

OMG

Exam OMG-OCSMP-MBI300

**OMG-Certified Systems Modeling Professional - Model Builder –
Intermediate**

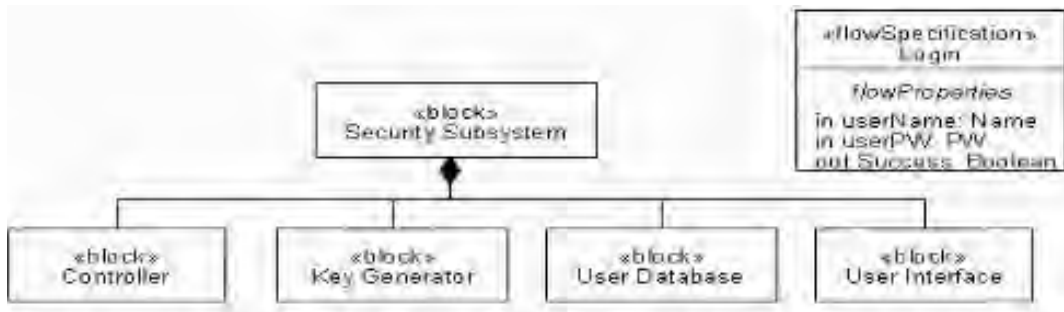
Version: 3.0

[Total Questions: 90]

Question No : 1

Choose the correct answer.

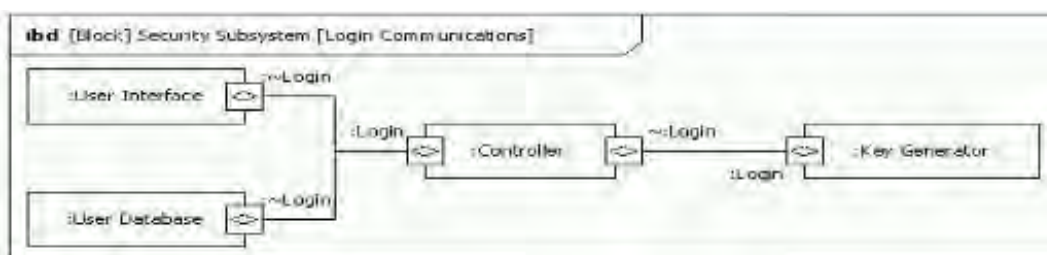
Given the following bdd fragment:



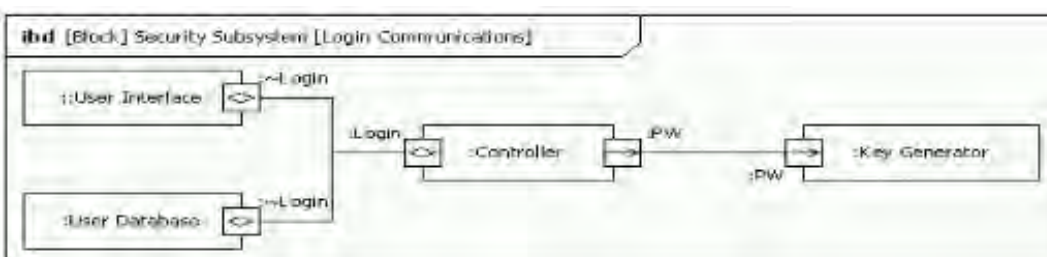
A user provides login credentials to the User Interface, and the Controller passes this information to the User Database. The User Database in turn validates the user name and password (typed by PW in the «flow Specification») and responds with a Boolean value indicating whether the login was successful. The Controller provides the password to the Key Generator if login was successful.

Which diagram correctly models these communications? If two or more options are correct, select the one that passes no unnecessary information between any two blocks. If two or more correct options pass the same information between blocks, select the one with the fewest ports.

