Multiple Choice Questions: Answer Key

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Name of the subject: Software Design and Modeling

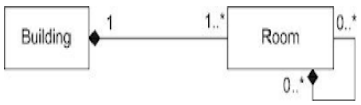
Year: BE

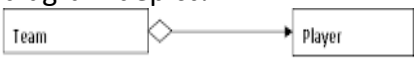
Branch: IT

Q. No	Description Question	Choice	Unit No.	Difficulty Level (Easy / Medium / Hard	Blooms Taxonomy Level
1	A _____ is a physical or replaceable part of a system that conforms to and provides the realization of set of interfaces.	a. node b. object **c. Component** d. interface	I	Medium	2
2	SDLC stands for	a. System Design life cycle **b.Software Development Life cycle** c. System Development Life cycle d. None of the mentioned	I	Easy	1
3	A _____ is a physical element that exists at run time and represents a computational	a.node b.class	I	Easy	1

	resource.	c**.package** d.component			
4	An association indicates the relationship between _____.	a. nodes **b.classes** c. interfaces d.objects	I	Medium	2
5	Which of these does not affect different types of software as a whole?	a. Heterogeneity **b. Flexibility** c. Business and social change d. Security	I	Easy	2
6	A relationship between classes and interfaces can be viewed as _____ relationship.	a.association b.generalization c.link **d.realization**	I	Medium	2
7	A _____ is a condition or situation during the life of an object during which it satisfies some condition, performs some activity, or waits for some events.	a.class **b.state** c. activity d. specification	I	Hard	2
8	A constraint is used to _____ rules of a UML building block.	a. add b. modify **c. both a and b** d.none	I	Hard	3
9	The architecture of a software-intensive system can be described by ____ views.	a. One b. Six c. Three **d. Five**	I	Hard	4
10	The _____ view addresses the performance, scalability and throughput of the system	a.use case **b. process** c. implementation d. design	I	Medium	2

11	The _____ view addresses the configuration management of the system's releases	a.use case b. process **c. implementation** d. design	I	Easy	2
12	Models help us to_____ a system as it is or the way it is wanted.	a. Analyze b. Design c**. Visualize** d. Measure	I	Medium	2
13	The explanatory parts of the UML model are known as _____	a. Behavioral things b. Grouping things c. Structural things **d. Annotational things**	I	Medium	2
14	RUP stands for_____ created by a division of _____	a. Rational Unified Program, IBM b. Rational Unified Process, Infosys c. Rational Unified Process, Microsoft **d. Rational Unified Process, IBM**	I	Easy	1
15	_____ are used to create new building blocks from existing blocks.	a. Tagged Values **b. Stereotypes** c. Constraints d. Diagrams	I	Medium	2
16	In which phase is the scope of the project defined?	**a. Inception** b. Elaboration c. Construction d. Transition	I	Easy	1
17	To hide the internal implementation of an object we use …	a) inheritance	I	Medium	2

		b) encapsulation c) polymorphism d) none of these			
18	A component diagram address the static _____ view of system.	a stuctural b. behavioral **c. implementation** d. none	I	Hard	3
19	If the objects focus on the problem domain, then we are concerned with _____.	**a. Object Oriented Analysis** **b.** Object Oriented Design **c.** Object Oriented Analysis and Design **d.** None of the above	I	Hard	3
20	Identify the following who presented the object modeling technique (OMT).	(a) Booch **(b) Jim Rumbaugh ET AL** (c) Jacobson ET AL (d) Both (a) and (b) above	I	Hard	2
21	Which of the following statements is **false** with respect to the diagram given below? 	(a) The building is composed of one or more rooms **(b) An aggregation relationship exists between the building and the room** (c) A room can have many rooms (d) There is a recursive composition in the above diagram	I	Hard	4

22	Which type of association does the following diagram depict? 	**(a) aggregation** (b) composition (c) specialization (d) generalization	I	Easy	1
23	Software is defined as ____ .	a. Instructions b. Data Structures c. Documents **d. All of the mentioned**	I	Easy	1
24	What are the signs that a software project is in trouble?	a. The product scope is poorly defined. b. Deadlines are unrealistic. c. Changes are managed poorly.	I	Hard	4
25	A class is divided into which of these compartments ?	a) Name Compartment b) Attribute Compartment c) Operation Compartment **d) All of the mentioned**	I	Easy	1
26	In Unified Modeling Language, diagrams which captures system static structure and provide foundation for other models is called	a) deployment diagrams **b) class diagrams** c) component diagrams d) object diagrams	I	Medium	2
27	Abstraction has _____ types.	a. 1 **b. 4**	I	Medium	2

		c. 2 d. 3			
28	What is a Software ?	a. Software is set of programs b. Software is documentation and configuration of data **c. Both a and b** d. None of the mentioned	I	Easy	2
29	CRC approach and noun phrase approach are used to identify …	**a) classes** b) colaborators c) use cases d) object	I	Medium	2
30	Arrange the following activities for making a software product using i. Design strategy ii. Transformation into product iii. Implementation iv. Requirement gathering	a. 1, 4, 3, 2 b. 4, 3, 1, 2 **c. 4, 1, 3, 2** d. 1, 3, 4, 2	I	Easy	2
31	Abstraction provide an operation named as …	a) encapsulation **b) call back** c) turndown d) inheritance	I	Easy	2

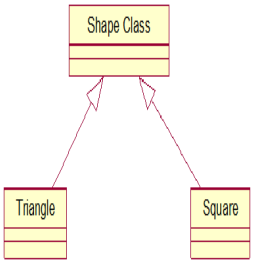
32	To distunguish between active and non-active object which property is applied?	a) abstraction b) polymophism **c) concurrency** d) aggregation	I	Easy	2
33	Aggregation is …	a) set of relationship **b) composed of relationship** c) part of relationship d) all of these	I	Hard	2
34	A model is a _____ of reality.	a. Complication **b. Simplification** c. Realization d. Generalization	I	Hard	4
35	In which principle, the models created explain the identification of a problem and	**a. The Choice of Model is Important** b. Levels of Precision May	I	Easy	1

	find its solution?	Differ c. The Best Models are connected to Reality d. No Single Model is Sufficient			
36	Algorithmic and object-oriented are the two common ways for modeling _____	a. Non-software Systems **b. Software Systems** c. Vocabulary of a System d. Client/Server System	I	Hard	3
37	_____ helps to communicate the overall system architecture unambiguously.	a. Flow charts **b. Designing** c. SRS d. Templates	I	Easy	2
38	_____ defines the system's actions and how different parts contribute to it.	**a. Behavior** b. Structure c. Model d. Use case	I	Hard	1
39	_____ can be done for both simple and complex systems.	**a. Generalization n** b. Specification cm, c. Modeling d. Collaboration	I	Medium	2

