

Notations :

- 1.Options shown in **green** color and with ✓ icon are correct.
- 2.Options shown in **red** color and with ✗ icon are incorrect.

Question Paper Name :	IIT M FOUNDATION AN EXAM QDF2 23 Feb 2025
Subject Name :	2025 Feb23: IIT M AN EXAM QDF2
Creation Date :	2025-02-07 13:34:47
Duration :	120
Total Marks :	715
Display Marks:	Yes
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	Scientific
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

Group I

Group Number :	1
Group Id :	64065323758
Group Maximum Duration :	0
Group Minimum Duration :	90

Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	715
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No
Revisit allowed for group Instructions? :	Yes
Maximum Instruction Time :	0
Minimum Instruction Time :	0
Group Time In :	Minutes
Revisit Section :	Yes
Action on Revisit Section :	View and Edit
Navigate To Group Summary From Last Question? :	No
Disable Submit Button During Assessment? :	No
Section Selection Time? :	0
No of Optional sections to be attempted :	0

Sem1 Maths1

Section Id :	64065379166
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	14
Number of Questions to be attempted :	14
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653168785
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 6406531114602 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER I: MATHEMATICS FOR DATA SCIENCE I (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 :

6406533776563. ✓ YES

6406533776564. ✗ NO

Question Number : 2 Question Id : 6406531114603 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

Instructions:

- There are some questions which have functions with discrete valued domains (such as day, month, year etc).
- For NAT type questions, enter only one right answer even if you get multiple answers for that particular question.
- Notations:
 - \mathbb{R} = Set of real numbers
 - \mathbb{Q} = Set of rational numbers
 - \mathbb{Z} = Set of integers
 - \mathbb{N} = Set of natural numbers
- The set of natural numbers includes 0.

Options :

6406533776565. ✓ Instructions has been mentioned above.

6406533776566. ✗ This Instructions is just for a reference & not for an evaluation.

Sub-Section Number :

2

Sub-Section Id :

640653168786

Question Shuffling Allowed :

Yes

Question Number : 3 Question Id : 6406531114604 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

The Cartesian product $A \times A$ has 9 elements. Two of the elements of the Cartesian product are $(1, 3)$ and $(3, 7)$. Find the sum of all the elements in set A .

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

11

Sub-Section Number : 3

Sub-Section Id : 640653168787

Question Shuffling Allowed : Yes

Question Number : 4 **Question Id :** 6406531114605 **Question Type :** MSQ

Correct Marks : 3 **Max. Selectable Options :** 0

Question Label : Multiple Select Question

Let X be the set of natural numbers divisible by 100, Y be the set of natural numbers divisible by 25, and Z be the set of natural numbers that are perfect squares. Now consider the following Venn diagram.

[Note: A, B, C, D, E, F, and G are the regions marked in the following Venn diagram (a region in the Venn diagram can be empty)]

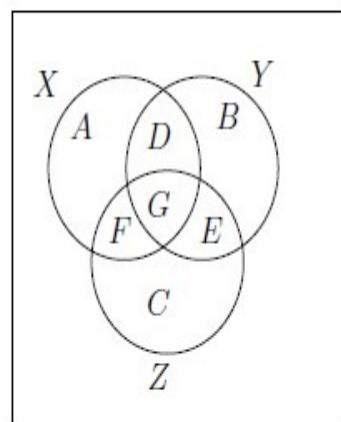


Figure M1-1

Which of the following options is (are) correct?

Options :

640653776568. ✓ 625 is in E .

640653776569. ✗ G is an empty set.

640653776570. ✓ A and F are empty set.

640653776571. ✗ 25 is in F .

Sub-Section Number : 4

Sub-Section Id : 640653168788

Question Shuffling Allowed : Yes

Question Number : 5 Question Id : 6406531114606 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following option(s) is(are) true for relation,

$$R_1 = \{(x, y) : x, y \in \mathbb{R}, x^2 + y^2 = 1\}$$

Options :

6406533776572. ✘ R_1 is a reflexive relation.

6406533776573. ✓ R_1 is a symmetric relation.

6406533776574. ✘ R_1 is a transitive relation.

6406533776575. ✘ R_1 is an equivalence relation.

Question Number : 6 Question Id : 6406531114607 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Which of the following relations is/are one-one function?