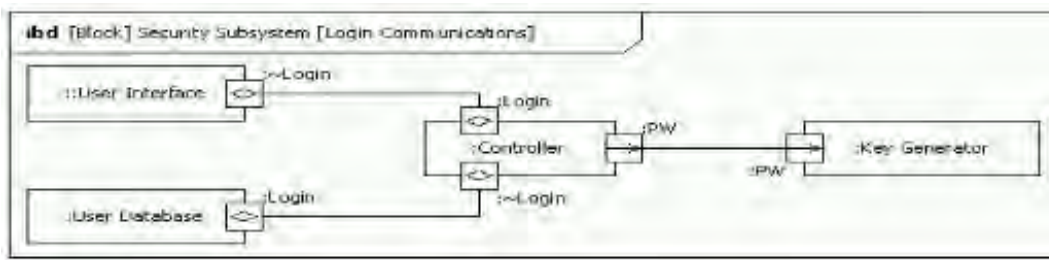
A)



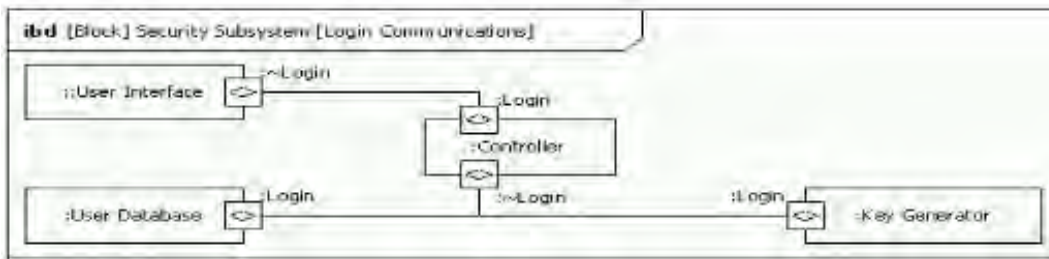
B)



C)



D)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

Question No : 2

Choose the correct answer

Where may constraint blocks be defined?

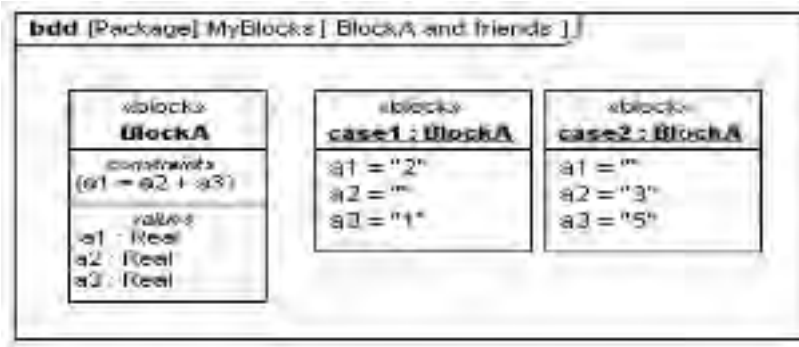
- A. on any diagram
- B. only on parametric diagrams
- C. only on block definition diagrams
- D. only on block definition diagrams or package diagrams
- E. only on block definition diagrams or parametric diagrams
- F. only on block definition diagrams or internal block diagrams

Answer: D

Question No : 3

Choose the correct answer.

Given the model composed of the following diagram:



The modeler has set all shown values as inputs and next intends to solve the model that is, to calculate the outputs. Assume nothing relevant has been left out.

What is wrong with this model?

- A. The modeler set a1 as an input value in case1.
- B. Block A cannot be used by both case1 and case2.
- C. Both case1 and case2 should not be underlined.
- D. The slash (/) in property a1 of BlockA is an error that the parser will assume to be a division sign.

Answer: C

Question No : 4

Choose the correct answer

What is an efficient way to represent highly reused patterns of interaction on sequence diagrams?

- A. an Interaction use referencing an interaction defined on a separate sequence diagram
- B. an interaction template construct that is instantiated from the referring sequence diagram
- C. the call interaction operator with an operand referring to the reusable Interaction defined elsewhere
- D. an activation on the referring sequence diagram allocated to another activation on the referenced diagram

Answer: B

Question No : 5

Choose the correct answer

Which statement is true about the read only keyword when it appears next to a property?