40	The best kind of models helps to choose _____	**a. Degree of detail** b. Design view c. Single model d. Choice of model	I	Hard	4
41	A set of _____ models are used to approach a complex system.	a. Dependent w" **b. Independent** c. Both dependent and independent d. Different	I	Medium	2
42	An Object-oriented program is structured as a community of interacting agents, called _____	a. True **b. False**	I	Medium	2
43	Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?	**a. Objects** b. Classes c. Functions d. Statements	I	Easy	2
44	UML is useful to _____ a system as it is or as we want it to be.	a. Visualize b. Specify c. Document **d. All of the above**	I	Hard	3

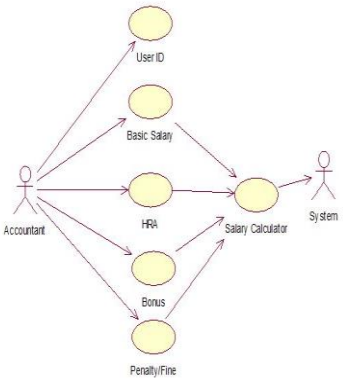
45	A collection of operations that specify the services rendered by a class or component known as_____	a. Class b. Interaction **c. Interface** d. Collaboration	I	Medium	2
46	_____ is an abstraction of a set of functions that the system performs.	a. Class b. Interaction **c. Use case** d. Collaboration	I	Medium	2
47	_____ is a physical element that exists at runtime and represents a computational resource.	**a. Node** b. Actor c. Name d. Object	I	Medium	2
48	If the software process were based on scientific and engineering concepts, it would be easier to re-create new software than to scale an existing one.	a. True **b. False**	I	Easy	1
49	Which one of the following is not a structural thing?	a. Class **b. Package** c. Use case d. Node	I	Hard	3
50	A link is an instance of _____	a. Generalization	I	Easy	2

		b. Association c. Dependency d. Realization			
51	Which of the following is used to create new building blocks from existing blocks	a. Tagged Values **b. Stereotypes** c. Constraints d. Diagrams	II	Medium	2
52	All public methods in business model objects are defined directly or indirectly because of a _____ requirement.	**a. Use case** b. Dependency c. Association d. Sequence	II	Medium	2
53	In class diagram, inside each class what is to be printed?	a. Its name, attributes, operations and derived class **b. Its name, attributes and operations** c. Its name and attributes d. Its name and operations	II	Easy	1
54	Key elements of use-case diagrams are	a. People, computer **b. Actors, use cases** c. People, classes and objects d. Uses, cases	II	Hard	3

55	Aggregation relationship is represented in UML notation by	a.Line with solid diamond at one end **b.Line with hollow diamond at one end** c.Line with an arrow at one end d. Line without an arrow	II	Hard	2
56	Modality is the term used to indicate whether or not a particular data object must participate in a relationship.	**a. Yes** b. No	II	Hard	3
57	The maximum number of objects that can participate in a relationship is called_____ .	**a. Cardinality** b. Attributes c. Operations d. Transformers	II	Easy	1
58	Software Requirement Specification should come up with following features: 1) User Requirements are expressed in natural language. 2) Technical requirements are expressed in structured language, which is used inside the organization. 3) Design description should be written in Pseudo code.	**a. True** b. False	II	Easy	1
59	What type of relationship is represented by Shape class and Square ?  	**a.** Realization b. Generalizatio n **c.** Aggregation **d.** Dependency	II	Medium	2
60	UML interfaces are used to _____	a. Define an API for all classes b. Program in Java, but	II	Easy	2

		not in C++ or Smalltalk c. Define executable logic to reuse across classes **d. Specify required services for types of objects**			
61	An actor is _____	a. A person b. A job title **c. A role** d. A system	II	Hard	4
62	_____ allows us to infer that different members of classes have some common characteristics.	a. Realization b. Aggregation **c. Generalizatio n** d. dependency	II	Easy	1
63	Which model in system modelling depicts the static nature of the system ?	a. Behavioral Model b. Context Model c. Data Model **d. Structural Model**	II	Medium	2
64	Which of these software characteristics are used to determine the scope of a software project?	a. Only performance. b. Only context. **c. Information objectives, function, performance** d. None of the above.	II	Medium	2
65	The system icon identifies _____	a. The boundaries of the system b. The scope of the project so **c. The context of the**	II	Easy	1

		system d. Another system in the role of an actor			
66	The software scope identifies what the product will do and what it will not do, what the end product will contain and what it will not contain.	**a. True** b. False	II	Easy	1
67	Devices and other systems _____	**a. May be actors** b. May only receive output from a use case c. May only provide input to a use case d. Are out of scope because we are describing only one system at	II	Medium	1
68	Associations _____	a. May exist only between actors and use cases b. Identify the flow of data between actors and use cases **c. Identify interactions between actors and use cases** d. Identify dependencies between actors and use cases	II	Hard	3
69	Which UML diagram is shown	**a. Use Case**	II	Medium	2

	below?  	b. Collaboration Diagram c. Class Diagram d. Object Diagram			
70	Which things are dynamic parts of UML models	a. Structural things **b. Behavioral things** c. Grouping things d. Annotational things	II	Easy	1
71	Use cases _____	a. Identify business processes **b. Identify system goals** c. Describe workflow d. Prioritize system procedures	II	Easy	2
72	Which of the following term is best defined by the statement:"a structural relationship that specifies that objects of one thing are connected to objects of another"?	**a. Association** b. Aggregation c. Realization d. Generalization	II	Easy	2
73	Which document is created by system analyst after the requirements are collected from Various stakeholders?	**a. Software requirement specification** b. Software requirement validation	II	Medium	2

