

पुस्तिका में पृष्ठों की संख्या : 24

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Paper-II

Exam Date : 20/08/2025



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प्रश्न पुस्तिका संख्या व
बारकोड /
Question Booklet No.
& Barcode

समय : 02:00 घण्टे + 10 मिनट अतिरिक्त*

Time : 02:00 Hours + 10 Minutes Extra*

अधिकतम अंक : 100

Maximum Marks: 100

प्रश्न पुस्तिका के पेपर की सील/पॉलिथिन बैग को खोलने पर प्रश्न पत्र हल करने से पूर्व परीक्षार्थी यह सुनिश्चित कर लें कि :-

- प्रश्न पुस्तिका संख्या तथा ओ.एम.आर. उत्तर-पत्रक पर अंकित बारकोड संख्या समान है।
 - प्रश्न पुस्तिका एवं ओ.एम.आर. उत्तर-पत्रक के सभी पृष्ठ व सभी प्रश्न सही मुद्रित हैं। समस्त प्रश्न जैसा कि ऊपर वर्णित है, उपलब्ध हैं तथा कोई भी पृष्ठ कम नहीं है/मुद्रण त्रुटि नहीं है।
- किसी भी प्रकार की विसंगति या दोषपूर्ण होने पर परीक्षार्थी वीक्षक से दूसरी प्रश्न पुस्तिका प्राप्त कर लें। यह सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी। परीक्षा प्रारम्भ होने के 5 मिनट पश्चात् ऐसे किसी दावे/आपत्ति पर कोई विचार नहीं किया जायेगा।

On opening the paper seal/polythene bag of the Question Booklet before attempting the question paper the candidate should ensure that:-

- Question Booklet Number and Barcode Number of OMR Answer Sheet are same.
- All pages & Questions of Question Booklet and OMR Answer Sheet are properly printed. All questions as mentioned above are available and no page is missing/misprinted.

If there is any discrepancy/defect, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this. No claim/objection in this regard will be entertained after five minutes of start of examination.

परीक्षार्थियों के लिए निर्देश

INSTRUCTIONS FOR CANDIDATES

1. प्रत्येक प्रश्न के लिये एक विकल्प भरना अनिवार्य है।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का मात्र एक ही उत्तर दीजिये। एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
4. OMR उत्तर-पत्रक इस प्रश्न पुस्तिका के अन्दर रखा है। जब आपको प्रश्न पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्रक निकाल कर ध्यान से केवल नीले बॉल प्वाइंट पेन से विवरण भरें।
5. कृपया अपना रोल नम्बर ओ.एम.आर. उत्तर-पत्रक पर सावधानीपूर्वक सही भरें। गलत रोल नम्बर भरने पर परीक्षार्थी स्वयं उत्तरदायी होगा।
6. ओ.एम.आर. उत्तर-पत्रक में करेक्शन पेन/व्हाइटनर/सफेदा का उपयोग निषिद्ध है।
7. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है।
8. प्रत्येक प्रश्न के पांच विकल्प दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4, 5 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले (बबल) को उत्तर-पत्रक पर नीले बॉल प्वाइंट पेन से गहरा करना है।
9. यदि आप प्रश्न का उत्तर नहीं देना चाहते हैं, तो उत्तर-पत्रक में पांचवें (5) विकल्प को गहरा करें। यदि पांच में से कोई भी गोला गहरा नहीं किया जाता है, तो ऐसे प्रश्न के लिये प्रश्न अंक का 1/3 भाग काटा जायेगा।
10. *प्रश्न पत्र हल करने के उपरान्त अभ्यर्थी अनिवार्य रूप से ओ.एम.आर. आंसर शीट जांच लें कि समस्त प्रश्नों के लिये एक विकल्प (गोला) भर दिया गया है। इसके लिये ही निर्धारित समय से 10 मिनट का अतिरिक्त समय दिया गया है।
11. यदि अभ्यर्थी 10% से अधिक प्रश्नों में पांच विकल्पों में से कोई भी विकल्प अंकित नहीं करता है, तो उसको अयोग्य माना जायेगा।
12. मोबाइल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है, तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।

