Unit-3: Object-Oriented Software Estimation

Multiple Choice Questions [1 Mark]

3.1. Need of Object-Oriented Software Estimation

1. After the requirements have been gathered, what customer may like to estimate?
   a) Classes
   b) Cost and time
   c) Result
   d) Feedback

2. What one should identify to conduct effective software estimation?
   a) Scope/boundaries, Size and Effort of the project
   b) Resources required in the project
   c) Risk involved in the project
   d) All of the above

3. In traditional software, which type(s) of model(s) was/were used for size estimations?
   a) COCOMO 81
   b) COCOMO II
   c) Both (a) and (b)
   d) Putnam resource allocation

4. In object-oriented systems, size can be estimated by:
   a) Use cases
   b) Classes
   c) Both (a) and (b)
   d) None of the above

5. How the effort can be estimated for the computation of object-oriented products?
   a) By using use cases and classes
   b) By using cost and time
   c) By using result
   d) By using feedback

3.2. Loren and Kidd Estimation Method

6. Which two methods are provided by Lorenz and Kidd for estimating number of classes?

a) Use of Mean and Medium
b) Use of scenario and; key and support classes
c) Use of classes and objects
d) None of the above

7. The size of the classes can be estimated as:

a) 15 × Number of scenario scripts
b) 17 × Number of scenario scripts
c) 20 × Number of scenario scripts
d) 25 × Number of scenario scripts

8. Support classes includes…

a) User interface
b) Back end classes
c) Communications
d) All of the above

9. Match the multiplier with its interface type:

Interface type	Multiplier
1. No GUI	A. 2.5
2. Text-based user interface	B. 2.0
3. Graphical user interface	C. 3.0
4. Complex graphical user interface	D. 2.25

a) 1-B, 2-C, 3-D, 4-A
b) 1-B, 2-A, 3-C, 4-D
c) 1-B, 2-D, 3-A, 4-C
d) 1-B, 2-D, 3-C, 4-A

10. The support classes can be calculated as:

a) Number of key classes + Multiplier
b) Number of key classes × Multiplier
c) Number of key classes / 17
d) Number of key classes × 17

11.	The total number of classes is obtained by:
	a) adding key classes and support classes b) subtracting key classes and support classes c) multiplying key classes and support classes d) dividing key classes and support classes
12.	According to Lorenz and Kidd, how many person days each class requires for implementation?
	a) 0 to 10 person days b) 10 to 20 person days c) 20 to 30 person days d) 30 to 40 person days
13.	The effort can be calculated as:
	a) Key classes × (10 to 20 person days) b) Support classes × (25 person days) c) Total number of classes × (10 to 20 person days) d) Total number of classes × (25 person days)
14.	If an application consists of 15 scenarios scripts, then what will be the number of classes?
	a) 250 b) 255 c) 350 d) 355
15.	If an application requires 15 person days to implement each class and the number of classes is 255, then what will be the effort of the given application?
	a) 3825 b) 3835 c) 3845 d) 3855
16.	If the number of classes is 750 and requires person days is 17 to implement each class, then what will be the effort of the given application?
	a) 11750 b) 11955 c) 12000 d) 12750

17.	If scenarios scripts are 35 and require person days is 10, then determine the effort of the given application.
	a) 6580 b) 7810 c) 5950 d) 5460
18.	By considering the database application project with the following characteristics: 1. The application has 45 key classes 2. A graphical user interface is required What will be the number of support classes?
	a) 100 b) 112.5 c) 135.2 d) 254.4
19.	If number of key classes is 112.5 and number of support classes is 45, then find total number of classes.
	a) 157.5 b) 160.8 c) 198.5 d) 250.3
20.	If total number of classes is 157.5, then calculate the effort to develop an application project for 20 person days.
	a) 3200 b) 3160 c) 3150 d) 3900
3.3. Use Case Point Estimation Method	
21.	The use case points method was developed by:
	a) B. Boehm b) V. Basili c) G. Karner d) A. Albrecht