		c. Feasibility study d. Requirement Gathering			
74	What refers to the value associated with a specific attribute of an object and to any actions or side?	a. Object **b. State** c. Interface d. None of the mentioned	II	Easy	1
75	In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____ .	a. Classes b. Objects **c. Encapsulation** d. Inheritance	II	Medium	1
76	Which of the following are the valid relationships in Use Case Diagrams	a. Generalization b. Include c. Extend **d. All of the mentioned**	II	Medium	2
77	Which of the following is a building block of UML	a. Things b. Relationships c. Diagrams **d. All of the mentioned**	II	Medium	3
78	Classes and interfaces are a part of	**a. Structural things** b. Behavioral things c. Grouping things d. Annotational things	II	Hard	4
79	What can be requested from any object of the class to affect behavior?	a. object b. attribute **c. operation** d. instance	II	Medium	2
80	The UML was designed for describing _____	a. object-oriented systems b. architectural design c. SRS **d. Both object-oriented systems and Architectural design**	II	Hard	2

81	Class responsibilities are defined by	a. its attributes only b. its collaborators c. its operations only **d. both its attributes and operations**	II	Hard	2
82	Events occur whenever an	**a. actor and the OO system exchange information** b. class operation is invoked c. messages are passed between objects d. all of the above	II	Hard	2
83	The association stereotype «Extends» indicates _____	a. Delegation of part of a task to another use case b. The target use case is a subprocess of the source use cases **c. A specialized form of a use case** d. A deviation from the UML standard	II	Medium	2
84	For purposes of behavior modeling a state is any	a. consumer or producer of data. b. data object hierarchy. **c. observable mode of behavior.** d. well defined process.	II	Hard	4
85	Which of following is not a UML diagram used creating a system analysis model?	a. activity diagram b. class diagram **c. dataflow diagram** d. state diagram	II	Medium	2
86	Forward engineering and reverse engineering can be	**a. class diagram** b. stereotypes	II	Easy	1

	applicable to _____	c. tagged values d. adornments			
87	A generalized description of a collection of similar objects is a	**a. class** b. instance c. subclass d. super class	II	Hard	3
88	Which of the following diagram is used to model the vocabulary of a system?	a. Object Diagram b. Activity Diagram **c. Class diagram** d. Interaction Diagram	II	Medium	2
89	What does a simple name in UML Class and objects consists of ?	a) Letters b) Digits c) Punctuation Characters **d) All of the mentioned**	II	Medium	2
90	Which of the following is false?	a) A note is a dog-eared box connected to any model element by a dashed line b) The main way to extend UML is by constraints, properties, etc **c) A dependency relation holds between two entities D and I where change in I does not affect D** d) All of the mentioned	II	Medium	2
91	Requirements should specify 'what' but not 'how'.	**a. True** b. False	II	Medium	2

92	Which of the following in incorrect in reference to dependency?	a) Module D uses module I when a correct version of I must be present for D to work correctly b) Module D depends for compilation on module I **c) Class I imports elements from package D** d) None of the mentioned	II	Easy	1
93	Modelling is a representation of the object-oriented classes and the resultant collaborations will allow a system to function.	**a. True** b. False	II	Easy	1
94	_____ model static data structures.	a. Object Diagram b. Activity Diagram **c. Class diagram** d. Interaction Diagram	II	Easy	1
95	Requirements can be gathered from users via interviews, surveys, task analysis,brainstorming, domain analysis, prototyping, studying existing usable version of software, and by observation.	**a. True** b. False	II	Easy	1
96	In the requirement analysis which model depicts how the software behaves as a consequence of external events?	a. Class-Oriented models b. Scenario-based models c. Flow-oriented models **d. Behavioural models**	II	Easy	1
97	Which of the following describes"Is-a-Relationship" ?	a. Aggregation **b. Inheritance** c. Dependency d. None of the above	II	Hard	4
98	_____ model static data structures.	a. Object diagrams b. Activity diagrams **c. Class diagrams**	II	Easy	1

		d. Interaction diagrams			
99	Abstract class doen not have its direct instance.True or False	**a.True** b.False	II	Easy	1
100	Forward engineering in UML is the process of transforming _____	a. a code into a model b. a code into design n **c. a model into a code** d. a model into test	II	Hard	4
101	UML activity diagrams are useful in representing which analysis model elements?	a. Behavioral elements b. Class-based elements c. Flow-based elements **d. Scenario-based elements**	III	Medium	2
102	In an Activity Diagram, organizing the activities into groups is called _____ a. forking	a.forking b.joining **c.swimlane** d. synchronization	III	Medium	2
103	_____ is used to represent concurrent flows in an Activity Diagram.	a. Slide bar **b. Synchronization bar** c. Swim lane d. Branch	III	Medium	3
104	Objects placed in an Activity Diagram are connected to the activity or transition using _____ relationship.	**a. association** b. generalization c. dependency d. realization	III	Hard	2
105	_____ is a path from one activity state to the next activity state.	a. Action state b. Activity state **c. Transition** d. Fork	III	Easy	1