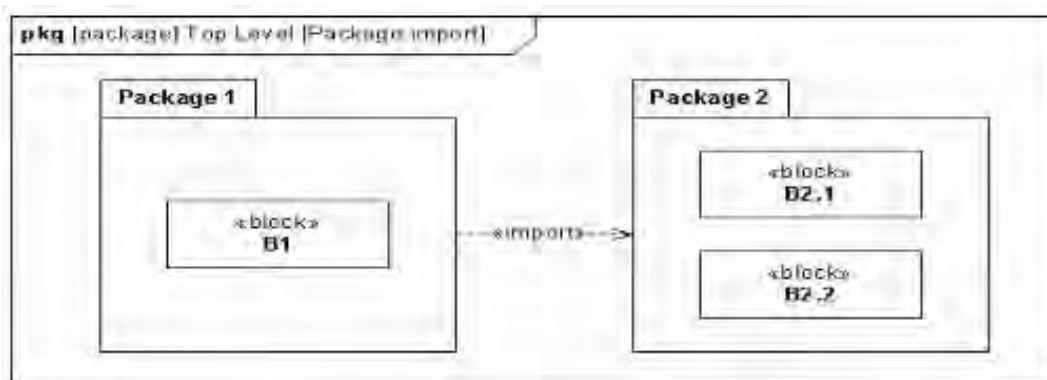
- A. It states that the corresponding property is provided for reading purposes only
- B. It specifies that the corresponding property cannot be redefined
- C. It specifies that the value of the corresponding property cannot change during the lifetime of its owner.
- D. It specifies that the value of the corresponding property can be changed by its owner, but can only be read by other blocks

Answer: A

Question No : 6

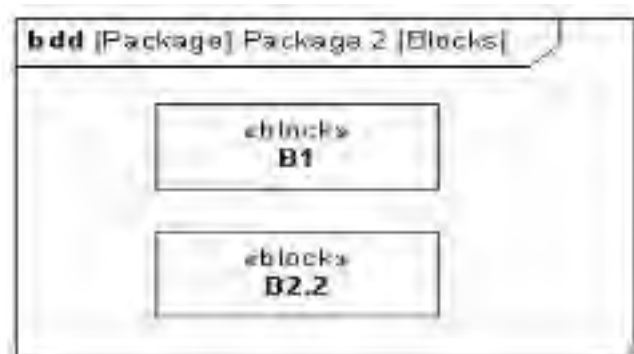
Choose the correct answer.

Given the following diagram:

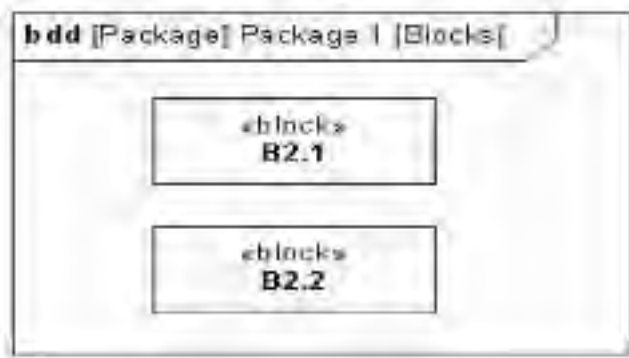


Which diagram is correct?

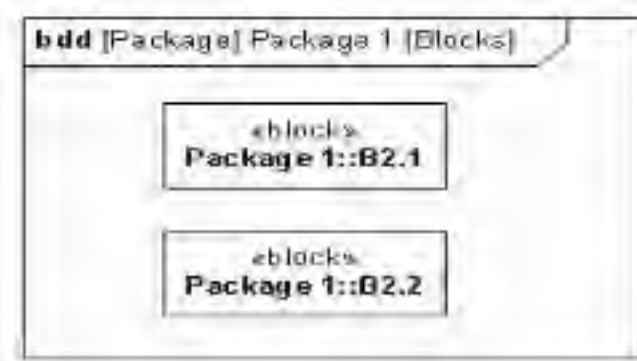
A)



B)



C)



D)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

Question No : 7

Choose the correct answer.

What are the possible values of the enumeration ControlValue?

