

Sw Engg

Section Id :	64065338440
Section Number :	13
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	27
Number of Questions to be attempted :	27
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065381203
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 267 Question Id : 640653567155 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DEGREE LEVEL : SOFTWARE ENGINEERING (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531895432.  YES

6406531895433.  NO

Sub-Section Number : 2

Sub-Section Id : 64065381204

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 268 Question Id : 640653567156 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

At which stage of the software development life cycle does the software code gets implemented and turns into a working software product?

Options :

6406531895434.  Requirements gathering

6406531895435.  Design

6406531895436.  Development

6406531895437.  Testing

6406531895438.  Deployment

Question Number : 269 Question Id : 640653567157 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

A software development team is working on a project to create a new mobile application for a

bank. During the requirement-gathering phase, the team wants to explore the government guidelines and regulations for online banking systems. Which requirement-gathering technique would be most effective for this purpose?

Options :

6406531895439. ✖ Questionnaires

6406531895440. ✖ Interviews

6406531895441. ✖ Focus groups and workshops

6406531895442. ✔ Documentation

Question Number : 270 Question Id : 640653567160 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Suppose a software company is developing a search engine. They have implemented an algorithm so that if the user mistypes the search query, it will suggest a correct query that will enable effective searching.

Which of the design heuristics are fulfilled in this given scenario?

Options :

6406531895452. ✖ Consistency

6406531895453. ✖ Freedom

6406531895454. ✖ Recognition over recall

6406531895455. ✔ Support error recovery

Question Number : 271 Question Id : 640653567162 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

With respect to software engineering gold plating is considered a _____ risk.

Fill in the blank with the appropriate option.

Options :

6406531895460. ✖ Technical

6406531895461. ✖ Project

6406531895462. ✔ Business

6406531895463. ✖ Technical and project

Question Number : 272 Question Id : 640653567168 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which kind of development tool gives all the following capabilities:

- Syntax checking
- Find where a particular function has been used
- Renaming a variable/class name throughout the entire code base

Options :

6406531895484. ✖ Text Editors

6406531895485. ✖ Compilers and interpreters

6406531895486. ✔ IDEs

6406531895487. ✖ Debugging tools

Question Number : 273 Question Id : 640653567171 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

In which of the following hosting service, the provider is responsible for providing a part of the infrastructure without providing the software layer?

Options :

6406531895496. ✖ Bare Metal Servers

6406531895497. ✔ Infrastructure-as-a-service

6406531895498. ✖ Platform-as-a-service

6406531895499. ✖ All of these

Question Number : 274 Question Id : 640653567172 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following statements are true about the staging environment?

Options :

6406531895500. ✖ It provides the local environment to a software developer which contains the tools like IDE.

6406531895501. ✖ It provides an environment with several testing tools and focuses on integration testing.

6406531895502. ✔ It provides an environment that exactly resembles the production environment.

6406531895503. ✖ It provides the actual production environment.

Question Number : 275 Question Id : 640653567173 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following types of testing determines whether a software product meets non-functional requirements or not?

Options :

6406531895504. ✖ Unit testing

6406531895505. ✖ Alpha testing

6406531895506. ✖ Beta testing

6406531895507. ✖ Smoke testing

6406531895508. ✔ Performance testing

Question Number : 276 Question Id : 640653567177 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Consider a distributed voice communication app that enables direct conversation between any two nodes in the network and which is not governed or supervised by a central authority.

Identify the type of software architecture of the video application.

Options :

6406531895521. ✖ Client-server architecture

6406531895522. ✖ Pipe and filter architecture

6406531895523. ✖ MVC architecture

6406531895524. ✔ Peer-to-peer architecture

Question Number : 277 Question Id : 640653567180 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following teams in a software organization is responsible for all the tasks listed below?

- Address the different kinds of problems faced by the clients.
- Provide regular feedback to other teams about the product and its defects and shortcomings.