106	Executable atomic computations are called as _____	**a. action states** b. activity states c. composite states d. concurrent states	III	Medium	4
107	Activity diagram is a special kind of _____	a. use case diagram **b. state chart diagram** c. interaction diagram d. component diagram	III	Medium	4
108	Executable non atomic computations are called as _____	a. action states **b. activity states** c. transitions d. simple states	III	Medium	3
109	which of the following is NOT present in an Activity Diagram?	a. Action States b. Objects **c. Events** d. Notes	III	Medium	2
110	In an Activity Diagram, transitions belongs to _____	a. trigger oriented transitions b. self transitions c. internal transitions **d. completion transitions**	III	Easy	1
111	_____ uses the services of the system under design to fulfill the goals.	**a. Primary actor** b. Supporting actor c. Offstage actor d. Secondary actor	III	Easy	2
112	Which of the following diagrams is used to model business workflows?	a. Deployment diagram **b. Activity diagram** c. Use Case diagram	III	Easy	1

		d. Interaction diagram			
113	The scenario of a use case is graphically represented using _____	a. deployment diagram **b. sequence diagram** c. use case diagram d. interaction diagram	III	Easy	1
114	A _____ is a stream of messages exchanged between objects.	**a. sequence** b. modeling c. transition d. objects	III	Easy	1
115	An _____ shows an interaction consisting of a set of objects and their relationships, including the messages.	**a. interaction diagram** b. class diagram c. use case diagram d. activity diagram	III	Easy	1
116	_____ diagram illustrates use case realizations.	**a. Sequence** b. Class c. use case d. Activity	III	Medium	2
117	Which of the following doesn't include in message types?	a. Call b. Return c. Send **d. Delete**	III	Hard	3
118	Interaction diagrams are of _____ types.	a. 1 **b. 2** c. 3 d. 4	III	Easy	2
119	_____ are used to model the dynamic aspects of collaborations.	a. Sequence Diagrams b. Structural **c. Interactions**	III	Easy	1

		d. Messages			
120	A set of messages exchanged among a set of objects is called as _____	a. use case b. activity **c. interaction** d. deployment	III	Easy	1
121	Sequence of messages is emphasized by _____ diagram.	a. state chart **b. sequence** c. activity d. collaboration	III	Easy	1
122	_____ specifies a path to send and receive messages between two objects.	**a. Link** b. Sequencing c. Object d. Role	III	Easy	1
123	which diagram is used to show interactions between messages are classified as?	A) activity B) state chart **C) collaboration** D) object lifeline	III	Medium	3
124	_____diagram is time-oriented?	A) Collaboration **B) Sequence** C) Activity D) None of the mentioned	III	Easy	1
125	which term are combined Interaction Diagram?	**A) Sequence Diagram + Collaboration Diagram** B) Activity Diagram + State Chart Diagram C) Deployment Diagram + Collaboration Diagram D) None of the mentioned	III	Easy	1
126	_____ can model the behavior of an individual object.	a. Class b. Use case **c. State machine** d. Activity	III	Easy	1

127	A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.	a. class **b. state machine** c. use case d. activity	III	Hard	3
128	A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.	a. class **b. state** c. actor d. component	III	Easy	1
129	A _____ is a relationship between two states indicating that an object in the first s will enter the second state.	a. transition **b. state** c. association d. generalization	III	Medium	2
130	A state that has substates, that is nested states, is called _____	**a. composite state** b. history state c. target state d. source state	III	Easy	1
131	Inside the states, the events are encountered to handle without leaving the state. This is known as_____	a. state machine b. state transition **c. internal transition** d. external transition	III	Hard	3
132	_____ is the state that is active after completion of the transition.	a. Composite state b. History state **c. Target state** d. Source state	III	Medium	1
133	A The relationship between two	**a. transition**	III	Easy	1

	states is called _____	b. state c. association d. generalization			
134	_____ are handled without causing a change in state.	**a. Transitions** b. Events c. Signals d. State	III	Easy	1
135	Which of the following is used to model the life time of an object?	a. Use Case b. Class **c. State Machine** d. Interface	III	Hard	3
136	State that is active after the completion of the transition is called _____	a. source state **b. target state** c. history state d. final state	III	Medium	2
137	Which of the following is present in a nested concurrent state machine?	a. Initial State b. Final State c. History State **d. Concurrent sub state**	III	Easy	1
138	Absolute time of an event is modeled as _____	**a. timing constraint** b. timing mark c. timing expression d. timing semantics	III	Easy	1
139	State chart Diagrams are needed _____	**a. when a class has complex life cycle** b. when the execution of scenario is to be traced c. to allocate classes and objects to modules d. to allocate processes to	III	Hard	4

		processors			
140	**The state diagram**	a. depicts relationships between data objects b. depicts functions that transform the data flow c. indicates how data are transformed by the system d. **indicates system reactions to external events**	III	Hard	3
141	Which of the following can estimate size of project directly from problem specification?	a. LOC **b. Function point Metric** c. COCOMO d. COCOMO II	III	Hard	3
142	_____ Which of the following is a type of UML diagram:	**a. Collaboration** b. Context c. User Interface d. None of the above	III	Easy	2
143	If the system is performing no function thenit is in	A. Clear State **B. Initial State** C. Final State D.Reset State	III	Easy	1
144	The vertcal dimension of a sequence diagram shows	a) abstract b) line **c) time** d) messages	III	Hard	3
145	**The** time oriented diagram **include …**	**a) sequence**	III	Easy	1

		b) classes c) activity d) none of these			
146	In a sequence diagram, the _____ indicates when an object sends or receives a message.	(A)command line (B)focus **(C)request link** (D)lifeline	III	Easy	1
147	Fork and Join terms are associated with	**a. Activity Diagram** b. Use Case Diagram c. Class Diagram d. Object Diagram	III	Easy	1
148	Timing diagram is a special form of a sequence diagram.True or False	**a. True** **b.** False	III	Hard	3
149	Which UML diagram shows the objects participating in the interaction by their links to each other and the messages that they send to each other.	a. Class b. Object c. Activity **d. Collaboration**	III	Hard	3
150	Timing diagrams are used to explore the behaviors of objects throughout a given period of time	**a. True** b. False	III	Easy	1
151	Component diagram is used to describe the _____ between various software components of structural diagram.	a. inheritance **b. dependencies** c. classes d. objects	IV	Medium	2
152	Component diagrams commonly contain components, interfaces and _____	a. objects b. nodes **c. relationships** d. classifiers	IV	Easy	1
153	A _____ shows the configuration of run time	a. use case diagram b. component diagram	IV	Medium	2

	processing nodes and the components that live on them.	c. class diagram **d. deployment diagram**			
154	_____ relationship is used among nodes in deployment diagram.	a. Dependency b. Generalization **c. Association** d. Aggregation	IV	Medium	2
155	In deployment diagram every _____ name is unique.	a. edge **b. node** c. arcs d. squares	IV	Easy	1
156	In deployment diagram, a node is represented as a _____	**a. cube n** b. cuboids c. prism d. rectangular	IV	Easy	1
157	Component diagram is a collection of vertices and _____	a. edge b. bipartites **c. arcs** d. squares	IV	Hard	3
158	Which of the following is not one of the use of component diagram?	a. To model physical databases b. To model executable releases **c. To model general view** d. To model adaptable systems	IV	Medium	2
159	Which of the following is doesn't included in the component diagram?	a. Dependency b. Generalization c. Association **d. Aggregation**	IV	Easy	1

