RPSC Paper 2

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100 RPSC_March-2016_Paper 2

The correct order of steps for a system development life cycle is

- Analysis, Planning, design, test, document, implement, evaluate.
- Planning, Analysis, implement, design, document, test, evaluate.
- Planning, Analysis, design, document, implement, test, evaluate.
- Analysis, Planning, design, implement, evaluate, test, document.

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101 RPSC_March-2016_Paper 2

Translating a required task for system development into a series of commands that a computer will be able to understand is

- Project design
- Installation
- Programming
- Systems analysis

3 of 100

102 RPSC_March-2016_Paper 2

Designers create system prototypes to

- make the programmers understand how the system will function.
- make the user visualize how the system will look like when it is developed and receive feedback

- give a demo of the system to his administrating system manager to show as report
- make both programmers and user understands how the system will look and function

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103 RPSC_March-2016_Paper 2

Dotted arrows in a DFD are used to represent

- Data flow
- Control flow
- Result
- Simple connector

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104 RPSC_March-2016_Paper 2

A data dictionary has consolidated list of data required for
i. Documenting
ii. Input form designing
iii. Temporarily stored items

- (i) and (ii)
- (i),(ii) and (iii)
- (i) and (iii)
- None of the these

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105 RPSC_March-2016_Paper 2

Hierarchy of maintenance requests is in order
i. maintenance controller

ii. system supervisor
iii. change control authority

- ii to i to iii
- i to ii to iii
- iii to i to ii
- maintenance is not possible in this way

7 of 100

106 RPSC_March-2016_Paper 2

The data which is eligible for record keeping during maintenance

- source statements added by the program change
- number of machine code instructions
- number of processing failures associated with the runs
- All of these

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107 RPSC_March-2016_Paper 2

In the model of total effort expended in maintenance $M = a + K(b-c)$, a represents

- an empirical constant
- productive effort
- complexity attributed to the lack of good design and documentation
- measure of the familiarity with the software

9 of 100

108 RPSC_March-2016_Paper 2

Debugging is

- creating program code.
- creating the bugs in the program for testing
- finding and correcting errors in the program code.
- creating the algorithm.

10 of 100

109 RPSC_March-2016_Paper 2

Match the following

1. Verification	K. checking whether the software meets the decided specification
2. Validation	L. converting logics into computer program
3. Testing	M. checking whether the software meets customer requirements
4. Coding	N. to check is the software is giving desired output for all inputs

- 1-N, 2-L, 3-M, 4-N
- 1-M, 2-K, 3-N, 4-L
- 1-K, 2-N, 3-M, 4-L
- 1-K, 2-M, 3-N, 4-L

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110 RPSC_March-2016_Paper 2

Which is not valid difference between verification and validation

Verification	Validation
Verification is carried out before the Validation.	Validation activity is carried out just after the Verification.

Verification	Validation
Testing like black box testing, white box testing and gray box testing are done under this.	Reviews, Meetings and Inspections are done under this.

Verification	Validation
Cost of errors caught in Verification is less than errors found in Validation.	Cost of errors caught in Validation is more than errors found in Verification

Verification	Validation
Execution of code is not comes under Verification.	Execution of code is comes under Validation.

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111 RPSC_March-2016_Paper 2

Which statement is correct about of testing

- It is done only for customer satisfaction that the product is working properly and is optional step.
- It is a problem statement which lists specific inputs that are typically expected to be entered by the user and precise output values that a perfect program would return for those input values
- It is finalized when the coding is completed
- All of these

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112 RPSC_March-2016_Paper 2

The primary objective of system implementation is
i. to build a system prototype

ii. to train users to operate the system
iii. to implement designed system using computers
iv. write programs, create databases and test with live data

- i, iii
- i, ii, iii
- ii ,iii
- iii, iv

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113 RPSC_March-2016_Paper 2

Which design is perfect for long use, maintainability and up-gradation

- use good software tools
- use the best hardware available
- design the system in independent modules
- Create versions of the program frequently

15 of 100

114 RPSC_March-2016_Paper 2

The system analyst is required to perform the task(s) include
i. defining and prioritizing information requirement of an organization
ii. gathering data, facts and opinions of users in an organization
iii. drawing up specifications of the system for an organization
iv. designing, coding and evaluating the system