Options :

6406531895534. ✖ Marketing team
6406531895535. ✖ Sales team
6406531895536. ✖ Data scientists
6406531895537. ✖ Ethics and policy specialists
6406531895538. ✔ Support team

Sub-Section Number :	3
Sub-Section Id :	64065381205
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 278 Question Id : 640653567158 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider an online vendor that sells software on their website. One of the user stories describes the following feature:

1 | Feature 1: Search and order a software

It has been found that implementation of Feature 1 is not possible within one agile iteration. Therefore Feature 1 is subdivided as follows:

1 | Feature 1a: Search a software

and

1 | Feature 1b: Order a software

Which of the SMART characteristics is fulfilled by the refinement?

Options :

6406531895443. ✖ Specific

6406531895444. ✖ Measurable

6406531895445. ✔ Achievable

6406531895446. ✖ Relevant

6406531895447. ✖ Time-bound

Question Number : 279 Question Id : 640653567159 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider an online gift shop which enables sellers to showcase and sell several gift items on the portal. A customer can select the gift items and place the order. After receiving the orders the sellers contact a courier service to deliver the gift items to the customers. An auditor will access the portal once in every year to audit the sales records, and they will be provided with a special credential for doing the same.

Which type of user is the auditor?

Options :

6406531895448. ✖ Primary user

6406531895449. ✔ Secondary user

6406531895450. ✖ Tertiary user

6406531895451. ✖ Not user

Question Number : 280 Question Id : 640653567161 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

A developer has developed a GUI-based text editor. The text editor has different functionalities, which are indicated by the icons embedded on different buttons and links. However, instead of using the traditional types of icons used in standard editors, the developer has created all new types of icons using several animal pictures. As a result, the users find it extremely difficult to remember which icon represents which functionalities. They have to refer to the manual every time they want to use the text editor.

Which of the usability goals is missing in the GUI?

Options :

6406531895456. ✖ Safety

6406531895457. ✖ Effectiveness

6406531895458. ✖ Learnability

6406531895459. ✔ Memorability

Question Number : 281 Question Id : 640653567165 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider a module `stack` that maintains a linked list. The module `stack` has the following functions:

- `push(e)` - adds an element `e` at the beginning of the linked list
- `pop()` - removes the element from the beginning of the linked list
- `peek()` - returns the element from the beginning of the linked list
- `isEmpty()` - returns `true` if the linked list is empty; otherwise, `false`

Identify the type of cohesion for the module `stack`.

Options :

6406531895472. ✖ Sequential cohesion

6406531895473. ✔ Communicational cohesion

6406531895474. ✖ Procedural cohesion

6406531895475. ✖ Coincidental cohesion

Question Number : 282 Question Id : 640653567166 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider a module `Producer` that generates data items and adds them to a list named `buffer`, whereas another module `Consumer` reads the data items from the `buffer`. The list `buffer` is shared between both modules, `Producer` and `Consumer`.

Identify the type of coupling between the `Producer` and `Consumer` modules.

Options :

6406531895476. ✖ Data coupling

6406531895477. ✖ Control coupling

6406531895478. ✔ Common coupling

6406531895479. ✖ Content coupling

Question Number : 283 Question Id : 640653567169 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider an eCommerce portal that has been integrated with a payment gateway with a set of APIs. Which of the following debugging strategies involves the task of searching the documentation and code examples to understand the correct use of the APIs?

Options :

6406531895488. ✖ Input manipulation

6406531895489. ✖ Backwards

6406531895490. ✖ Forwards

6406531895491. ✔ Blackbox debugging

Question Number : 284 Question Id : 640653567170 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Match the following:

Performance/Monitoring Approach	Description
1. Caching	A. Generate reports, analyze page resources, calculate the performance score, etc.
2. Task Queues	B. Minify code and compress static pages
3. Loading and rendering Pages	C. Store results of common operations in memory
4. Monitoring tools	D. Applications execute resource- and time-consuming tasks asynchronously

Options :

6406531895492. ✖ 1-B, 2-D, 3-C, 4-A

6406531895493. ✖ 1-B, 2-A, 3-C, 4-D

6406531895494. ✔ 1-C, 2-D, 3-B, 4-A

6406531895495. ✖ 1-C, 2-A, 3-B, 4-D

Sub-Section Number :	4
Sub-Section Id :	64065381206
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 285 Question Id : 640653567163 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Suppose the risk assessed for schedule slippage is 1.2. The impact of the risk due to schedule slippage is 3. What is the probability of schedule slippage occurring during project development?