160	A _____ diagram shows the organization of a set of components and their relationship	**a. component** b. interface c. deployment d. architectural	IV	Medium	1
161	_____ are created as a consequence of an executing system.	a. Deployment components b. Work product components **c.Execution components** d. System components	IV	Hard	3
162	Source code files and data files are contained by the _____ components	a. system n b. execution c. deployment **d. work product**	IV	Medium	2
163	_____ form an executable system like dynamic libraries and executable's	**a.Deployment components** b. Work product components c. Execution components d. System components	IV	Medium	3
164	The rules and semantics of the UML can be expressed in a form known as	(a) Object modeling language **(b) Object constraint language** (c) Object specification language (d) Object control language	IV	Easy	1
165	OCL stands for	**a. Object Constraints Language** b. Object Complete	IV	Hard	3

		Language c. Object Critical Language d. None of the above			
166	Applications of OCL are	a.To specify invariants on classes and types in the class model b. To specify type invariant for Stereotypes c. To describe pre- and post conditions on Operations and Methods **d. All of the Above**	IV	Hard	2
167	Which is true about Axioms	a.Hypothesized from observation b.Common truth c.Always valid	IV	Easy	1
168		**d.All of the Above**	IV	Easy	1
169	Object Oriented Design process includes refining UML class Diagram.	**a.True** b.False	IV	Easy	1
170	Designing Business Layer classes includes apply design axioms to design classes,their attributes,methods,associations ,,strctures and protocols.	**a.True** b.False	IV	Easy	1
171	Attributes types are	a. Single value attribute b. Multi value attribute c. Reference to another object	IV	Easy	1

		d.All of the above			
172	OCL can be used to define the class attributes.	**a.True** b.False	IV	Easy	1
173	Visibility can be	a.public b.protected c.private **d.All above**	IV	Easy	1
174	package may contain both other packages and ordinary modeling elements.	**a.True** b.False	IV	Easy	1
175	Table class mapping is a simple one-to-one mapping of a table to a class and the mapping of columns in a table to properties in a class.	**a.True** b.False	IV	Medium	2
176	In Table multiple class mapping a Single table is mapped to multiple non inheriting classes	**a.True** b.False	IV	Easy	1
177	In Table-inherited classes mapping a single tables maps to many classes that have common super class	**a.True** b.False	IV	Easy	1
178	Multi database systems (MDBS) is a database systems that resides on top of all local database systems and presents a single database illusion to its users.	**a.True** b.False	IV	Easy	1
179	UI design is a creative process	**a.True** b.False	IV	Medium	1
180	Process of designing view layer classes includes	a. Macro level UI design process b. Micro level UI design activities c. Testing usability	IV	Medium	1

		and user satisfaction **d. All of the above**			
181	Macro level design process includes identify the interface objects for the class	**a.True** b.False	IV	Medium	1
182	The OCL makes use of Collection class for describing the constraints.	**a.True** b.False	IV	Easy	1
183	The symbol used for package visibility is	a. + b. – **c. ~** d. *	IV	Medium	1
184	The symbol used for private visibility is	a. + **b. –** c. ~ d. *	IV	Easy	1
185	The symbol used for protected visibility is	a.+ b. – c.* **d.#**	IV	Easy	1
186	Major task of access layer are	a.Translate the request b.Translate the results **c. both a and b** d. none	IV	Easy	1
187	Creaing a relational database(schema) from existing object model is called as	a.reverse engineering **b.Forward engineering** c.Backward engineering d. Traditional engineering	IV	Medium	2
188	Creating a object model from an existing relational databse	**a.reverse engineering**	IV	Easy	1

	layout is called as	b.Forward engineering c.Backward engineering d. Traditional engineering			
189	The main process in building the object relational systems is defining the relationship between table structure with classes.	**a.True** b.False	IV	Easy	1
190	Access layer is an intermediate layer between business layer and physical database, files,ORB, Internet.	**a.True** b.False	IV	Easy	1
191	The access layer classes translate any data related requests from business layer into appropriate protocol for data access.	**a.True** b.False	IV	Easy	1
192	The three layer architecture consistes of	a.data access layer b.business layer c.View layer **d.All of the above**	IV	Easy	1
193	The main goal of interface view layer design process in Micro level design process is to address users needs.	**a.True** b.False	IV	Easy	1
194	The mail goal of attribute refinement is to make all attributes suitable to elevate the system into implementation.	**a.True** b.False	IV	Easy	1
195	In OCL,The subclass of Collection class are	a.Self b.Sequence **c.Both a and b** d.None	IV	Easy	1

196	The purpose of access layer is to create, a set of classes that know how to communicate with the place where the date actually reside	**a.True** b.False	IV	Medium	1
197	"One person might have one or more bank accounts". This example represents	a.Single value attribute b.Multivalue attribute **c.Reference to another object** d. Passive attribute type.	IV	Medium	1
198	"Names of students who enrolled for particular course" This example represents	a.Single value attribute **b.Multivalue attribute** c.Reference to another object d. Passive attribute type	IV	Easy	1
199	"Simplify classes and their relationships "is one of the step for designing the access layer.	**a.True** b.False	IV	Medium	1
200	The important characteristic of view layer objects is that they are the only exposed objects of the application with which the user can interact.	**a.True** b.False	IV	Easy	1
201	Patterns is…	a) It solves a software design problem b) It is a model proposed for imitation **c) All of these** d) None of these	V	Easy	1
202	Which of the following benefits provide patterns?	a) Increasing Development Efficiency	V	Easy	1

		b) Promoting Communication c) Streamlining Documentation **d) All of these**			
203	Patterns important due to…	a) They captured design accessible to novices and other experts b) They capture expert design knowledge c) None of these **d) All of these**	V	Medium	1
204	——– is a design pattern?	a) Structural b) Abstract Factory c) Behavioral **d) All of these**	V	Medium	1
205	——– design pattern defines one-to-many dependency between objects…	**a) Observer pattern** b) Factory Pattern c) Facade pattern d) Singleton method pattern	V	Medium	1
206	Which of the following are concerned with communication between objects?	a) J2EE Design Patterns **b) Behavioral Design**	V	Medium	1