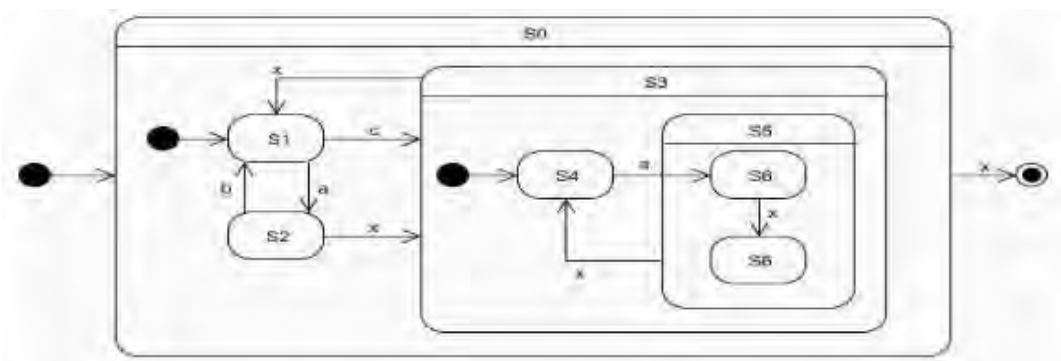
- A. suspend and resume
- B. enable and disable
- C. suspend, resume, enable and disable
- D. It has no values, but is intended for a modeler to extend with their own control values.

Answer: C

Question No : 8

Choose the correct answer.

Given the following statement machine, and assuming that it starts from initialization:



What is the shortest event sequence that will place this state machine in its final state?

- A. a, b, x
- B. c, a, x
- C. c, a, x, x
- D. a, b, c, x
- E. a, b, c, a, x, x

Answer: B

Question No : 9

Choose the correct answer.

Which diagram type is commonly used to create a bill of materials?

- A. Package diagram
- B. Activity diagram

- C. Parametric diagram
- D. Requirements diagram
- E. internal block diagram
- F. Block definition diagram

Answer: C

Question No : 10

Choose the correct answer.

What is one key advantage of using SysML parametrics versus traditional derived properties?

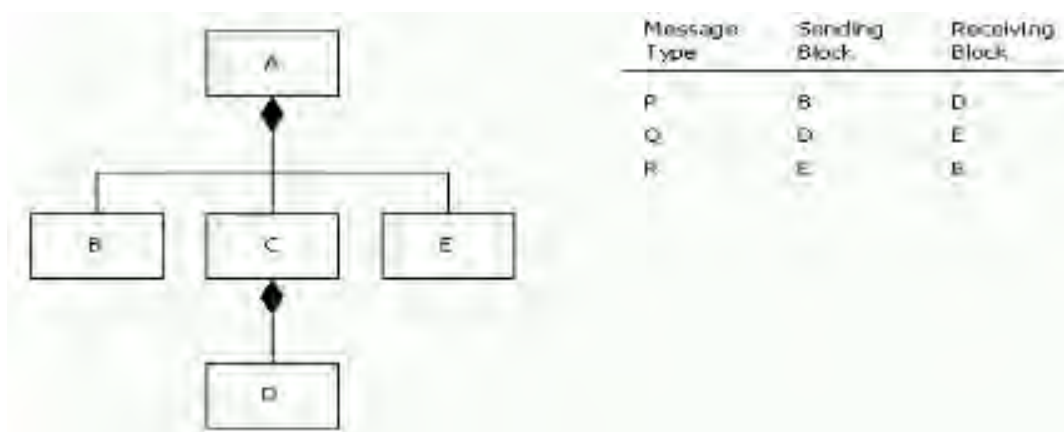
- A. A derived property requires an additional constraint expression, whereas SysML parametrics does not.
- B. OCL-based constraint expressions can be used with SysML parametrics but not with derived properties
- C. it takes many more steps to specify derived properties in the typical tool compared to specifying constraint blocks.
- D. SysML parametrics supports non causal expressions, whereas a derived property involves an expression with a fixed output direction

Answer: C

Question No : 11

Choose the correct answer.

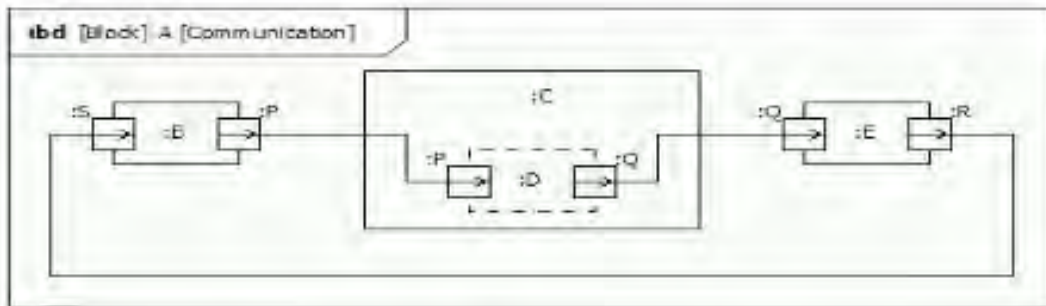
Given the following bdd fragment and table showing messages sent between blocks:



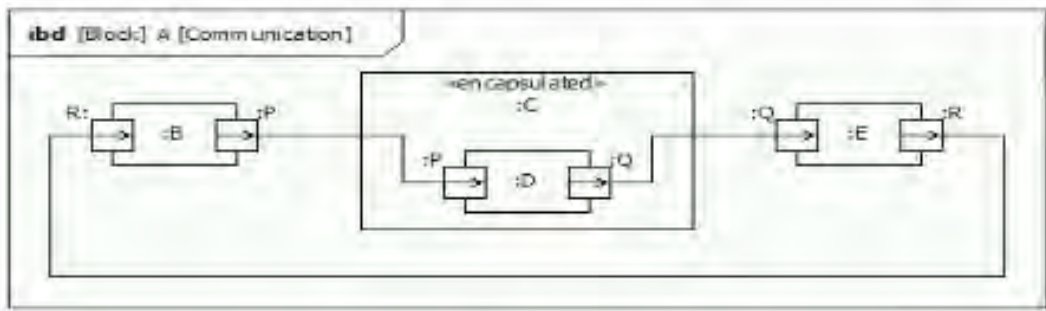
Block C Is encapsulated; none of the other blocks are.

Which Ibd for block A has the correct assignment of flow ports and connectors? If two or more options are correct, select the one with the fewest ports.

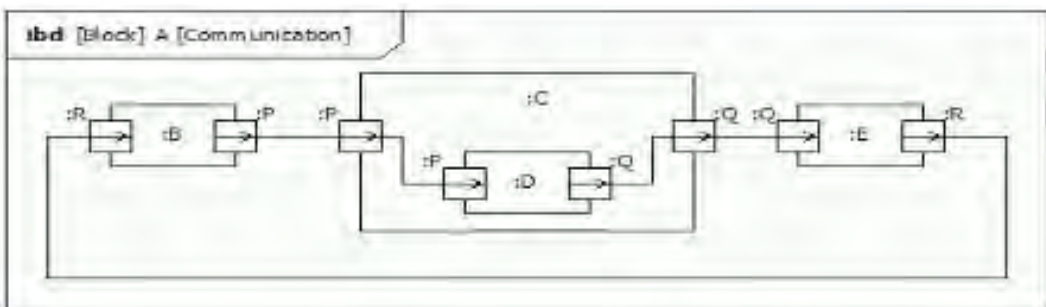
A)



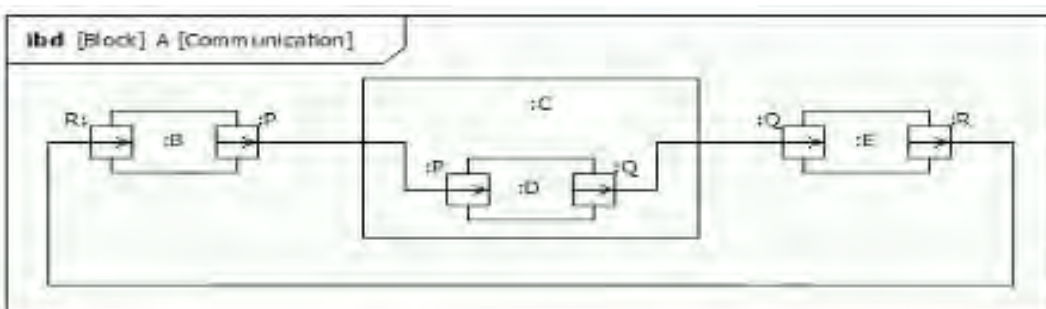
B)



C)



D)



- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

Question No : 12

Choose the correct answer.

A system engineer has created a SysML block structure for his system-of-interest. Two of the blocks (M and E) represent system-level abstractions of components that will be designed by a mechanical engineer and an electrical engineer in their respective computer-aided design (CAD) tools.

Given that the CAD models are wrapped as blocks B_mcad and B_ecad, what type of diagram should the system engineer use to quantitatively relate the properties of B_mcad and B_ecad to their system level abstractions M and E respectively?

