

OMG OMG-OCRES-A300 Exam

Volume: 180 Questions

Question No: 1

What is one difference between service level software and application level software?

- A. Service level software always provides real-time guarantees on execution time, while application level software does not.
- B. Application level software always forms the core "building bricks" of software systems while service level software is always portable across different hardware.
- C. Application level software provides the functionality and behavior required of the system while service level software provides application-independent functionality.
- D. Service level software always provides the same set of operations regardless of environment, while application level software provide a consistent programming interface.

Answer: C

Question No: 2

What is the difference between static and dynamic variables?

- A. Static variables are used to save memory space in lieu of dynamic variables.
- B. Static variables have global visibility while dynamic variables are restricted to individual components.
- C. Static variables have a set value for the lifetime of the program, while dynamic variables can change value as determined by the program.
- D. Static variables exist for as long as the program runs, while dynamic variables are created and destroyed by the program and scoping rules.

Answer: D

Question No: 3

A Rate Monotonic Schedule sets task priorities according to what?

- A. task laxity
- B. task deadline

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- C. system mode
- D. length of a task's period

Answer: D

Question No: 4

Programs devised using functional structuring are based on what?

- A. abstract machines organized in layers
- B. data processed by individual statements
- C. functions operating on shared structures
- D. independent functions organized in parallel

Answer: A

Question No: 5

Which is an example of a performance modeling tool?

- A. spreadsheet
- B. discrete event simulator
- C. transaction rate analyzer
- D. software configuration manager

Answer: B

Question No: 6

Which statement is true about the feasibility of a Rate Monotonic Schedule?

- A. It CANNOT be determined precisely.
- B. It can be determined only for the highest priority task.
- C. It can be determined for any set of task deadlines with bounded execution times.

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D. It can be determined for any number of periodic tasks with bounded execution times.

Answer: D

Question No: 7

What does performance engineering start with?

A. creating a predictable system architecture

B. choosing an appropriately predictable scheduling policy

C. defining the performance requirements for the target system

D. defining a set of performance tests to determine that requirements will be met

Answer: C

Question No: 8

How does a pure tree decomposition differ from a general hierarchical decomposition?

A. Different modules share standard subroutines.

B. Leaf-functions are shared between many different modules.

C. 'Building-brick' functions are NOT shared between modules.

D. System branch prediction can be used to increase performance.

Answer: C

Question No: 9

Creating rate groups can produce which effect?

A. reducing processor load variations

B. ensuring that time constraints are met

C. decreasing the overhead of task dispatch

D. simplifying system maintainability when requirements change

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Answer: C

Question No: 10

Earliest deadline scheduling is a form of what?

- A. preemptive static scheduling
- B. deadline monotonic scheduling
- C. non-preemptive static scheduling
- D. priority-based preemptive dynamic scheduling

Answer: D

Question No: 11

For which schedule is the task priority computed using both the tasks execution time and its deadline?

- A. Least Laxity First
- B. Shortest Job First
- C. Deadline Monotonic
- D. Shortest Remaining Time

Answer: A

Question No: 12

A 'strongly typed' programming language is subject to which two rules? (Choose two.)

- A. Every data object must belong to one unique type.
- B. All data objects are strongly associated to a local scope.
- C. Data object names must be in strong Hungarian notation.
- D. Data objects must be of the same type during assignments unless actively overridden.

Answer: A,D

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Question No: 13

Which two most accurately describe the added value of using MDA based transformations? (Choose two.)

- A. PIM/PSM distinction
- B. PIM/PSM template usage
- C. Transformation recording
- D. Transformation verification
- E. Transformation automation

Answer: A,C

Question No: 14

What transformation method is a component-based product line architecture most likely to use?

- A. QVT
- B. Manual
- C. Patterns
- D. Factoring
- E. Automatic

Answer: E

Question No: 15

Which statement is true about a PIM?

- A. It is always an application-level model.
- B. It is sometimes called a domain model.
- C. It may be transformed to a PSM using cascaded transformations.
- D. It is a set of subsystems that provides functionality through interfaces.