		Patterns c) Creational Design Pattern d) Structural Design Patterns			
207	Which one pattern creating duplicate object?	a) Filter Pattern **b) Prototype Pattern** c) Bridge Pattern d) Builder Pattern	V	Medium	1
208	A visitor class is used which changes the executing algorithm of an element class…	A. Business Delegate Pattern B. Composite Entity Pattern **C. Visitor Pattern** D. MVC Pattern	V	Easy	1
209	Which of the following represents the structure and behavior of the pattern?	a) Consequences **b) Form** c) Aplication d) Name	V	Easy	1
210	Which design pattern suggest multiple classes?	**a) Chain of responsibility pattern** b) Bridge pattern	V	Easy	1

		c) Singleton pattern d) State pattern			
211	Which of the following is correct about Creational design patterns.	A - These design patterns are specifically concerned with communication between objects. **B - These design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new opreator.** C - These design patterns concern class and object composition. Concept of inheritance is used to compose interfaces and define ways to compose objects to obtain new functionalities. D - None of the above.	V	Easy	1
212	Which of the following describes the Prototype pattern correctly?	A - This pattern builds a complex object using simple objects and using a step by step approach. **B - This pattern refers to creating duplicate object while keeping performance in mind.** C - This pattern works as a bridge between two	V	Medium	2

		incompatible interfaces. D - This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.			
213	Which of the following pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently?	**A - Bridge Pattern** B - Adapter Pattern C - Prototype Pattern D - Filter Pattern	V	Easy	1
214	Which of the following pattern creates a chain of receiver objects for a request?	A - Proxy Pattern **B - Chain of Responsibility Pattern** C - Command Pattern D - Interpreter Pattern	V	Hard	2
215	Which of the following pattern a request is wrapped under an object as command and passed to invoker object?	A - Proxy Pattern B - Chain of Responsibility Pattern **C - Command Pattern** D - Interpreter Pattern	V	Easy	2
216	Which of the following describes the Strategy pattern correctly?	A - In this pattern, a class behavior changes based on its state.	V	Easy	1

		B - In this pattern, a null object replaces check of NULL object instance. **C - In this pattern, a class behavior or its algorithm can be changed at run time.** D - In this pattern, an abstract class exposes defined way(s)/template(s) to execute its methods.			
217	Which of the following is true for Adapter pattern?	**a.** An adapter or wrapper is a component that provides a new interface for an existing component **b.** An Adapter or Wrapper pattern is a broker pattern that provides a new interface for existing software so that it can be reused **c.** Adaptation for reuse is an old technique that has been used since the beginning of software development **d. All of the mentioned**	V	Medium	2
218	The Adapter patterns provide object-oriented adapters in which of theses varieties?	a. One uses inheritance b. one uses delegation **c. All of the mentioned** d. None of the mentioned	V	Easy	1
219	A class (the adapter class) may be given a new interface by an adapter class in which of these ways?	a. Class Adapter pattern b. Object Adapter pattern	V	Easy	1

		c. All of the mentioned d. None of the mentioned			
220	Which of these states about Object Adapter pattern?	a. The adapter can inherit adapter operations with appropriate semantics and pragmatics, override those with inappropriate semantics or pragmatics, and add operations needed for the new interface **b. The adapter may hold a reference to the adapter and delegate must work to the adapter object** c. All of the mentioned d. None of the mentioned	V	Medium	2
221	Which of the following is true for proxy pattern?	a. Has exactly the same interface as the real object b. Handles routine or illegitimate messages without accessing the real object c. Delegates messages that it cannot handle to the real object **d. All of the mentioned**	V	Medium	2
222	Which of the following is not followed by proxy pattern?	a. virtual proxies b. remote proxies c. access proxies **d. none of the mentioned**	V	Easy	1
223	Which of the following is consequence for proxy pattern?	a. The Proxy pattern makes it possible to defer expensive operations (virtual proxies)	V	Medium	2

		b. Provides an elegant way to treat remote objects as if they were loc c. Provides a mechanism for implementing supplier access restriction proxies) **d. All of the mentioned**			
224	Which of the following is true about factory method?	a. A factory method is a non-constructor operation that creates and r b. Factory methods are widely used in mid-level design patterns and i programming in general c. Factory methods create new instances using constructors or clonin any special technique for class instantiation **d. All of the mentioned**	V	Easy	1
225	What are the types of factory pattern?	a. Factory Method b. Abstract Method **c. All of the mentioned** d. None of the mentioned	V	Medium	1
226	Which class that can have only one instance?	a. Adaptor Class b. Proxy Class **c. Singleton Class** d. Factory class	V	Easy	1
227	Which of the following are true for the singleton class?	a. Singleton classes should be used whenever it is important that only class exist and that that single instance be widely accessible b. The Singleton pattern can also be used, with slight modifications, w instances greater than one are desired c. Access restrictions are usually easy to add by restricting the visibilit factory method **d. All of the mentioned**	V	Medium	2
228	Which of the following are true for prototype pattern?	a. A clone is a copy of an object b. When values stored in an entity (including references) are reproduc operation is said to be shallow c. In contrast, a copy operation is deep when copies are made of all re original composite, and references to the new entities are placed in **d. All of the mentioned**	V	Medium	2
229	Which of the following are consequences for command pattern?	a. Reactor patterns provide event-driven design models b. They decouple clients and targets c. Encapsulate reactions to event	V	Medium	2

		d. None of the mentioned			
230	Which GRASP pattern helps to find out answer for "Who should be responsible for creating a new instance of some class?	a. Adapter b. Protected Vairation **c. Creator** d. Fabircation	V	Medium	2
231	Defines an interface for creating an object, but let the subclasses decide which class to instantiate.It lets the instantiation differ to subclasses.	a. Builder b. Abstract Factory **c. Factory Method** d. Prototype	V	Medium	2
232	Which design pattern defines one-to-many dependency among objects?	a. Singleton pattern b. Facade Pattern c. Factory method pattern **d. Observer pattern**	V	Medium	1
233	The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:	a) Object- Oriented Programming **b) Object- Oriented Design** c) Object- Oriented Analysis d) None of the mentioned	V	Easy	1
234	GRASP stands for	**a. General Responsibility Assignment Software Patterns** b. General Responsibility Assignment Software	V	Easy	1