1. It is mandatory to fill one option for each question.
2. All questions carry equal marks.
3. Only one answer is to be given for each question. If more than one answers are marked, it would be treated as wrong answer.
4. The OMR Answer Sheet is inside this Question Booklet. When you are directed to open the Question Booklet, take out the Answer Sheet and fill in the particulars carefully with BLUE BALL POINT PEN only.
5. Please correctly fill your Roll Number in OMR Answer Sheet. Candidate will himself/herself be responsible for filling wrong Roll Number.
6. Use of Correction Pen/Whitener in the OMR Answer Sheet is strictly forbidden.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question.
8. Each question has five options marked as 1, 2, 3, 4, 5. You have to darken only one circle (bubble) indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
9. If you are not attempting a question, then you have to darken the circle '5'. If none of the five circles is darkened, one third (1/3) part of the marks of question shall be deducted.
10. * After solving the question paper, candidate must ascertain that he/she has darkened one of the circles (bubbles) for each of the questions. Extra time of 10 minutes beyond scheduled time is provided for this.
11. A candidate who has not darkened any of the five circles in more than 10% questions shall be disqualified.
12. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt by the Commission as per rules.

Warning : If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under Rajasthan Public Examination (Measures for Prevention of Unfair Means in Recruitment) Act, 2022, other laws applicable and Commission's Regulations. Commission may also debar him/her permanently from all future examinations.

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए और राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्याय) अधिनियम, 2022 तथा अन्य प्रभावी कानून एवं आयोग के नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

उत्तर-पत्रक में दो प्रतियां हैं - मूल प्रति और कार्बन प्रति। परीक्षा समाप्ति पर परीक्षा कक्ष छोड़ने से पूर्व परीक्षार्थी उत्तर-पत्रक की दोनों प्रतियां वीक्षक को सौंपेंगे, परीक्षार्थी स्वयं कार्बन प्रति अलग नहीं करें। वीक्षक उत्तर-पत्रक की मूल प्रति को अपने पास जमा कर, कार्बन प्रति को मूल प्रति से कट लाइन से मोड़कर सावधानीपूर्वक अलग कर परीक्षार्थी को सौंपेंगे, जिसे परीक्षार्थी अपने साथ ले जायेंगे। परीक्षार्थी को उत्तर-पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा मांगे जाने पर प्रस्तुत करनी होगी।



1. Which type of feasibility assesses whether the proposed system can be developed with the available technology and resources?
 - (1) Legal feasibility
 - (2) Operational feasibility
 - (3) Economic feasibility
 - (4) Technical feasibility
 - (5) Question not attempted
2. Which one of the alternatives given below is not a tool of structured analysis?
 - (1) DFD
 - (2) Bar chart
 - (3) Decision table
 - (4) Decision tree
 - (5) Question not attempted
3. Identify an approach which is not used to evaluate user interface design -
 - (1) Integration testing
 - (2) Heuristic evaluation
 - (3) Formal usability testing
 - (4) Walk through evaluation
 - (5) Question not attempted
4. Which one of the following input devices recognize pencil, ink marks or characters by their configuration (shape)?
 - (1) Mark sensing readers
 - (2) MICR
 - (3) Optical bar-code readers
 - (4) OCR
 - (5) Question not attempted
5. Which of the following is an example of a tangible cost in system analysis and design?
 - (1) User satisfaction levels
 - (2) Software licensing fees
 - (3) Employee satisfaction levels
 - (4) Employee motivation
 - (5) Question not attempted



6. A is a structured repository of data about data.
- (1) Data table
 - (2) Decision tree
 - (3) Data dictionary
 - (4) Decision table
 - (5) Question not attempted
7. Which of the following is a type of performance requirements in SAD?
- (1) System integration requirements
 - (2) Capacity requirements
 - (3) Portability requirements
 - (4) Maintainability requirements
 - (5) Question not attempted
8. means that the same message can be interpreted differently by different classes of objects.
- (1) Static binding
 - (2) Encapsulation
 - (3) Polymorphism
 - (4) Dynamic capturing
 - (5) Question not attempted
9. advocates building a simple system through trial error and refining it through an iterative process.
- (1) Fact finding
 - (2) Investigation
 - (3) Background analysis
 - (4) Prototyping
 - (5) Question not attempted
10. Which of the following shows succession of interactions between object instances over time?
- (1) Object diagram
 - (2) Sequence diagram
 - (3) Use case diagram
 - (4) Class diagram
 - (5) Question not attempted