Options :

6406531895464. ✖ 30%

6406531895465. ✖ 36%

6406531895466. ✔ 40%

6406531895467. ✖ 3.6%

Question Number : 286 Question Id : 640653567164 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

A software company has to develop a task planner application. The team formed for development

is small in size and the members are well-experienced. The requirements for the application are well-understood.

The values for the constants in the COCOMO model for the different types of the project are as follows:

- Organic project: $a = 2.4$, $b = 1.05$
- Semi-detached project: $a = 3.0$, $b = 1.12$
- Embedded project: $a = 3.6$, $b = 1.20$

Considering the source code of 20,000 lines, what is the initial estimated effort for the project?

Options :

6406531895468. ✖ 85.56 person months

6406531895469. ✔ 55.76 person months

6406531895470. ✖ 131.08 person months

6406531895471. ✖ 78,757.65 person months

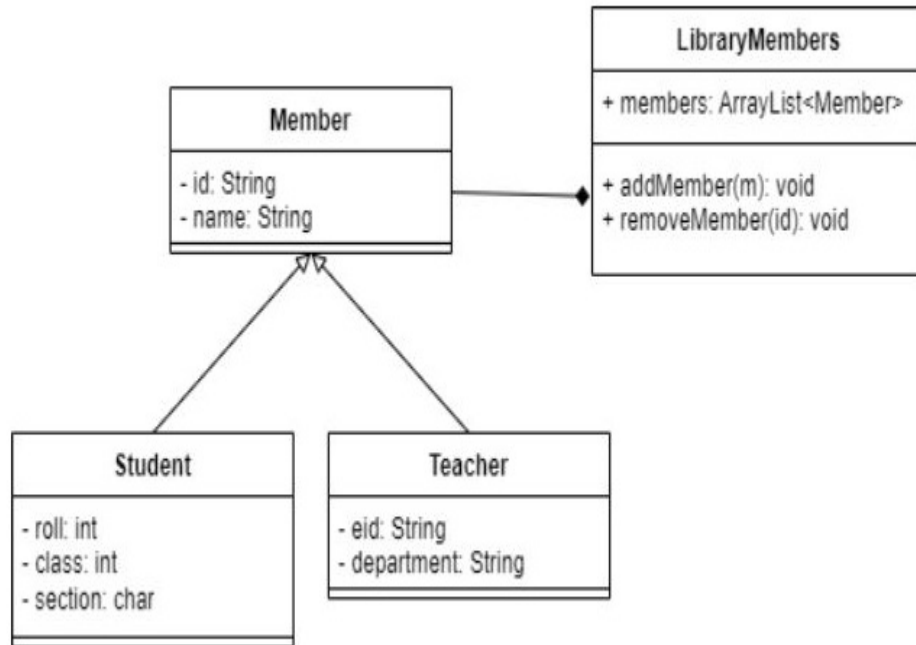
Question Number : 287 Question Id : 640653567167 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider a class diagram as shown below.



Identify the relationship **x** between **Teacher** and **Member**, and **y** between **LibraryMembers** and **Member**.

Options :

6406531895480. ✖ **x** is inheritance and **y** is association

6406531895481. ✔ **x** is inheritance and **y** is composition

6406531895482. ✖ **x** is association and **y** is composition

6406531895483. ✖ **x** is association and **y** is inheritance

Question Number : 288 Question Id : 640653567178 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider developing an online food delivery app that is initially designed to accept payment before the delivery (prepaid delivery). Therefore, to enable advance payment, class `Order` and class `Customer` are associated with an interface `PaymentProcessing` which comprises various abstract methods which are useful for online payment processing. In the current design, the classes that enable card payment (class `CardPayment`), UPI payments (class `UPIPayment`) etc. all implement the interface `PaymentProcessing` and define all the abstract methods it has.