		Problem c. Great Responsibility Assignment Software Patterns d. General Relational Assignment Software Patterns			
235	The controller pattern assigns the responsibility of dealing with system events to a non-UI class that represents the overall system or a use case scenario	**a.True** b.False	V	Medium	1
236	Coupling is a measure of how strongly one element is connected to, has knowledge of, or relies on other elements	**a.True** b.False	V	Easy	1
237	High cohesion is an evaluative pattern that attempts to keep objects appropriately focused, manageable and understandable	**a.True** b.False	V	Easy	1
238	A pure fabrication is a class that does not represent a concept in the problem domain, specially made up to achieve low coupling, high cohesion, and the reuse potential thereof derived	**a.True** b.False	V	Easy	1
239	GRASP Pattern are	a.Creator b.Information Expert c.Low Coupling **d.All above**	V	Easy	1
240	GRASP helps us in deciding which responsibility should be assigned to which object/class.	**a.True** b.False	V	Easy	1
241	What is Gang of Four (GOF)?	**A - Four authors of Book 'Design Patterns - Elements of Reusable**	V	Medium	2

		Object-Oriented Software' are known as Gang of Four (GOF). B - Gang of Four (GOF) is a name of a book on Design Patterns. C - Gang of Four (GOF) is a Design Pattern. D - None of the above.			
242	Event handling frameworks like swing, awt use Observer Pattern.	**a.True** b.False	V	Medium	2
243	Which of the following pattern works as a bridge between two incompatible interfaces?	A - Builder Pattern **B - Adapter Pattern** C - Prototype Pattern D - Filter Pattern	V	Medium	2
244	In which of the following pattern, a class behavior changes based on its state?	**A - State Pattern** B - Null Object Pattern C - Strategy Pattern D - Template Pattern	V	Easy	1

245	Which GOF design pattern is applied in the code snippet below?
	public class PrintSpooler {
	private static final PrintSpooler INSTANCE = new PrintSpooler();
	private PrintSpooler() {}
		a. PrintSpooler
		b. Spooler
		c. Singleton
		d. Factory
			V	Easy	1

	public static PrintSpooler getInstance() {
	return INSTANCE;
	}
	}
	Select one:				

246	The term "Delegation" is most closer to which of the following GRASP patterns Select one:	a. Expert b. Creator c. Low Cohesion **d. Controller**	V	Medium	1
247	Which GRASP pattern asnwers the question "What object should have the responsibility, when you do not want to violate High Cohesion and Low Coupling, or other goals, but solutions offered by Expert are not appropriate?"	**a. Pure Fabrication** b. Indirection c. Creator d. Polymorphism	V	Medium	1
248	In the Publish-Subscribe messaging model, the subscribers register themselves in a topic and are notified when new messages arrive to the topic. Which pattern does most describe this model?	a. Adapter b. Notifier **c. Observer** d. Factory	V	Hard	2
249	Which GRASP pattern is suitbale to handle alternatives based on type?	a. Indirection b. Pure Fabrication **c. Polymorphism** d. Creator	V	Easy	1
250	Which design pattern you would you use to limit the class instantiation to one object? Select one:	a. Factory **b. Singleton** c. Observer d. Adapter	V	Easy	1
251	What makes a good architecture?	a. The architecture may not be the product of a single architect or a small group b. **The architect should**	VI	Easy	1

		have the technical requirements for the system and an articulated and prioritized list of qualitative properties c. The architecture may not be well documented d. All of the mentioned			
252	Which of the following are correct statements?	a. An architecture may or may not defines components b. An architecture is not dependable on requirements **c. An architecture is foremost an abstraction of a system that suppresses details of the affect how they are used** d. All of the mentioned	VI	Easy	1
253	What does “Every software system has an architecture” implies?	a. System itself is a component b. Architecture an exist independently of its description or specification **c. All the system to be stable should posses an architecture** d. None of the mentioned	VI	Medium	2
254	What is architectural style?	a. Architectural style is a description of component types b. It is a pattern of run-time control c. It is set of constraints on architecture **d. All of the mentioned**	VI	Medium	2

255	Which of the following can be considered regarding client and server?	**a. Client and server is an architectural style** b. Client and server may be considered as an architectural style c. Client and server is not an architectural style d. None of the mentioned	VI	Medium	1
256	Which of the statements truly concludes client and server relation with architectural styles?	**a. They are component types and their coordination is described in terms of protocols that server uses to communicate with each of its clients** b. Multiple client cannot exist at an instance c. Architecture are countless for client and server but their architectural styles are different d. All of the mentioned	VI	Easy	1
257	What is Architecture?	a. Architecture is components b. Architecture is connectors c. Architecture is constraints **d. All of the mentioned**	VI	Medium	2
258	Why is Software architecture so important?	a. Communication among stakeholders b. Early Design decisions c. Transferable abstraction of a system **d. All of the mentioned**	VI	Medium	2
259	Which lines depict that	a. An implementation	VI	Hard	3

	architecture defines constraints on an implementation?	exhibits an architecture if it conforms to the structural decisions described by the architecture b. The implementation need not be divided into prescribed components **c. An implementation exhibits an architecture if it conforms to the structural decisions described by the architecture and the implementation must be divided into prescribed components** d. None of the mentioned			
260	Why does architecture dictates organizational structure?	**a. Architecture describes the structure of the system being developed which becomes engraved in the development project structure** b. An implementation exhibits an architecture if it conforms to the structural decisions described by the architecture c. Architecture may not describe structure as whole d. None of the mentioned	VI	Hard	3
261	Is it possible to make quality predictions about a system based solely on evaluation of its	**a. Yes** b. No c. May be	VI	Medium	2