11.consists of a hierarchy chart and an associated set of input/process/output charts.
- (1) HIPO chart
 - (2) ER diagram
 - (3) Decision tree
 - (4) DFD
 - (5) Question not attempted
12. Release testing primarily involves -
- (1) Load testing under extreme conditions by end user.
 - (2) Black-box testing based on system specification.
 - (3) Regression testing of individual units.
 - (4) Static analysis of modules.
 - (5) Question not attempted
13. displays decision logic (if statements) as a set of nodes (questions) and branches (answers).
- (1) Decision tree
 - (2) Red-black tree
 - (3) Segment tree
 - (4) AVL tree
 - (5) Question not attempted
14. Which of the following model is most suitable when the developer is unsure about the form that human-machine interaction should take?
- (1) Prototyping model
 - (2) Spiral model
 - (3) Waterfall model
 - (4) Component based model
 - (5) Question not attempted
15. Debugging is an action that -
- (1) checks that the software correctly implements a specific function.
 - (2) includes Black-box testing.
 - (3) checks that the software satisfies customer requirements.
 - (4) results in the removal of error.
 - (5) Question not attempted

16. In SDLC, during which phase the detailed evaluation of the present system is done?
- (1) Design phase
 - (2) Maintenance phase
 - (3) Implementation phase
 - (4) Analysis phase
 - (5) Question not attempted
17. Which of the following design strategy is the merger of various structured techniques with prototyping techniques and joint-application development techniques for quick system development?
- (1) Rapid Application Development
 - (2) Prototyping
 - (3) Information Engineering
 - (4) Model Structured Design
 - (5) Question not attempted
18. A bank's credit card approval logic is based on three conditions: income level, credit score and existing loans. Management wants a complete and compact tabular view of how decisions are made based on these variables. Which representation is most suitable?
- (1) Decision tree
 - (2) Class diagram
 - (3) Flowchart
 - (4) Decision table
 - (5) Question not attempted
19. Which of the following is not an element of a system?
- (1) Control
 - (2) Processor(s)
 - (3) Feedback
 - (4) Integration
 - (5) Question not attempted
20. Which of the following is/are role(s) of System Analyst?
- (I) Consultant
 - (II) Agent of change
 - (III) Supporting expert
- Choose the correct option -
- (1) (II) and (III) only
 - (2) (I) and (II) only
 - (3) (I) and (III) only
 - (4) (I), (II) and (III)
 - (5) Question not attempted

21. Which type of benefits are easily quantified and usually measured in terms of monthly or annual savings or of profit to the firm?
- (1) Immaterial benefits
 - (2) Impalpable benefits
 - (3) Tangible benefits
 - (4) Intangible benefits
 - (5) Question not attempted
22. Which of the following is NOT a component of use case diagram?
- (1) System boundary
 - (2) Association relationship
 - (3) Actor
 - (4) Database
 - (5) Question not attempted
23. Which one of the following is NOT a UML diagram?
- (1) E-R diagram
 - (2) Sequence diagram
 - (3) Use case diagram
 - (4) State chart diagram
 - (5) Question not attempted
24. Which is the type of maintenance for enhancing performance or modifying programs to accommodate user's changing needs?
- (1) Corrective Maintenance
 - (2) Preventive Maintenance
 - (3) Perfective Maintenance
 - (4) Adaptive Maintenance
 - (5) Question not attempted
25. When a module contains functions that are executed in the same time span, then the module is said to possess -
- (1) Procedural cohesion
 - (2) Temporal cohesion
 - (3) Spatial cohesion
 - (4) Logical cohesion
 - (5) Question not attempted

26. are used to document an organization's complex business policies and decision-making rules.
- (1) Decision tables
 - (2) Requirement tables
 - (3) Heuristic tables
 - (4) Data tables
 - (5) Question not attempted
27. Which scenario justifies the use of the Incremental Process Model over the Waterfall Model in enterprise software development?
- (1) Stakeholders prefer full delivery in one release.
 - (2) System requires formal verification at every stage.
 - (3) Core functionalities are well defined but additional features are expected to evolve over time.
 - (4) Requirements are fixed and clearly understood from the beginning.
 - (5) Question not attempted
28. is the number of entities that participate in a relationship.
- (1) Degree
 - (2) Association
 - (3) Modulo
 - (4) Cardinality
 - (5) Question not attempted
29. Which of the following is not a category of class in UML?
- (1) Interface
 - (2) Equivalence
 - (3) Abstract
 - (4) Entity
 - (5) Question not attempted
30. Which of the following testing strategy aims to test every independent execution path through a program?
- (1) Equivalence partitioning
 - (2) Boundary value analysis
 - (3) Path testing
 - (4) Usability testing
 - (5) Question not attempted