- i and ii
- i, ii and iv
- i, ii and iii

i, ii, iii and iv

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115 RPSC_March-2016_Paper 2

Which of the following is not the primary design objective

Cost

Reusability

Understandable code for user

Security

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116 RPSC_March-2016_Paper 2

A system when made of several discrete components is called

Top-down

Bottom up

Modular

Linear

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117 RPSC_March-2016_Paper 2

Which of the following is true for cohesion and coupling

Coupling taken place between multiple modules whereas cohesion is the strength of various elements inside a module

A good design must have very high cohesion

- A good design must have very low coupling
- All of these

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118 RPSC_March-2016_Paper 2

Which of the following is not advantage of structured design

- Critical interfaces are designed first
- Controls for upgrades are very easy and low cost
- Early versions of design can give pre-review of system
- Real life systems can be easily modeled

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119 RPSC_March-2016_Paper 2

In IPO charts P stands for

- Program
- Process
- Publish
- Presumption

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120 RPSC_March-2016_Paper 2

Which is not a reason to consult user while designing of structured walk

- Probability of success improves with involvement of user

- Feedback is received which is very important
- User and programmer can communicate to decide the price of the software
- User can be trained and made understood about system

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121 RPSC_March-2016_Paper 2

The correct order of input form design stages is
i. Determining the contents of the input
ii. Choosing appropriate input device
iii. Identify the inputs required by the system
iv. Designing forms for input

- iii-i-ii-iv
- i-iii-ii-iv
- i-iii-iv-ii
- iii-i-iv-ii

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122 RPSC_March-2016_Paper 2

From the following which is not the activity of software maintenance

- corrective maintenance
- adaptive maintenance: modifies software to properly interface with a changing environment
- preventive maintenance
- reverse engineering

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123 RPSC_March-2016_Paper 2

Correct order of stages of testing

- Unit, integration, system, regression, acceptance
- System, regression, unit, integration, acceptance
- Unit, system, regression, integration, acceptance
- System, integration, unit, acceptance, regression

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124 RPSC_March-2016_Paper 2

Organizational chart is an example of

- IPO
- HIPO
- Step chart
- Process chart

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125 RPSC_March-2016_Paper 2

Structured charts are developed after

- Designing
- Coding
- Requirement gathering
- Requirement analysis

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126 RPSC_March-2016_Paper 2

Out of following which comes under requirement specification

- Functional implementation
- Temporary Data collection
- User feedback about project
- Data flow models

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127 RPSC_March-2016_Paper 2

The model in which system development is broken down into a number of sequential sections or stages represented by boxes, with each stage being completed before work starts on the following one. The outputs from one stage are used as inputs to the next.

- Spiral model
- Waterfall model
- Structured model
- None of these

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128 RPSC_March-2016_Paper 2

The spiral model is advantageous than waterfall model

- When the requirements of the system are well understood by the users
- When the requirements are not well formed or understood by the users
- When the product comes after one stage easily

When all the functional requirements are available after requirement analysis

30 of 100

129 RPSC_March-2016_Paper 2

Match the following

1. Backtracking Approach	a) Black box testing technique
2. Software Maturity index	b) White box testing technique
3. Equivalence Partitioning Testing	c) Debugging Technique
4. Control Structure Testing	d) Maintenance Metric

1-c, 2-d, 3-a,4-b

1-d, 2-c, 3-b,4-a

1-b, 2-a, 3-c,4-d

1-a, 2-b, 3-d,4-c

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130 RPSC_March-2016_Paper 2

Cost-Benefit Analysis is performed during

Analysis phase

Design phase

Feasibility study phase

Implementation phase

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131 RPSC_March-2016_Paper 2

Project risk factor is considered in

- Spiral model
- Waterfall model
- Prototyping model
- Iterative enhancement model

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132 RPSC_March-2016_Paper 2

A software project classifies system entities, their activities and relationships. The classification and abstraction of system entities is important. .....methodology most clearly shows the classification and abstraction of entities in the system