- A. an activity diagram
- B. a parametric diagram
- C. an internal block diagram
- D. a block definition diagram

Answer: B

Question No : 13

Choose the correct answer

How can the composition (black diamond) relationship be used to relate Requirements?

- A. Composition allows requirements to inherit properties and requirements relationships
- B. Composition allows role names to be assigned to sub-requirements thus providing a contextual reference
- C. Composition allows a particularly useful requirement to be reused by multiple higher level requirements or specifications
- D. Composition allows a requirement to be decomposed into sub-requirements as long as they don't add to or change the meaning of the original requirement.
- E. Requirements cannot use composition. They are not classifiers

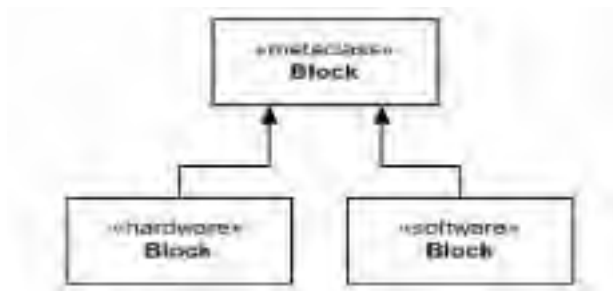
Answer: B

Question No : 14

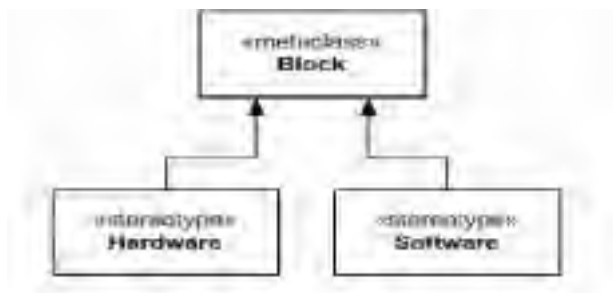
Choose the correct answer.

Which package diagram fragment depicts the definitions of the stereotypes Hardware and Software?

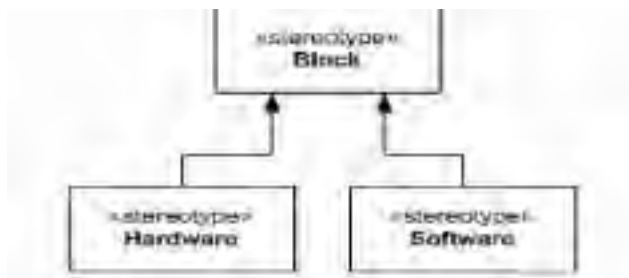
A)



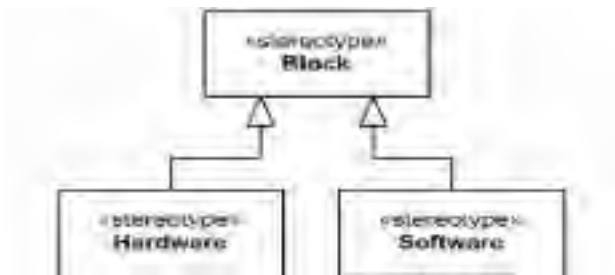
B)



C)



D)



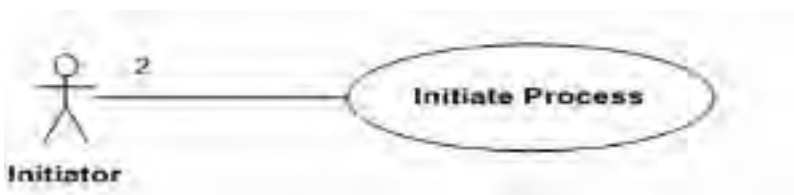
- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: B

Question No : 15

Choose the correct answer.

Given the following diagram fragment:



What does the multiplicity at the actor end mean?

- A. At most two Initiator actor instances can perform the use case
- B. Two Initiator actor instances are required to trigger the use case
- C. Two Initiator actor instances are required to participate in the use case.
- D. Multiplicities carry no meaning on use case diagrams

Answer: C

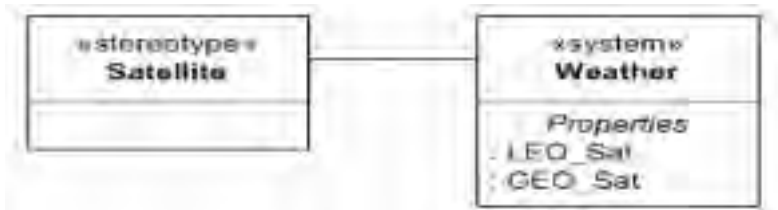
Question No : 16

Choose the correct answer.