31. Select the correct mapping of system phase with the corresponding deliverables in SDLC -
- (1) Analysis - Data Model, Process Models, Use Cases
 - (2) Implementation - Program Design, Hardware & Software specifications
 - (3) Design - Test Plan, Programs, Migration Plan
 - (4) Planning - Test Plan, Program Design, Support Plan
 - (5) Question not attempted
32. Which model is best suited for projects with well-defined requirements and no expected changes?
- (1) Spiral
 - (2) RAD
 - (3) Waterfall
 - (4) Agile
 - (5) Question not attempted
33. Which of the following is NOT a reason for corrective maintenance?
- (1) System errors detected by users.
 - (2) User requests for additional features.
 - (3) System crashes due to software bugs.
 - (4) Security vulnerabilities discovered post-deployment due to existing flaw.
 - (5) Question not attempted
34. What does "Coupling" indicate in modular design?
- (1) The strength of the connection between modules.
 - (2) The relationship between system hardware.
 - (3) The documentation process of modules.
 - (4) The cohesion of a module.
 - (5) Question not attempted
35. Orderly grouping of interdependent components linked together according to a plan to achieve a specific objective is called
- (1) system
 - (2) interconnection
 - (3) relationship
 - (4) entity
 - (5) Question not attempted



36. An open system is characterized by -
- (1) being closed during runtime.
 - (2) complete independence from its environment.
 - (3) require no input.
 - (4) interaction and exchange with its environment.
 - (5) Question not attempted
37. Out of the following in which situation, state chart diagrams are NOT created?
- (1) A class has a simple life cycle.
 - (2) A class has a complex life cycle.
 - (3) A class has an operational life cycle.
 - (4) Two classes depend on each other.
 - (5) Question not attempted
38. Which of the following is an example of a physical system?
- (1) A car engine
 - (2) A budgeting algorithm
 - (3) An abstract class in OOP
 - (4) A decision-making model
 - (5) Question not attempted
39. Site for Beta testing is -
- (1) End user's site(s)
 - (2) Testing lab in software company
 - (3) Within the development team
 - (4) Software developer's site
 - (5) Question not attempted
40. Which of the following is a normal acceptance testing?
- (1) Data Flow testing
 - (2) Alpha testing
 - (3) Security testing
 - (4) Usability testing
 - (5) Question not attempted
41. Data Flow Diagram (DFD) is a -
- (1) Flow model
 - (2) Class model
 - (3) Scenario-based model
 - (4) Behavioral model
 - (5) Question not attempted

42. Match the following -

List-1

- (i) The degree to which one class is connected to or relies upon other classes.
- (ii) The degree to which the attributes and behaviors of a single class are related to each other.
- (iii) A group of objects packaged together into one unit.
- (iv) An object class that contains business related information and implements the analysis classes.

List-2

- (a) Component
- (b) Entity class
- (c) Coupling
- (d) Cohesion

- (1) (i)-(c), (ii)-(a), (iii)-(d), (iv)-(b)
- (2) (i)-(c), (ii)-(d), (iii)-(b), (iv)-(a)
- (3) (i)-(a), (ii)-(d), (iii)-(b), (iv)-(c)
- (4) (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
- (5) Question not attempted

43. Which of these are the five generic software engineering framework activities?

- (1) Analysis, designing, programming, debugging, maintenance
- (2) Communication, planning, modelling, construction, deployment
- (3) Analysis, planning, designing, programming, testing
- (4) Communication, risk management, measurement, production, reviewing
- (5) Question not attempted

44. Which of the following is the key question in "Recognition of needs" stage of SDLC?

- (1) What is the problem or opportunity?
- (2) How will the individual programs test out?
- (3) Are user manuals ready?
- (4) Does the user approve the system?
- (5) Question not attempted



45. In a hospital management system, patient data is stored and retrieved as needed. The "Patient records" component in the DFD would most likely be categorized as -

- (1) Data flow
- (2) Data store
- (3) External entity
- (4) Process
- (5) Question not attempted

46. Validation is -

- (1) Evaluating the developer's performance.
- (2) Checking the product with respect to customer's requirements.
- (3) Checking the product with respect to implementation details.
- (4) Checking the product with respect to the constraints of the project.
- (5) Question not attempted

47. Which of the following is an example of a 'report form' in system design?

- (1) Purchase order
- (2) Profit and loss statement
- (3) Stock ledger
- (4) Inventory record
- (5) Question not attempted



48. Match the following -

List-1

- (i) An entity that contains attributes and behaviors that are common to one or more class subtypes.
- (ii) An object class that inherits attributes and behaviors from a supertype class and then may contain other attributes and behaviors that are unique to it.
- (iii) The concept wherein methods and/or attributes defined in an object class can be inherited or reused by another object class.
- (iv) The packaging of several items together into one unit.