Options :

6406533776576. ✘ $R_1 = \{(x, y) \mid x, y \in \mathbb{R}, x + y > 2\}$

6406533776577. ✘ $R_2 = \{(x, y) \mid x, y \in \mathbb{R}, x > y\}$

6406533776578. ✓ $R_3 = \{(x, y) \mid x, y \in \mathbb{R}, x + y = 12\}$

6406533776579. ✘ $R_4 = \{(x, y) \mid x, y \in \mathbb{R}, y = x^2\}$

Sub-Section Number :

5

Sub-Section Id :

640653168789

Question Shuffling Allowed :

No

Question Id : 6406531114608 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (7 to 8)

Question Label : Comprehension

Suppose that L_1 and L_2 are lines in the plane, with the x -intercepts of L_1 and L_2 are 2 and -1 , respectively, and that the respective y -intercepts are -3 and 2 .

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 7 Question Id : 6406531114609 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the point where L_1 and L_2 intersect.

Options :

6406533776580. ✘ (10, 18)

6406533776581. ✘ (5, 8)

6406533776582. ✓ (-10,-18)

6406533776583. ✘ (6, 6)

Question Number : 8 Question Id : 6406531114610 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

If θ is the angle between L_1 and L_2 , then

$\tan \theta$ is equal to

Options :

6406533776584. ✓ $\frac{1}{8}$

6406533776585. ✘ $\frac{1}{6}$

6406533776586. ✘ $\frac{3}{8}$

6406533776587. ✘ $\frac{1}{4}$

Sub-Section Number :

6

Sub-Section Id :

640653168790

Question Shuffling Allowed :

No

Question Id : 6406531114611 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (9 to 10)

Question Label : Comprehension

Consider two triangles ABC and PAB with coordinates $A(4, 3)$, $B(2, 2)$, $C(8, 3)$ and $P(t, t^2)$. The area of triangle ABC is 4 times the area of the triangle PAB .

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 9 Question Id : 6406531114612 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the area of the triangle ABC ?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

2

Question Number : 10 Question Id : 6406531114613 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Choose all the possible options for P .

Options :

6406533776589. ✘ (0, 0)

6406533776590. ✘ (2, 4)

6406533776591. ✘ (-2, 4)

6406533776592. ✓ (-1, 1)

Sub-Section Number :	7
Sub-Section Id :	640653168791
Question Shuffling Allowed :	Yes

Question Number : 11 Question Id : 6406531114614 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

Radhika has been tracking her monthly expenses and the corresponding number of outings she has with friends. Here's a table with two rows representing the amount spent on entertainment and the corresponding number of outings. Let's consider y to be the amount spent and x to be the corresponding number of outings. She fitted a best-fit line to her data and obtained the equation $y = 4x + 2$. What is the value of SSE (Sum of Squared Errors) in relation to the best-fit line?

Amount spent	6	14	24	29	39	45
Number of outings	1	3	5	7	9	11

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

7

Question Number : 12 Question Id : 6406531114616 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

If $x + a$ is one of the factors of $p(x) = kx^2 + kax + 5x + 15$, then find the value of a .

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3

Sub-Section Number : 8

Sub-Section Id : 640653168792

Question Shuffling Allowed : Yes

Question Number : 13 Question Id : 6406531114615 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Let l be the equation of line which passes through the point $(1, 9)$ and parallel to $y = 7x + 6$.

Then which of the following are correct.

Options :

640653776594. ✓ The slope of l is 7.

6406533776595. ✘ The y -intercept of l is 3.

6406533776596. ✓ The equation of line l is $y = 7x + 2$.

6406533776597. ✘ The x -intercept of l is $\frac{1}{6}$.

Sub-Section Number :

9

Sub-Section Id :

640653168793

Question Shuffling Allowed :

Yes

Question Number : 14 Question Id : 6406531114617 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Aman and Prakash want to solve a quadratic equation. Aman made a mistake in writing down the constant term and ended up in getting roots as 3 and 4. Prakash made a mistake in writing down the coefficient of x and got the roots as 2 and 3. Consider the leading coefficient to be 1 in all cases. The correct roots of the quadratic equation are:

Options :

6406533776599. ✘ 1 and 5

6406533776600. ✘ 2 and 6

6406533776601. ✓ 1 and 6

6406533776602. ✘ 2 and 5

Question Number : 15 Question Id : 6406531114618 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Consider two polynomials $p(x) = x^4 + 3x^3 - 9x + 8$ and $q(x) = (x^2 + x)(x + 3)$. Let $r(x)$ be the remainder obtained when $p(x)$ is divided by $q(x)$. Let $l(x)$ be the line that passes through the y -intercept and the minimum point in the graph of $r(x)$, for reference follow the Figure: M1Q1-1.