However, afterwards, the client decided to accept COD (cash on delivery) payment as well. During the design of the class `CODPayment` that implements the interface `PaymentProcessing` it was found that most of the abstract methods that the class `CODPayment` has to define are not relevant.

Which of the following SOLID principles is violated by this design?

Options :

6406531895525. ✖ Single responsibility principle

6406531895526. ✖ Open-close principle

6406531895527. ✖ Liskov substitution principle

6406531895528. ✔ Interface segregation principle

6406531895529. ✖ Dependency inversion principle

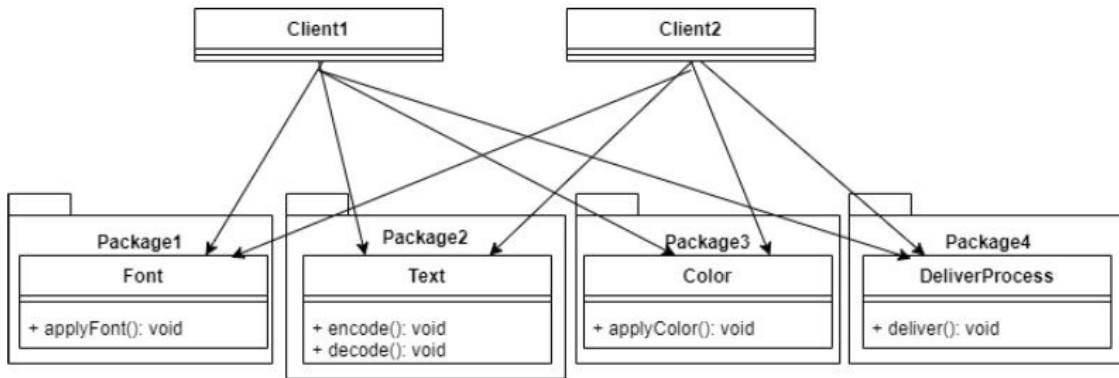
Question Number : 289 Question Id : 640653567179 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

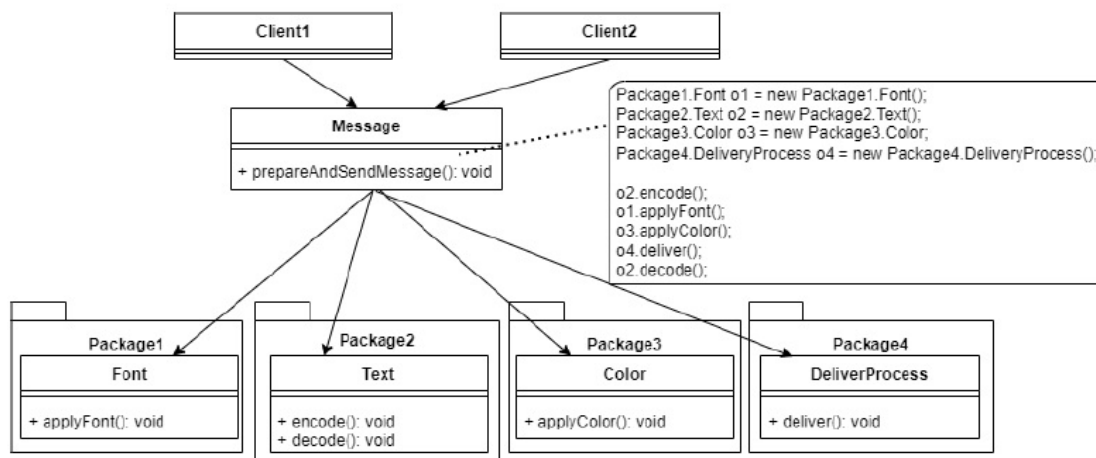
Consider the class diagram given below.