22.	Which method is used for estimating size and effort of object-oriented projects using use cases?
	a) SRS Point b) Use Case Point c) Activity Point d) Sequence Point
23.	The use case points method is based on:
	a) Classes b) Objects c) Use cases d) Scenarios
24.	The use case points method can be used in:
	a) Early phases b) Effort estimation c) Later phases d) Both (a) and (c)
25.	How to calculate unadjusted use case point?
	a) Unadjusted actor weight * Unadjusted use case weight b) Unadjusted actor weight / Unadjusted use case weight c) Unadjusted actor weight + Unadjusted use case weight d) Unadjusted actor weight - Unadjusted use case weight
26.	TCF stands for:
	a) Technological complexity factor b) Technical complexity factor c) Technical class factor a) Total complexity factor
27.	Environmental complexity factor helps
	a) to assesses the functionality of the software. b) to calculate by multiplying UUCP. c) in estimating the efficiency of the project. d) All of the above
28.	Use case points can be calculated by:

a) UUCP × TCF × ECF
b) UUCP × TCF
c) UCP × H
d) UUCP × ECF

29. The actors are ranked according to their complexity as:

a) First, Second and Third
b) Simple, Average and Complex
c) Easy, Medium and High
d) None of the above

30. To calculate use case point, the duration can be measured by how many person hours per use case point?

a) 10 person hours
b) 15 person hours
c) 20 person hours
d) 25 person hours

31. Consider an airline reservation system where the following information is available:

Number of actors: 05 and Number of use cases: 10

By assuming all the complexity factors as average, what will be the unadjusted use case weight for the project.

a) 101
b) 110
c) 111
d) 120

32. If UUCP is 110, TCF is 1.02 and ECF is 0.995, then what will be UCP?

a) 111.639
b) 115.666
c) 150.865
d) 950.546

33. Which one is not an object-oriented software estimation method?

a) Class point
b) Function point
c) Use case point
d) Lorenz and Kidd

34. If in an application there are 2 simple actors, 2 average actors and 1 complex actor, then what will be the unadjusted actor weight for the project.

a) 3
b) 6
c) 9
d) 12

35. If in an application there are 2 use cases with the number of transactions 3, 4 use cases with the number of transactions 5 and 2 use cases with the number of transactions 15, then what will be the unadjusted use case weight for the project.

a) 20
b) 40
c) 60
d) 80

36. If use case point is 133.46, then what will be the effort for an application?

a) 2600.5
b) 2669.2
c) 2690.8
e) 2890.3

37. What are the disadvantages of use case points method?

I. UCP can be used only when requirements are written in the form of use cases.
II. UCPs are based on use cases and can be measured very early in the project life cycle.
III. Use cases are being used vastly as a method of choice to describe requirements. In such cases, UCP is the best suitable estimation technique.
IV. If the use cases are not well or uniformly structured, then the resulting may not be accurate.
V. UCP is useful for initial estimate of overall project size, but they are much less useful in driving the iteration-to-iteration work of a team.

a) I, II, III
b) I, II, IV
c) I, III, IV
d) I, IV, V

3.4. Risk Management: Introduction to Risk Management

38.	Risk is defined as:
	a) Probability × size b) Propriety × size c) Probability × impact d) Probability × propriety
39.	Risk management is one of the most important jobs for a
	a) Client b) Investor c) Production Team d) Project Manager
40.	Which type of risks deal with the feasibility and understanding of the problem?
	a) Technical Risks b) Economical Risks c) Deployment Risks d) Environment Risks
41.	Which type of risks involve budget, time, personnel and quality risks?
	a) Technical Risks b) Economical Risks c) Deployment Risks d) Environment Risks
42.	Deployment risks consist of …
	a) Mishandling of the software b) Inadequate user training c) Ineffective maintenance activities d) All of the above
43.	In which type of risks, the security and safety of the workplace is addressed?
	a) Technical Risks b) Economical Risks c) Deployment Risks d) Environment Risks

44.	Which type of risks must be analyzed during the starting of the project life cycle?
	a) Technical Risks b) Economical Risks c) Deployment Risks d) Environment Risks
45.	Risks may be rated as:
	a) High, Medium and Low b) Urgent, High, Medium and Low c) Warm, Hot, Medium and Cool d) None of the above
46.	Which rating of the risks would cause high loss to the business?
	a) Low b) Medium c) High d) Urgent
47.	What rate of the risks would prevent the delivery of the software?
	a) Low b) Medium c) High d) Urgent
48.	"The medium rate of the risk may affect the company from meeting a milestone."
	a) True b) False
3.5. Framework for Managing Risk	
49.	_____ is a key part of project planning activities and is the specific risky area which are highlighted in the plan.
	a) Project management b) Risk planning c) Definition identification d) Risk management

50.	Which one of the following is not risk management activity? a) Risk identification b) Risk prioritization c) Risk activation d) Risk monitoring
51.	In risk management, after identifying _____ only, the risk reduction and removal of activities may be planned again. a) old risks b) new risks c) Both (a) and (b) d) None of the above