List-2

- (a) Subtype
- (b) Encapsulation
- (c) Supertype
- (d) Inheritance

- (1) (i)-(c), (ii)-(d), (iii)-(a), (iv)-(b)
- (2) (i)-(a), (ii)-(d), (iii)-(b), (iv)-(c)
- (3) (i)-(c), (ii)-(a), (iii)-(d), (iv)-(b)
- (4) (i)-(c), (ii)-(a), (iii)-(b), (iv)-(d)
- (5) Question not attempted

49. In the context of system design, the "Separation of concerns" principle primarily ensures -

- (1) The system is fully decoupled from any hardware layer.
- (2) A single unified data representation across all modules.
- (3) Minimized use of system resources.
- (4) Each module addresses a specific aspect of the problem domain.
- (5) Question not attempted

50. A university admission system developed as a closed system lacks external feedback mechanisms. Over time, student grievances and complaints increase. What is the most significant drawback of a closed system in this context?

- (1) Inaccurate inputs
- (2) Low scalability
- (3) No environmental interaction
- (4) High maintenance cost
- (5) Question not attempted

51. Which of the following is NOT listed as cause of software errors?

- (1) Client-developer communication failures
- (2) Faulty requirement definition
- (3) Client-server communication failures
- (4) Logical design errors
- (5) Question not attempted

52. **Assertion (A) :** Agile planning avoids long-term, fixed scheduling of project activities.

Reason (R) : Agile projects break work into short iterations and use velocity-based estimation for future planning.

Which of the following option is correct?

- (1) (A) is true but (R) is false
- (2) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (3) (A) is false but (R) is true
- (4) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (5) Question not attempted

53. Which planning approach is most effective for large safety-critical systems?

- (1) Fully agile planning
- (2) Dynamic iterative planning
- (3) Plan-driven approach
- (4) Planning poker
- (5) Question not attempted

54. Given the following data for several projects of an organization. What is the overall productivity in terms of SLOC per work-month for the organization?

Project	SLOC	Work month
a	6050	16.7
b	8363	22.6
c	13334	32.2
d	5942	3.9
e	3315	17.3
f	38988	67.7
g	38614	10.1
h	12762	19.3
i	26500	59.5

- (1) 617.20 SLOC/Work-month
 (2) 550.10 SLOC/Work-month
 (3) 472.50 SLOC/Work-month
 (4) 635.40 SLOC/Work-month
 (5) Question not attempted
55. 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 for project event is -
- (1) 27
 (2) 81
 (3) 9
 (4) 3
 (5) Question not attempted
56. Which of the following is NOT a common project scheduling technique?
- (1) Critical Path Method (CPM)
 (2) Waterfall Model
 (3) Gantt Chart
 (4) PERT
 (5) Question not attempted

57. Consider the following statements (A) and (B) -

Statement (A) : Risk planning provides approach in terms of effective steps in dealing with risk in terms of strategies and execution.

Statement (B) : Risk mitigation helps to meet the challenges of risk occurrence in effective implementation of specific plan of risk management.

Which of these statement/s is/are true?

- (1) Neither (A) nor (B)
 - (2) Both (A) and (B)
 - (3) Only (A)
 - (4) Only (B)
 - (5) Question not attempted
58. Which one of the following is a quantitative technique for monitoring project progress?
- (1) Earned Value Analysis
 - (2) Monte Carlo Simulation
 - (3) Configuration Audit
 - (4) Software Reviews
 - (5) Question not attempted
59. Why is decomposition an important step in software project planning?
- (1) To divide the project into manageable components for accurate cost and effort estimation.
 - (2) To simplify the design of the user interface.
 - (3) To assign tasks randomly.
 - (4) To estimate the project's size in terms of hardware requirements.
 - (5) Question not attempted
60. Chidamber and Kemerer's Suite of Metrics is widely used in which area of software engineering?
- (1) Object-oriented software metrics
 - (2) Functional testing
 - (3) Hardware performance metrics
 - (4) Traditional procedural programming metrics
 - (5) Question not attempted
61. What is the primary objective of the People Capability Maturity Model (PCMM)?
- (1) To minimize overall project expenditure.
 - (2) To strengthen and develop the capabilities of an organization's workforce.
 - (3) To enhance software development methodologies.
 - (4) To implement automation in software system development.
 - (5) Question not attempted