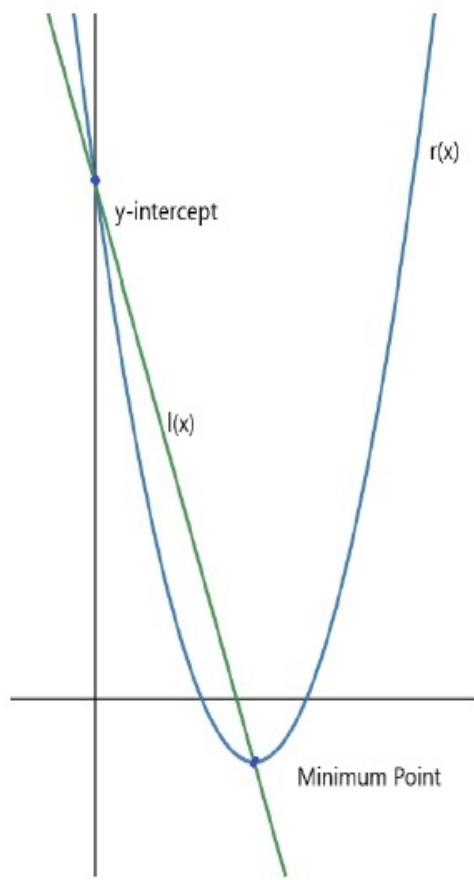


Figure: M1Q1-1

Which of the following options is/are true?

Options :

6406533776603. ✘ $r(x) = -16x^2 + 4x - 8$

6406533776604. ✓ $l(x) \equiv y = -3x + 8$

6406533776605. ✘ $l(x) \equiv y = -2x + 8$

6406533776606. ✘ The $p(x)$ has at most 4 turning points.

Sub-Section Number :

10

Sub-Section Id :

640653168794

Question Shuffling Allowed :

No

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (16 to 17)

Question Label : Comprehension

Consider the three polynomials

- $p(x) = 4x^5 + 9x^4 + b_1x^2 + c_1$.
- $q(x) = -5x^4 + 8x^2 + b_2x + c_2$.
- $s(x) = x^7 + 72x^5 + b_3x^3 + c_2x^2 + d_3x + e_3$.

Use this information to answer the given sub-questions.

Sub questions

Question Number : 16 Question Id : 6406531114620 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Which of the following options is/are true?

Options :

If $r_1(x)$ is the obtained remainder when $q(x)$ divides $p(x) + q(x)$, then the maximum possible degree of $r_1(x)$ is 5.

6406533776607. *

If $r_2(x)$ is the obtained remainder when $p(x)$ divides $s(x)$, then the maximum possible degree of $r_2(x)$ is 2.

6406533776608. *

If $t_1(x)$ is the obtained quotient when $q(x)$ divides $p(x)$, then the possible degree of $t_1(x)$ is 1.

6406533776609. ✓

If $t_2(x)$ is the obtained quotient when $p(x)$ divides $s(x)$, then the possible degree of $t_2(x)$ is 3.

6406533776610. *

Question Number : 17 Question Id : 6406531114621 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following options is/are true ?

Options :

6406533776611. ✓ $q(x) \rightarrow -\infty$ as $x \rightarrow \infty$.

6406533776612. ✓ $p(x) \rightarrow \infty$ as $x \rightarrow \infty$.

6406533776613. ✗ $q(x) \rightarrow \infty$ as $x \rightarrow \infty$.

6406533776614. ✗ $s(x) \rightarrow -\infty$ as $x \rightarrow \infty$.

Sem1 English1

Section Id :	64065379167
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	24
Number of Questions to be attempted :	24
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653168795
Question Shuffling Allowed :	No

Question Number : 18 Question Id : 6406531114622 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

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

REGISTERED BY YOU)

Options :

6406533776615. ✓ YES

6406533776616. ✗ NO

Sub-Section Number :

2

Sub-Section Id :

640653168796

Question Shuffling Allowed :

No

Question Id : 6406531114623 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (19 to 28)

Question Label : Comprehension

Read the following passage and answer the given subquestions.

