu...

Points: 1

Question	The most complex model is
Answer	RAD Model

Prototyping Model

Spiral Model

None

52. Multiple Choice: _____ is a measure of the degree of...

Points: 1

Question _____ is a measure of the degree of interdependence between modules.

Answer

Cohesion

Coupling

Both of the above

None of the above

53. Multiple Choice: " If all tasks must be executed in th...

Points: 1

Question " If all tasks must be executed in the same time-span, what type of cohesion is being exhibited?"

Answer

Functional Cohesion

Sequential Cohesion

Temporal Cohesion

Control Cohesion

54. Multiple Choice: McCall's Quality Factors

Points: 1

Question McCall's Quality Factors

Answer

Product Revision

Product Transition

Product Operation

All of the above

55. Multiple Choice: Capability Maturity Model includes /...

Points: 1

Question	Capability Maturity Model includes
Answer	4 levels
	<input checked="" type="checkbox"/> 5 levels
	6 levels
	3 levels

56. Multiple Choice: Context Diagram is /**/ document.on...

Points: 1

Question	Context Diagram is
Answer	<input checked="" type="checkbox"/> Level 0 DFD
	Level 1 DFD
	Level 2 DFD
	Level 3

57. Multiple Choice: If two module communicate using a com...

Points: 1

Question	If two module communicate using a composite data item then it is called
Answer	Data coupling
	Communication coupling
	Common coupling
	<input checked="" type="checkbox"/> Stamp coupling

58. Multiple Answer: The following ...

Points: 1

Question	
----------	--

The following program is to be tested for statement coverage:

```
begin
  if (a== b) {S1; exit;}
  else if (c== d) {S2;}
  else {S3; exit;}
  S4;
end
```

The test cases T1, T2, T3 and T4 given below are expressed in terms of the properties satisfied by the values of variables a, b, c and d. The exact values are not given. T1 : a, b, c and d are all equal; T2 : a, b, c and d are all distinct; T3 : a = b and c != d; T4 : a != b and c = d. Which of the test suites given below ensures coverage of statements S1, S2, S3 and S4?

Answer

T1, T2, T3

T2, T4

T3, T4

T1, T2, T4

59. Multiple Answer: The coupling b...

Points: 1

Question

The coupling between different modules of a software is categorized as follows:

- I. Content coupling
- II. Common coupling
- III. Control coupling
- IV. Stamp coupling
- V. Data coupling

Coupling between modules can be ranked in the order of strongest (least desirable) to weakest (most desirable) as follows:

Answer

I-II-III-IV-V

I-III-IV-V-II

V-IV-III-II-I

V-III-II-I-IV

60. Multiple Answer: while (first &...

Points: 1

Question

```
while (first <= last)
{
  if (array [middle] < search)
    first = middle + 1;
  else if (array [middle] == search)
    found = True;
  else last = middle - 1;
  middle = (first + last)/2;
}
```

The cyclomatic complexity of the program segment is

Answer

3

4

5

6

Select: [All](#) [None](#) Select by Type: - Question Type - ▼

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Points

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