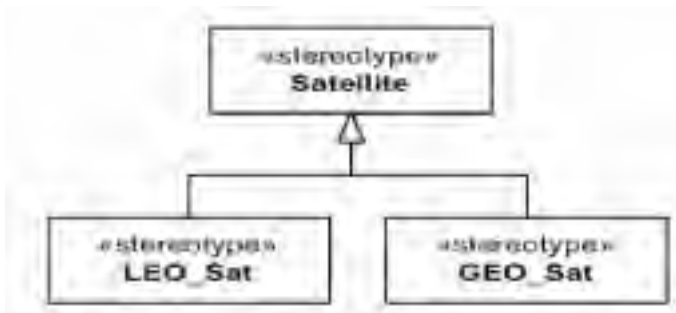
An engineer is building a model of a system that includes both Low Earth Orbit (LEO) and Geosynchronous Orbit (GEO) satellites.

Which diagram fragment shows a well-designed set of domain stereotypes that can be applied to the blocks representing those system elements?

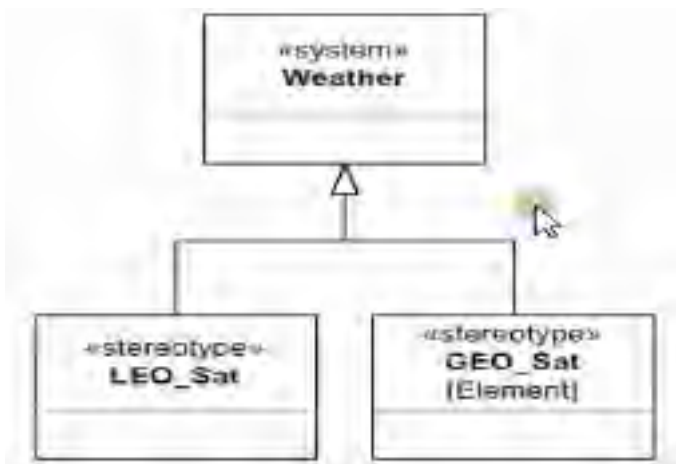
A)



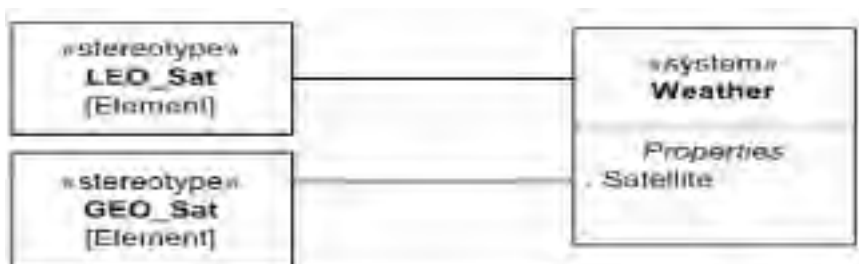
B)



C)



D)



A. Option A

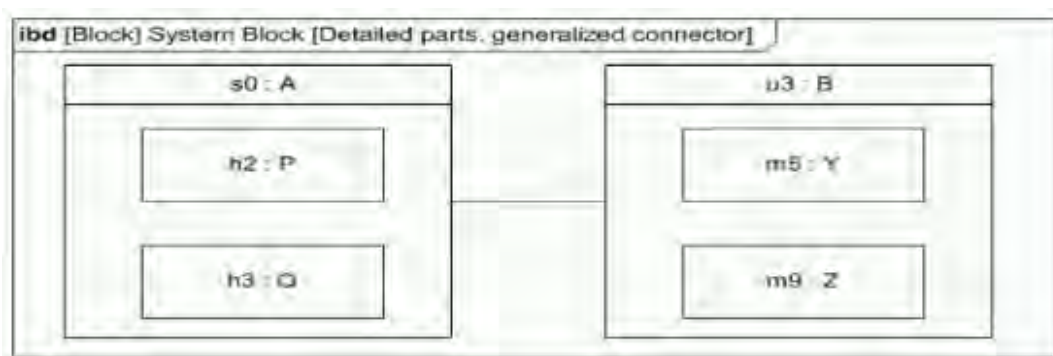
- B. Option B
- C. Option C
- D. Option D

Answer: B

Question No : 17

Choose the correct answer.