62. What is the primary purpose of software measurement in software engineering?
- (1) To eliminate the need of documentation.
 - (2) To quantify an attribute of a software product for assessing the quality of software.
 - (3) To replace the review entirely.
 - (4) To perform manual testing of software components.
 - (5) Question not attempted
63. Which of the following does NOT fall under top five business risks in software engineering?
- (1) Strategic risk
 - (2) Market risk
 - (3) Technical risk
 - (4) Sales risk
 - (5) Question not attempted
64. Which of the following is NOT a question in Boehm's W⁵HH principle?
- (1) How many people are on the team?
 - (2) How will the job be done technically and managerially?
 - (3) Why is system being developed?
 - (4) How much of each resource is needed?
 - (5) Question not attempted
65. A software development team uses historical project data to estimate the complexity of new software projects. To find the most suitable past project that is the similar one for analogy based estimation, the team uses Euclidean distance between the feature pairs. A new project is expected to have 6 inputs and 12 outputs. Three historical projects are described as below -
- Project X: 5 inputs, 10 outputs
 - Project Y: 7 inputs, 14 outputs
 - Project Z: 4 inputs, 9 outputs
- Using Euclidean distance to measure similarity, which is most accurate?
- (1) Project X is a closer match than project Y
 - (2) Project X and Y are equally similar to the new project
 - (3) Project Y is the farthest from the new project
 - (4) Project Z is the closest match to new project
 - (5) Question not attempted

66. Which of the following is NOT considered a valid step in the risk projection process during software project management?
- (1) Delineate the potential consequences of each risk.
 - (2) Estimating the potential impact of each risk on the project and product.
 - (3) Eliminating all identified risks prior to the start of project execution.
 - (4) Establishing a scale to reflect the perceived likelihood of each identified risk.
 - (5) Question not attempted
67. What can be considered as a practical way to meet self-realization needs in developers?
- (1) Give time to meet their co-workers.
 - (2) Offerings larger salaries.
 - (3) Public recognitions of achievements.
 - (4) Assigning demanding tasks and providing training opportunities.
 - (5) Question not attempted
68. The database used in the system cannot process as many transactions per second as expected. This is an example of which type of risk?
- (1) Estimation
 - (2) People
 - (3) Technology
 - (4) Organizational
 - (5) Question not attempted
69. Which of the following best defines the concept of a software configuration version?
- (1) A selected set of software modules from various versions.
 - (2) A selected set of backup strategies for run-time failure.
 - (3) A snapshot of all user requirements at the end of the development process.
 - (4) A documented and approved set of Software Configuration Item (SCI) versions at a specific time during development or maintenance.
 - (5) Question not attempted

70. What is the primary purpose of using a Pareto Chart in Statistical Software Quality Assurance (SQA)?
- (1) To analyze the variability of measurements.
 - (2) To show the relationship between some effect and all possible causes.
 - (3) To visualize long-term performance trends.
 - (4) To show fault sources identified in a software product during test.
 - (5) Question not attempted
71. Which of the following best defines the Function Point Metric in software engineering?
- (1) A metric that determines the hardware requirements for a software system.
 - (2) A metric that quantifies the functionality delivered by the software to the user.
 - (3) A metric used to measure the physical size of the software.
 - (4) A metric for evaluating the time complexity of a software program.
 - (5) Question not attempted
72. Which of the following is NOT one of the seven project factors listed by Mantel that influence Software Engineering Team structure?
- (1) Team salary levels
 - (2) Quality and reliability required
 - (3) Degree of sociability required
 - (4) Rigidity of delivery date
 - (5) Question not attempted
73. **Assertion (A) :** In software project scheduling, estimated effort and duration is always same for each task.
- Reason (R) :** A task with 10 person-days of effort will always take 10 calendar days.
- Which amongst the following option is correct?
- (1) (A) is false, (R) is false
 - (2) (A) is true, (R) is false
 - (3) (A) is false, (R) is true
 - (4) (A) is true, (R) is true and (R) is the correct explanation of (A)
 - (5) Question not attempted
74. In the context of project scheduling, what does the critical path represent?
- (1) The path with the lowest cost.
 - (2) The list of tasks that can be skipped without affecting the project.
 - (3) The path consisting of tasks with no dependencies.
 - (4) The chain of activities that determines the duration of the project.
 - (5) Question not attempted