The clients (classes `Client1` and `Client2`) want to perform the task of preparing and delivering a message, which consists of the following steps:

```
1 1: Package1.Font o1 = new Package1.Font();
2 2: Package2.Text o2 = new Package2.Text();
3 3: Package3.Color o3 = new Package3.Color();
4 4: Package4.DeliveryProcess o4 = new Package4.DeliveryProcess();
5
6 5: o2.encode();
7 6: o1.applyFont();
8 7: o3.applyColor();
9 8: o4.deliver();
10 9: o2.decode();
```

However, each client has to remember the methods and also which class and packages they belong to that they need to call, and they have to be called in a specific order. To avoid this complexity, we have applied the design pattern `X`, and come up with a new design.



In this we introduce a new class `Message`, which contains a method `prepareAndSendMessage()` comprises the operations for the task of preparing and delivering a message. The clients may call the method `prepareAndSendMessage()` instead of dealing with the complex set of classes and packages. Identify the design pattern `X`.

Options :

6406531895530. ✖ Factory design pattern

6406531895531. ✖ Builder design pattern

6406531895532. ✖ Adapter design pattern

6406531895533. ✔ Facade design pattern

Question Number : 290 Question Id : 640653567181 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

The current version of the local branch of your repository is given below. You have made some changes to the files `scan.py` and `run.py`.

```
1 $ tree
2 .
3 |-- config
4 |   |-- initial.config
5 |-- log.py
6 |-- main.py
7 |-- scan.py
8 |-- run.py
9
10 1 directory, 5 files
```

Consider the below command output that gives the current status of your local repository. It shows that you have edited some files but have not added them to the staging area.

```
1 $ git status
2 On branch master
3 Untracked files:
4   (use "git add <file>..." to include in what will be committed)
5       log.py
6       scan.py
7       run.py
8
9 nothing added to commit but untracked files present (use "git add" to track)
```

You wish to finally push your changes to the remote branch. What sequence of the below commands can be executed to push your local changes to the remote branch? (Given below are just the commands for simplicity, without the arguments.)

- I. git clone
- II. git push
- III. git pull
- IV. git add
- V. git commit

Options :

6406531895539. ✖ I --> V --> IV --> II

6406531895540. ✖ I --> III --> II --> IV --> V

6406531895541. ✔ IV --> V --> II

6406531895542. ✖ III --> II --> V

Sub-Section Number :	5
Sub-Section Id :	64065381207
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 291 Question Id : 640653567174 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

Which kinds of integration testing approaches must require the use of stubs?

Options :

6406531895509. ✖ Big Bang approach

6406531895510. ✖ Bottom-Up approach

6406531895511. ✔ Top-down approach

6406531895512. ✔ Mixed approach

Question Number : 292 Question Id : 640653567175 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

Consider the following code in Python.

```
1 def bubbleSort(items):
2     n = len(items)
3     if n <= 1:
4         return
5     for i in range(n):
6         for j in range(0, n - i - 1):
7             if items[j] > items[j + 1]:
8                 items[j], items[j + 1] = items[j + 1], items[j]
```

What is the cyclomatic complexity of the given code?

Options :

6406531895513. ✖ 3

6406531895514. ✖ 4

6406531895515. ✔ 5

6406531895516. ✖ 6

Question Number : 293 Question Id : 640653567176 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

Consider writing a program to compute factorial for a given integer number n . If $n < 0$, the program prints `invalid input`. Else if $n < 2$, the program prints `1`. Else the program computes the factorial as $n * (n - 1) * (n - 2) * \dots * 2 * 1$, and prints the result.

What is the number of equivalence classes for the above program?

Options :

6406531895517. ✔ 3

6406531895518. ✖ 4

6406531895519. ✖ 5

6406531895520.

Intro to BigData

Section Id :	64065338441
Section Number :	14
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	22
Number of Questions to be attempted :	22
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065381208
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 294 Question Id : 640653567182 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DEGREE LEVEL : INTRODUCTION TO BIG DATA (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?