Given the following diagram:



What needs to be determined in order to model the connection between components s0 and u3 in more detail?

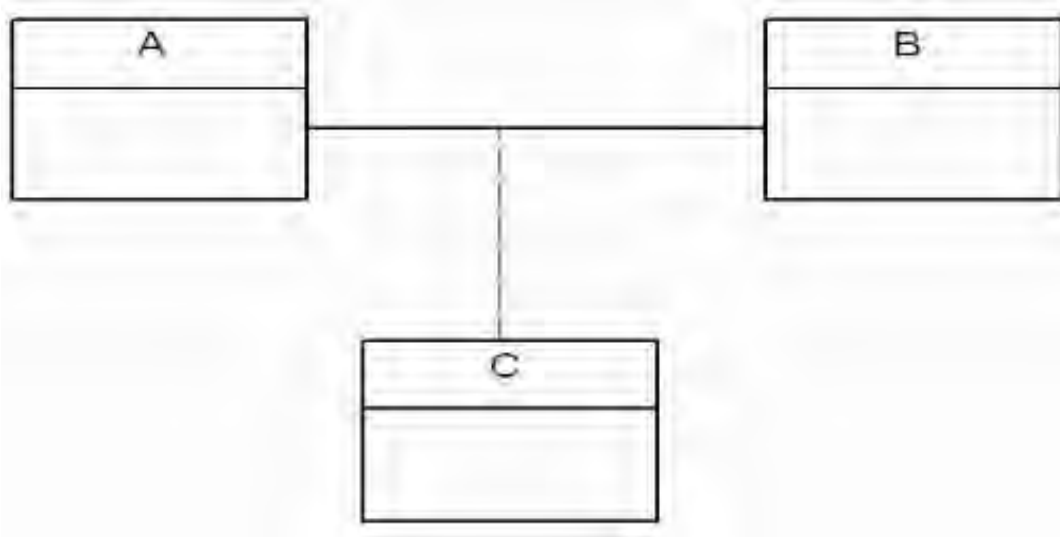
- A. whether component s0 subclasses component u3
- B. which parts of each component participate in the connection
- C. which parts of each component participate in a reference association
- D. whether any part that belongs to component s0 subclasses a part that belongs to component u3

Answer: B

Question No : 18

Choose the correct answer.

Given the following diagram:



What is element C?

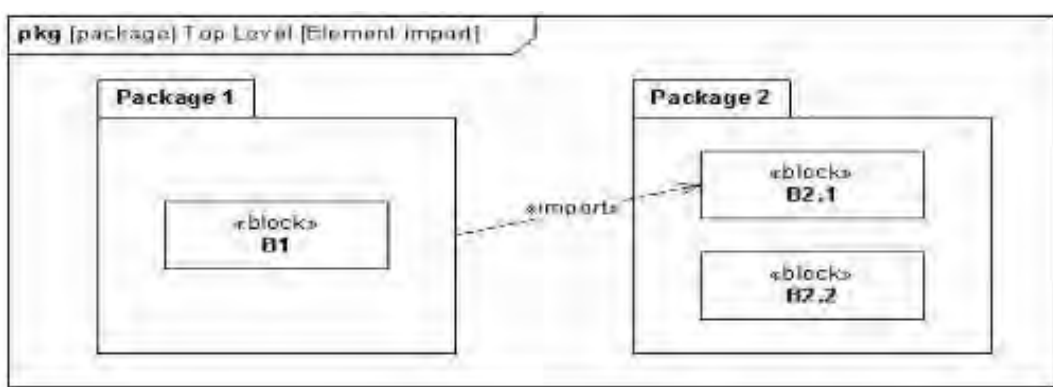
- A. a tag value
- B. an association block
- C. a connector property
- D. a connector illustration
- E. a relation information element

Answer: C

Question No : 19

Choose the correct answer.

Given the following diagram:



Which diagram is correct?

A)