From a very early age, perhaps the age of five or six, I knew that when I grew up I should be a writer. Between the ages of about seventeen and twenty-four I tried to abandon this idea, but I did so with the consciousness that I was outraging my true nature and that sooner or later I should have to settle down and write books.

I was the middle child of three, but there was a gap of five years on either side, and I barely saw my father before I was eight. For this and other reasons I was somewhat lonely, and I soon developed disagreeable mannerisms which made me unpopular throughout my school days. I had the lonely child's habit of making up stories and holding conversations with imaginary persons, and I think from the very start my literary ambitions were mixed up with the feeling of being isolated and undervalued. I knew that I had a facility with words and a power of facing unpleasant facts, and I felt that this created a sort of private world in which I could get my own back for my failure in everyday life. Nevertheless the volume of serious – i.e. seriously intended – writing which I produced all through my childhood and boyhood would not amount to half a dozen pages. I wrote my first poem at the age of four or five, my mother taking it down to dictation. I cannot remember anything about it except that it was about a tiger and the tiger had 'chair-like teeth' – a good enough phrase, but I fancy the poem was a plagiarism of Blake's 'Tiger, Tiger'. At eleven, when the war of 1914-18 broke out, I wrote a patriotic poem which was printed in the local newspaper, as was another, two years later, on the death of Kitchener. From time to time, when I was a bit older, I wrote bad and usually unfinished 'nature poems' in the Georgian style. I also, about twice, attempted a short story which was a ghastly failure. That was the total of the would-be serious work that I actually set down on paper during all those years.

Source: George Orwell's Why I Write.

Sub questions

Question Number : 19 Question Id : 6406531114624 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Select true or false for the following statement.

The narrator was unpopular throughout his school days because he picked up fights with his classmates.

Options :

6406533776617. ✘ TRUE

6406533776618. ✓ FALSE

Question Number : 20 Question Id : 6406531114625 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct option from the following

The narrator had the lonely child's habits of _____.

Options :

6406533776619. ✘ Making up stories

6406533776620. ✘ Holding conversations with imaginary persons

6406533776621. ✓ Both Making up stories and Holding conversations with imaginary persons

6406533776622. ✘ None of these

Question Number : 21 Question Id : 6406531114626 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct option from the following.

How did the narrator feel about abandoning the idea of becoming a writer during their late teens and early twenties?

Options :

6406533776623. ✘ Relieved

6406533776624. ✘ Confident

6406533776625. ✓ Unsettled

6406533776626. ✘ Indifferent

Question Number : 22 Question Id : 6406531114627 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct option from the following.

In the context of the passage, which one of the following is an antonym for the word 'facility'?

Options :

6406533776627. ✘ Ability

6406533776628. ✘ Capacity

6406533776629. ✓ Inability

6406533776630. ✘ Skillful

Question Number : 23 Question Id : 6406531114628 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

From the following options, identify the antonym for the word 'ghastly'.

Options :

6406533776631. ❌ Terrible

6406533776632. ❌ Frightful

6406533776633. ❌ Horrible

6406533776634. ✓ Pleasant

Question Number : 24 Question Id : 6406531114629 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose true or false for the following statement:

The narrator's first poem contained the phrase 'chair-like teeth.'

Options :

6406533776635. ✓ TRUE

6406533776636. ❌ FALSE

Question Number : 25 Question Id : 6406531114630 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Choose the correct answer from the following.

What is the synonym of the word 'plagiarism'?

Options :

6406533776637. ✓ Copying

6406533776638. ❌ Originality

6406533776639. ❌ Authenticity

6406533776640. ❌ Uniqueness

Question Number : 26 Question Id : 6406531114631 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Select true or false for the following statement.

The narrator wrote bad and usually unfinished 'nature poems' in the Victorian style during his teenage years.

Options :

6406533776641. ❌ TRUE

6406533776642. ✓ FALSE

Question Number : 27 Question Id : 6406531114632 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

In the context of the passage, what is the meaning of the expression 'set down'?

Options :

6406533776643. ✓ To record something in writing

6406533776644. ✗ To present oneself

6406533776645. ✗ To move backwards

6406533776646. ✗ To be logical

Question Number : 28 Question Id : 6406531114633 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

At the age of eleven, the narrator wrote a patriotic poem which was never published.