75. What is one of the primary problems that can occur if a company does not develop effective configuration management policies?
- (1) Reduced need for testing
 - (2) Difficulty in tracking modifications made in each system version
 - (3) Increased code reuse
 - (4) Faster development process
 - (5) Question not attempted
76. A change request is submitted for a project component and the change management tool logs the following :
- Change ID : 1024
- Date Submitted : 15 Jan, 2024
- Change description : "Update login security protocols"
- If the team resolves this change and finally approves it on March 10, 2024, then how long did the change process take, assuming period is inclusive of date of submission?
- (1) 56
 - (2) 59
 - (3) 55
 - (4) 54
 - (5) Question not attempted
77. Which quality model is most associated with usability, reliability, efficiency, maintainability and portability?
- (1) SSM model
 - (2) Six sigma
 - (3) ISO 9126
 - (4) Boehm's model
 - (5) Question not attempted
78. Which of the following is NOT one of the approaches to the software sizing problem suggested by Putnam and Myers?
- (1) Standard component sizing
 - (2) Function point sizing
 - (3) Market based sizing
 - (4) Fuzzy logic sizing
 - (5) Question not attempted

79. Which of the following is NOT one of the four critical factors that influence the relationship between a manager and his/her team?
- (1) Inclusion
 - (2) Rigidity
 - (3) Consistency
 - (4) Honesty
 - (5) Question not attempted
80. Which of the following activity is NOT directly supported by the use of project metrics in software project management?
- (1) Adjusting workflow
 - (2) Reviewing the statement of project scope
 - (3) Tracking potential risks
 - (4) Identifying problem areas before they become critical
 - (5) Question not attempted
81. What does "Process maturity" in software engineering signify?
- (1) Use of modern programming languages
 - (2) Popularity of the software
 - (3) Number of bugs in the system
 - (4) Goal is to improve product quality and process predictability
 - (5) Question not attempted
82. Which of the following statement is NOT correct in relation to the SCM (Software Configuration Management) repository?
- (1) It is the set of mechanisms and data structures that allow a software team to manage change in an effective manner.
 - (2) It provides the obvious functions of a modern database management system by ensuring data integrity, sharing and integration.
 - (3) It is only used during the testing phase and has no role in earlier stages of software development.
 - (4) It provides a hub for the integration of software tools, is central to the flow of the software process and can enforce uniform structure and format for software engineering work products.
 - (5) Question not attempted
83. Which of the following is NOT considered a component in the calculation of Function Point Metric?
- (1) Number of External Inquiries
 - (2) Number of External Inputs
 - (3) Number of External Logics
 - (4) Number of External Interface Files
 - (5) Question not attempted

84. Which of the following is NOT an objective of Software Quality Assurance activities during software development?
- (1) Maximizing the number of features regardless of requirements
 - (2) Ensuring conformance to managerial scheduling and budgetary requirements
 - (3) Ensuring conformance to functional technical requirements
 - (4) Initiating activities for improvement and efficiency
 - (5) Question not attempted
85. Which of the following is NOT a fundamental principle that guides software project scheduling?
- (1) The project must be compartmentalized into a number of manageable activities and tasks.
 - (2) Every scheduled task may not be assigned a start date and a completion date.
 - (3) Every scheduled task should have a defined outcome.
 - (4) Every scheduled task should be assigned to a specific team member.
 - (5) Question not attempted
86. **Assertion (A) :** Descriptive statistics are sufficient for determining the significance of metric trends.
Reason (R) : Descriptive statistics include mean, mode and visual plots like histograms to illustrate the information to which they relate.
- Which of the following option is correct? 
- (1) (A) is true but (R) is false
 - (2) (A) is false but (R) is true
 - (3) Both (A) and (R) are true but (R) is not the correct explanation of (A)
 - (4) Both (A) and (R) are true and (R) is the correct explanation of (A)
 - (5) Question not attempted
87. Which of the following best describes Lines of Code (LOC) in the context of software estimation?
- (1) A measure of the number of errors in a program.
 - (2) A measure of the number of lines in software documentation.
 - (3) A measure of testing time for software modules.
 - (4) A measure of the size of software based on the number of lines in the source code.
 - (5) Question not attempted
88. Which of the following is an objective of risk management in software projects?
- (1) Ensure maximum reuse of legacy code to avoid risk
 - (2) Anticipating risks that might affect the project schedule and then taking action to avoid these risks
 - (3) Minimize the effort in software coding for risk management
 - (4) Ensure continuous integration and deployment of the codebase to avoid vulnerabilities to reduce further risk
 - (5) Question not attempted