- Prototyping Model
- Data Flow Model
- RAD model
- None of these

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133 RPSC_March-2016_Paper 2

In unit testing, interface testing is performed to assess

- Efficiency
- Behavior
- Functional Independence
- Internal logic of code

35 of 100

134 RPSC_March-2016_Paper 2

Which of following is NOT defined in a good software requirement specification (SRS) document

- Functional requirement
- Non Functional requirement
- Goals of Implementation
- Algorithms for software Implementation

36 of 100

135 RPSC_March-2016_Paper 2

Match the following based on Design

i. Import Coupling	a. Nominal communication between modules
ii. Procedural call Coupling	b. Minimum communication between modules
iii. External Coupling	c. Declaration of a module in another module
iv. Low Coupling	d. Communication between internal modules & Collaborators

- i-c, ii-d, iii-a, iv-b
- i-d, ii-c, iii-b, iv-a
- i-a, ii-c, iii-d, iv-b
- i-c, ii-a, iii-d, iv-b

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136 RPSC_March-2016_Paper 2

Which of the following is not regression test case?

- A representative sample of tests that will exercise all software functions
- Additional tests that focus on software functions that are likely to be affected by the change
- Tests that focus on the software components that have been changed
- Low-level components are combined into clusters that perform a specific software sub-function

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137 RPSC_March-2016_Paper 2

After Development phase, a document is prepared

- Program specification
- System specification
- Design specification
- None of these

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138 RPSC_March-2016_Paper 2

A diagram that shows the major subsystems in an object-oriented system is called a

- System flowchart
- Design class diagram
- Class diagram
- Component diagrams

40 of 100

139 RPSC_March-2016_Paper 2

During the planning phase of the system development life cycle (SDLC), the ____ helps to define the scope of the problem.

- critical path method (CPM) chart
- project evaluation and review technique (PERT) chart
- proof of concept prototype
- context diagram

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140 RPSC_March-2016_Paper 2

Clients play what role in the development of a new system?

- Develop the project plan
- Define the business processes
- Fund the project
- Lead the project team

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141 RPSC_March-2016_Paper 2

Questionnaires can be useful in information gathering when users ____.

- are widely distributed geographically
- need prompting to respond to questions
- are not well-informed
- do not have time for interviews

43 of 100

142 RPSC_March-2016_Paper 2

____ requirements are based on the procedures and rules that the organization uses to run its business.

- Functional
- Logical
- Physical
- None of these

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143 RPSC_March-2016_Paper 2

The first item to be reviewed during a structured walkthrough is the documentation that was developed as part of the ____ phase of the systems development life cycle (SDLC).

- design
- analysis
- planning
- implementation

45 of 100

144 RPSC_March-2016_Paper 2

Error report is an example of

- Process
- Output process
- Input process
- None of these

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145 RPSC_March-2016_Paper 2

An external entity in the system is

- Unit outside the system and controllable by system analyst
- External unit which will be designed
- A unit which is not shown in DFD
- A unit outside the system and works completely independent manner

47 of 100

146 RPSC_March-2016_Paper 2

The controlling factor which does not governs the software maintainability

- use of standardized programming languages
- inefficient maintenance team taking much time
- standardized structure of the documentation
- availability of test cases

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147 RPSC_March-2016_Paper 2

The code used for the validation purpose is known

- Debugging code
- Self-checking code
- Sequence code
- Group classification code

49 of 100

148 RPSC_March-2016_Paper 2

Feasibility checking is the step performed

- Before requirements specifications are drawn up
- during the period when requirements specifications are drawn up
- After all requirements specifications are drawn up
- at any time

50 of 100

149 RPSC_March-2016_Paper 2

What is incorrect about DFDs

- process models have as many level 1 diagrams as there are processes on the level 0 diagram
- every process in the level 1 DFD would be decomposed into its own level 1 DFD
- The purpose of the level 0 DFD is to show all the major high-level processes of the system and how they are interrelated
- level 1 DFD shows how level 0 processes operates in greater detail

51 of 100

150 RPSC_March-2016_Paper 2

Effective software project management focuses on four P's which are

- people, performance, payoff, product
- people, product, performance, process
- people, product, process, project

- people, process, payoff, product

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151 RPSC_March-2016_Paper 2

The first step in project planning is to

- determine the budget
- select a team organizational model.
- determine the project constraints.
- establish the objectives and scope

53 of 100

152 RPSC_March-2016_Paper 2

The application of knowledge, skills, tools and techniques to project activities to meet the project requirements.