	architecture?	d. None of the mentioned			
262	Which of the following are the several architectural issues for system's testability?	a. Its level of architectural documentation b. Its separation of concerns c. The degree to which the system uses information hiding **d. All of the mentioned**	VI	Medium	1
263	Which of the following are the main aspects for the qualities of architecture?	a. Conceptual Integrity b. Buildability c. Correctness and Completeness **d. All of the mentioned**	VI	Easy	1
264	What concept is followed by Conceptual integrity?	a. Architecture should do different things in different ways b. Architecture should do different things in similar ways **c. Architecture should do similar things in similar ways** d. None of the mentioned	VI	Medium	2
265	Which of the following are essential for the architecture to allow for the meeting of all the systems and runtime resource constraints?	a. Conceptual Integrity b. Buildability **c. Correctness and Completeness** d. All of the mentioned	VI	Medium	2
266	Which of the following is true?	a. Architecture is low level design b. Architecture is mid level design **c. Architecture is high level design** d. None of the mentioned	VI	Medium	1

267	What is Architecture of a software based on?	a. Design **b. Requirements** c. All of the mentioned d. None of the mentioned	VI	Medium	2
268	What does Software architecture means?	a. It is the structure or structure of systems b. It comprises of software components c. Relationship among components **d. All of the mentioned**	VI	Medium	2
269	Point out the wrong statement:	1. SOA provides the standards that transport the messages and makes the infrastructure to support it possible **2. SOA provides access to reusable Web services over a SMTP network** 3. SOA offers access to ready-made, modular, highly optimized, and widely shareable components that can minimize developer and infrastructure costs 4. None of the mentioned	VI	Easy	1
270	Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand ?	**1. SOA** 2. EBS 3. GEC 4. All of the mentioned	VI	Easy	1
271	Which of the following is used to aid for locating services in SOA ?	**1. catalog service** 2. data abstraction services 3. data bus 4. all of the mentioned	VI	Easy	2

272	The primary objective of component-based architecture is to ensure	a. **component reusability** b. security c. integrity d. coupling	VI	Easy	1
273	A component is a modular, portable, replaceable, and reusable set of well-defined functionality that encapsulates its implementation and exporting it as a higher-level interface.	**a.True** b.False	VI	Easy	1
274	A component can have following views −	a. object-oriented view b. conventional view c. process-related view. **d. All of the Above**	VI	Easy	1
275	Characteristics of Components are	a. Reusability b. Replaceable c. Extensible d. **All of the above**	VI	Easy	1
276	Ease of deployment is the one of the advantage of component based architecture	**a.True** b.False	VI	Easy	1
277	A concurrent task (process) is the execution of a sequential component of a concurrent program	**a.True** b.False	VI	Medium	2
278	when only one task may have access to a resource at a given time is called as	a. Critical access **b. Mutual Exclusion** c. Dedicated control d. Direct access	VI	Medium	2
279	A real-time system is a software system where the correct functioning of the system depends on the results produced by the system and the	**a.True** b.False	VI	Medium	2

	time at which these results are produced				
280	Example od real time system are	a.radar systems b. data streaming c. customer service systems d. All of the Above	VI	Medium	2
281	"Identify the stimuli to be processed and the required responses to these stimuli" is one of the step in designing Real Time system.	**a.True** b.False	VI	Easy	1
282	A software product line is a set of software-intensive systems that share a common, managed set of features satisfying the specific needs of a particular market segment or mission and that are developed from a common set of core assets in a prescribed way.	**a.True** b.False	VI	Easy	1
283	A product-line architecture (PLA) is a blue-print for creating families of related applications.	**a.True** b.False	VI	Easy	1
284	Product-line architectures give stakeholders tools with which ordinary product architecture can be diversified into an artifact suitable for describing related products i.e. a product line.	**a.True** b.False	VI	Easy	1
285	The power of product lines comes through reuse of-	a.Engineering knowledge b.Existing product architectures, styles and patterns	VI	Easy	1

		c.Pre-existing software components and connectors **d. All of the Above**			
286	Notions of product lines are	a. Business product lines b. Engineering product lines **c. Both a and b** d. None	VI	Easy	1
287	Types of Real time system are	a.Soft RTS b.Hard RTS **c. both a and b** d.None	VI	Easy	2
288	Elements of Web services are	a.UDDI b.WSDL c.SOAP **d.All of the above**	VI	Hard	4
289	Example of Web services are	a.Credit Card validation system b.Weather forecast system c.Currency converter **d.All of the above**	VI	Medium	2
290	In SOA broker is a middleman between clients and servers.	**a.True** b.False	VI	Medium	2
291	Design Principles for Service Oriented Architecture are	a.Loose Coupling	VI	Medium	2

		b.Service Contract c.Abstraction **d.All above**			
292	Various Client server architecture patterns are	a.Multiple Client and single service b.Multiple client and multiple services c.Multi-tier client service **d.All above**	VI	Medium	2
293	Layers of Abstraction architectural pattern is typically used in TCP/IP Protocol	**a. True** b. false	VI	Easy	1
294	Call and Return pattern is commonly used architectural pattern	**a.True** b.False	VI	Easy	1
295	Structural view is represented by	a. Activity diagram **b. Class diagram** c. State diagram d. Timing diagram	VI	Easy	2
296	Semantic models specify how to determine a systems overall properties from the properties of its parts	**a.True** b.False	VI	Hard	3
297	Types of Architectural viewa are	a.Structural view b.Dynamic view c.Deployment view **d.All**	VI	Hard	3
298	Role of connector is	a. Communicate b. Coordinate c. Cooperate **d. All of the above**	VI	Hard	3

299	Connectors is one of the architectural element	**a.True** b.False	VI	Medium	2
300	The software architect	a. Is an artifact of early analysis b. Help to identify risks c. Represents earliest design decision **d. All of the Above**	VI	Medium	1

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