89. Which of the following is NOT a key responsibility of Benefits Management?
- (1) Ensure benefits are realized
 - (2) Measure code efficiency
 - (3) Allocate responsibilities for successful delivery of benefits
 - (4) Define expected benefits
 - (5) Question not attempted
90. In PERT analysis, the following time estimates are provided for an activity : The optimistic time is 5 days, the most likely time is 8 days and the pessimistic time is 12 days. What is the Estimated Time (TE) for the activity?
- (1) 7.8 days
 - (2) 8.2 days
 - (3) 8.0 days
 - (4) 8.5 days
 - (5) Question not attempted
91. Which of the following will most likely be addressed by a reactive risk management strategy?
- (1) Deal with risks if they become actual problems
 - (2) Use of unproven CASE tools during design phase
 - (3) Staff turnover identified during feasibility study
 - (4) Architectural instability
 - (5) Question not attempted
92. Which of the following is the most widely recognized empirical model used for software cost estimation?
- (1) Spiral Model
 - (2) COCOMO Model
 - (3) Waterfall Model
 - (4) V-Model
 - (5) Question not attempted
93. In the basic COCOMO (Constructive Cost Model) for software estimation, which of the following formula is used to calculate the Development Time (DT) in the embedded mode when estimated Labour Months (LM) is given?
- (1) $DT = 2.5 \times (LM)^{0.80}$
 - (2) $DT = 2.5 \times (LM)^{0.55}$
 - (3) $DT = 2.5 \times (LM)^{0.32}$
 - (4) $DT = 2.5 \times (LM)^{0.72}$
 - (5) Question not attempted

94. **Assertion (A) :** Software products require a unique software quality assurance methodology.
Reason (R) : Software products have higher product complexity and are invisible, in comparison to other products.
- Which of the following is true?
- (1) (A) is false but (R) is true
 - (2) Both (A) and (R) are true but (R) is not the correct explanation of (A)
 - (3) Both (A) and (R) are true and (R) is the correct explanation of (A)
 - (4) (A) is true but (R) is false
 - (5) Question not attempted
95. Which of the following set of factors is considered as the key component of effective software project management?
- (1) People, Product, Performance, Process
 - (2) People, Process, Payoff, Product
 - (3) People, Product, Process, Project
 - (4) People, Performance, Payoff, Product
 - (5) Question not attempted
96. Why is measurement ambiguity a concern in software metrics?
- (1) Because ambiguity is irrelevant in software measurement.
 - (2) Because all metrics are straightforward and unambiguous.
 - (3) Because data collected can be misinterpreted without context.
 - (4) Because measurement tools are perfect and always provide clear insights.
 - (5) Question not attempted
97. In the context of the organic mode of software development in basic COCOMO (Constructive Cost Model), which of the following best describes the composition of the development team?
- (1) A small, cohesive team of experienced developers who are well-versed in both application area and the development environment.
 - (2) Developers with limited experience and no domain knowledge.
 - (3) Developers with extensive experience but limited familiarity with the specific application technology.
 - (4) A distributed team of developers working remotely on different project domains.
 - (5) Question not attempted

98. Which of the following is NOT considered a core aspect of a proper Software Quality Assurance (SQA) process?
- (1) Team commitment
 - (2) Completeness
 - (3) Cost analysis
 - (4) Applicability
 - (5) Question not attempted
99. What is primary goal of configuration management?
- (1) Reduce coding effort
 - (2) Automate test cases
 - (3) Maintain control over software changes
 - (4) Manage project deadlines
 - (5) Question not attempted
100. Which of the following factor does NOT impact the reliability of estimates during the software project planning phase?
- (1) Team size
 - (2) Degree of structural uncertainty
 - (3) Project size
 - (4) Project complexity
 - (5) Question not attempted
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Space for Rough Work