- Software quality control
- Software project management
- Software process management
- Software project planning

54 of 100

153 RPSC_March-2016_Paper 2

Which of the following is a tool of time management for software development

- Project network diagrams
- Gantt charts

- Critical-path analyses
- All of these

55 of 100

154 RPSC_March-2016_Paper 2

Match the project manager responsibilities with their tasks

Responsibilities	Tasks
i. interpersonal responsibilities	a. disseminating information about tasks to the project team
ii. informational responsibilities	b. allocating resources according to the project plan
iii. decisional responsibilities	c. leading the project team

- i-c, ii-a, iii-b
- i-a, ii-c, iii-b
- i-a, ii-b, iii-c
- i-c, ii-b, iii-a

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155 RPSC_March-2016_Paper 2

What information is not essentially required in a project progress report

- Reporting period to which it refers
- Days taken and cost to complete the report
- Authors of the report
- Date of submission

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156 RPSC_March-2016_Paper 2

Which of following is not the aim of project progress report

- Provide an overview of project's progress up to date
- To keep it as a document for customer satisfaction
- Ensure that the key stakeholders are regularly informed
- Inform the key stakeholders about issues that require immediate action or resolution

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157 RPSC_March-2016_Paper 2

Objectives of risk management do not include

- Minimize the effort in software coding
- Minimize adverse impacts to project scope, cost, and schedule
- Maximize opportunities to improve the project's objectives with lower cost, shorter schedules, enhanced scope and higher quality
- Minimize management by crisis

59 of 100

158 RPSC_March-2016_Paper 2

Match the processes with their deliverables

Processes	Deliverables
i. Risk management planning	a. Prioritized list of risks classified as high, moderate, or low
ii. Risk identification	b. RMP document
iii. Qualitative risk analysis	c. Risk register
iv. Quantitative risk analysis	d. Numerical analysis of the project'slikelihood of achieving its overallobjectives

- i-b, ii-c, iii-a, iv-d
- i-c, ii-a, iii-d, iv-b
- i-b, ii-c, iii-d, iv-a
- i-c, ii-d, iii-a, iv-b

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159 RPSC_March-2016_Paper 2

Which of the following is not an information gathering technique for risk identification?

- Brain Storming
- Risk Calculator
- Interviewing
- SWOT Analysis

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160 RPSC_March-2016_Paper 2

Which is not a suitable difference in qualitative and quantitative risk analysis?

- Qualitative analysis assesses the likelihood and impact of identified risks to determine whereas quantitative analysis is a way of numerically estimating the probability that a project will meet its cost and time objectives.

Quantitative risk analysis involves statistical techniques whereas qualitative analysis is found using impact matrix.

Qualitative risk analysis generally follows qualitative analysis.

None of these

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161 RPSC_March-2016_Paper 2

Which statement is false?

Organizations that achieve high levels of maturity in the people management area have a higher likelihood of implementing effective software engineering practices.

The software developer and analyst must meet to define product objectives and scope alone.

Without information of technical and management constraints, it is impossible to define accurate estimates of the cost and risk.

Umbrella activities are independent of any one framework activity and occur throughout the process

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162 RPSC_March-2016_Paper 2

Which is not the meaning of W's W^5HH

Why is the system being developed?

Who is responsible for a function?

What will be done, by when?

Where the organizational hierarchy plays its role?

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163 RPSC_March-2016_Paper 2

Defect removal efficiency (DRE) can be computed as (where E represent effort and D represent defects)

- $DRE = Echange / (Echange + Dchange$
- $DRE = Dchange / (Echange - Dchange)$
- $DRE = Echange / (Echange - Dchange)$
- $DRE = Dchange / (Echange + Dchange)$

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164 RPSC_March-2016_Paper 2

Which is not a quality metric?

- Maintainability
- Integrity
- Usability
- Controllability

66 of 100

165 RPSC_March-2016_Paper 2

Which of the following condition if hold true suggests that process is out of control?

- A single metrics value lies outside the upper natural process limit (UNPL)
- Two out of three successive metrics values lie more than two standard deviations away from average metric value A_m
- All the metrics cannot be calculated together
- Eight consecutive metrics values lie on one side of A_m

67 of 100

166 RPSC_March-2016_Paper 2

Which is not a reusable software resource from the following

- Off-the-shelf components
- Full-experience components
- Environmental components
- Partial-experience components

68 of 100

167 RPSC_March-2016_Paper 2

Which of the following is not a good and reliable cost and effort estimate

- Delay estimation until late in the project
- Ask from customer about his budget
- Base estimates on similar projects that have already been completed
- Use relatively simple decomposition techniques to generate project cost and effort estimates

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168 RPSC_March-2016_Paper 2

In a sample of empirical estimation model M represents

$$E = A + B \times (M)^C$$

- Effort
- Estimation variable
- Empirical constant
- Time

70 of 100

169 RPSC_March-2016_Paper 2

COnstructive COst Model (COCOMO) model addresses

- Application composition model
- Early design stage model
- Maintenance model
- Post-architecture-stage model

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170 RPSC_March-2016_Paper 2

In the following effort estimation model, B represents

$$E = [LOC \times B^{0.333}/K]^3 \times (1/t^4)$$

- Effort
- Project duration
- Special skills factor
- Productivity parameter

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171 RPSC_March-2016_Paper 2

Not a basic function of automated estimation

- Selecting project activities
- Predicting software effort
- Predicting software cost

Maintenance plan creation

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172 RPSC_March-2016_Paper 2

Which of the following is not a general risk component

Performance risk

Cost risk

Support risk

Payment Risk

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173 RPSC_March-2016_Paper 2

Which of the following is not a common step to mitigate the risk

Train project teams so that they do not take risk

Meet with current staff to determine causes for turnover

Mitigate those causes that are under our control before the project starts

Once the project commences, assume turnover will occur and develop techniques to ensure continuity when people leave

75 of 100

174 RPSC_March-2016_Paper 2

Which of the following is not generally a reason for late project delivery

An unrealistic deadline established by someone outside the software development group and forced on managers and practitioner's within the group

- Changing customer requirements that are not reflected in schedule changes
- Customer not releasing payment
- An honest underestimate of the amount of effort and/or the number ofresources that will be required to do the job

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175 RPSC_March-2016_Paper 2

_____is an activity that distributes estimated effort across the planned project duration by allocating the effort to specific software engineering tasks

- Software project scheduling
- Software project management
- Software planning
- Software effort estimation

77 of 100

176 RPSC_March-2016_Paper 2

Issues guiding software project scheduling

- Interdependency
- Time allocation
- Both Interdependency & Time Allocation
- None of these

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177 RPSC_March-2016_Paper 2

Reliable decomposition technique under software project estimation is

- Process based estimation
- Software sizing
- Problem based estimation
- All of these

79 of 100

178 RPSC_March-2016_Paper 2

The correct order of earned value calculation steps is
i. Estimate effort for work planned
ii. budgeted cost of work scheduled
iii. Estimate budget for work performed

- i-ii-iii
- ii-i-iii
- iii-i-ii
- ii-iii-i

80 of 100

179 RPSC_March-2016_Paper 2

The auditing and reporting functions of management are part of

- Cost of quality
- Quality control
- Quality assurance
- Quality evaluation

81 of 100

180 RPSC_March-2016_Paper 2

Which of the following is not a fundamental source of change

- New business or market conditions dictate changes in product requirements
- New customer needs demand modification
- Problems in the organization
- Commitment to other customer

82 of 100

181 RPSC_March-2016_Paper 2

_____combines procedures and tools to manage different up-gradations of configuration objects that are created during the software process

- Maintenance schedule
- Version control
- Evolutionary design
- Data flow model

83 of 100

182 RPSC_March-2016_Paper 2

Which of the following risk is the failure of a purchased component to perform as expected?

- Product risk
- Project risk
- Business risk
- Programming risk

84 of 100

183 RPSC_March-2016_Paper 2

Software interoperability is:

- The ability of a software system to work on different hardware platforms
- The ability of a software system to work under different operating systems
- The ability of a software system to exchange information with other software systems and to use the exchanged information
- The ability to replace a software system with another software system that has similar functionality

85 of 100

184 RPSC_March-2016_Paper 2

Cyclomatic Complexity is :

- number of operands in program
- number of decision points +1
- number of operators in program
- None of these

86 of 100

185 RPSC_March-2016_Paper 2

Grade of a product

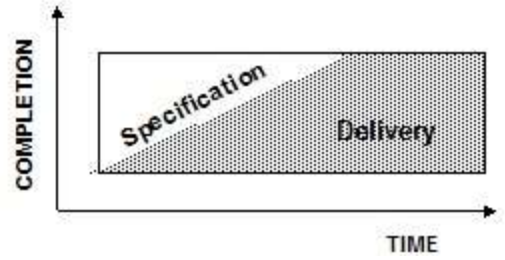
- Means the same thing as quality
- can be used interchangeably with quality
- Is the level of product or service

- None of these

87 of 100

186 RPSC_March-2016_Paper 2

The following diagram shows that:



- Specification is completed before delivery
- Specification is not completed until delivery
- Specification is part of delivery
- Specification is an ongoing activity

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187 RPSC_March-2016_Paper 2

The ..... allows determination of early start, early finish, late start and late finish

- Three point estimates
- Flow chart technique
- Precedence diagramming method
- Critical Path method

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188 RPSC_March-2016_Paper 2

_____is the degree to which the design specifications are followed during manufacturing

- Quality of development
- Quality of conformance
- Quality of design
- None of the these

90 of 100

189 RPSC_March-2016_Paper 2

Top-level problem solving and internal team coordination are managed by a team leader in which approach

- Controlled centralized
- Controlled decentralized
- Democratic decentralized
- Partial centralized

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190 RPSC_March-2016_Paper 2

Associate Potential Risk Conditions Associated With Each Knowledge Area

Knowledge Area	Risk Conditions
i. Integration	a. Poor resource allocation
ii. Scope	b. Poor definition of scope
iii. Time	c. Early release of competitive products
iv. Cost	d. Inadequate productivity

- i-a, ii-b, iii-c, iv-d

- i-b, ii-a, iii-d, iv-c
- i-d, ii-b, iii-a, iv-c
- i-b, ii-c, iii-a, iv-d

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191 RPSC_March-2016_Paper 2

Which of the following term is best defined by the statement: “The underlying technology on which the system is built is superseded by new technology.”?

- Product competition
- Technology change
- Requirements change
- None of the mentioned

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192 RPSC_March-2016_Paper 2

Which is a project attribute?

- Resources
- Efforts
- User feedback
- Hardware up-gradation

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193 RPSC_March-2016_Paper 2

Which is not an umbrella activity under software Engineering?

- Software quality assurance
- Software configuration management
- Document preparation and production
- Software Encryption

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194 RPSC_March-2016_Paper 2

Product quality is defined as:

- Delivering a product with correct requirements
- Delivering a product using correct development procedures
- Delivering a product which is developed iteratively
- Delivering a product using high quality procedures

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195 RPSC_March-2016_Paper 2

Which type of risk factor is most likely to cause problems for a software project which develops military software?

- Unused or unusable software
- Legal expenses
- Excessive paperwork
- High maintenance costs

97 of 100

196 RPSC_March-2016_Paper 2

_____is a technique used to show the effects of change of one or more variables on an outcome.

- Statistical Analysis
- Sensitivity Analysis
- Proportional Analysis
- Quantitative Analysis

98 of 100

197 RPSC_March-2016_Paper 2

A _____ is developed using historical cost information that relates some software metric to the project cost

- Algorithmic cost modeling
- Expert judgment
- Estimation by analogy
- Parkinson’s Law

99 of 100

198 RPSC_March-2016_Paper 2

Halstead's source code metrics are based on the number of

- modules in the program
- operands in the program
- operators in the program
- Both operator and operands in the program

199 RPSC_March-2016_Paper 2

Which of the following is not an approach to software cost estimation?

- Empirical
- Heuristic
- Analytical
- Critical