Options :

6406533776647. ✗ TRUE

6406533776648. ✓ FALSE

Sub-Section Number :

3

Sub-Section Id :

640653168797

Question Shuffling Allowed :

Yes

Question Number : 29 Question Id : 6406531114634 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Look at the word given below and study the sound that is underlined in it. Choose the option which has the same sound.

Zoo

Options :

6406533776649. ✓ Clause

6406533776650. ✗ Loss

6406533776651. ✗ Nice

6406533776652. ✗ Spy

Question Number : 30 Question Id : 6406531114635 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Pick the odd one out based on the initial sound: pare, bare, mare, stare.

Options :

- 6406533776653. ✘ Pare
- 6406533776654. ✘ Bare
- 6406533776655. ✘ Mare
- 6406533776656. ✓ Stare

Question Number : 31 Question Id : 6406531114636 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which semi-vowel occurs in the transition between the words "he" and "advised" in the sentence "*he advised me to carry an umbrella*"?

Options :

- 6406533776657. ✘ /w/
- 6406533776658. ✓ /y/

Question Number : 32 Question Id : 6406531114637 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which among the following is a word without a diphthong?

Options :

- 6406533776659. ✘ Ply
- 6406533776660. ✘ Clay
- 6406533776661. ✘ Buy
- 6406533776662. ✓ Clue

Question Number : 33 Question Id : 6406531114638 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which semi-vowel does the word "huge" contain?

Options :

- 6406533776663. ✘ /w/
- 6406533776664. ✓ /y/

Question Number : 34 Question Id : 6406531114639 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the word with the "ii" sound from the following.

Options :

- 6406533776665. ✘ Meat
- 6406533776666. ✘ Week
- 6406533776667. ✘ Light

Question Number : 35 Question Id : 6406531114640 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Find the vowel sound that is the same as that which is underlined in the word given below:

Tongue

Options :

6406533776669. ✗ Shot

6406533776670. ✓ Shut

6406533776671. ✗ Gone

6406533776672. ✗ Shout

Question Number : 36 Question Id : 6406531114641 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the sequence of consonant and vowel sounds in the word *succeed*.

Options :

6406533776673. ✗ CVVCCV

6406533776674. ✗ CVCVV

6406533776675. ✗ CVCVC

6406533776676. ✓ CVCCVC

Question Number : 37 Question Id : 6406531114642 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which among the following is not a collective noun?

Options :

6406533776677. ✗ Army

6406533776678. ✓ Sheeps

6406533776679. ✗ Scissors

Question Number : 38 Question Id : 6406531114643 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct past form of the verb '**Choose**':

Options :

6406533776680. ✗ Chosen

6406533776681. ✓ Chose

6406533776682. ✗ Choosed

6406533776683. ✘ Choose

Question Number : 39 Question Id : 6406531114644 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the adverb:

"*She sang beautifully at the concert*"

Options :

6406533776684. ✘ She

6406533776685. ✘ Sang

6406533776686. ✓ Beautifully

6406533776687. ✘ Concert

Question Number : 40 Question Id : 6406531114645 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"*She spoke very quietly*"

Which word modifies the adverb?

Options :

6406533776688. ✘ She

6406533776689. ✘ Spoke

6406533776690. ✓ Very

6406533776691. ✘ Quietly

Question Number : 41 Question Id : 6406531114646 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"*The happy dog wagged its tail excitedly*"

Identify the adjective and adverb:

Options :

6406533776692. ✘ Happy (adj.), wagged (adv.)

6406533776693. ✓ Happy (adj.), excitedly (adv.)

6406533776694. ✘ Dog (adj.), excitedly (adv.)

6406533776695. ✘ Tail (adj.), happy (adv.)

Question Number : 42 Question Id : 6406531114647 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

She's allergic ____ dust.

Choose the correct preposition

Options :

6406533776696. ✘ Of

6406533776697. ✘ From

6406533776698. ✓ To

6406533776699. ✘ With

Question Number : 43 Question Id : 6406531114648 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the interjection expressing relief:

Options :

6406533776700. ✓ Phew!

6406533776701. ✘ Yay!

6406533776702. ✘ Oops!

6406533776703. ✘ Brrr!

Question Number : 44 Question Id : 6406531114649 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option.

When referring to a specific day of the month numerically, which article is used?

Options :

6406533776704. ✘ A

6406533776705. ✘ An

6406533776706. ✓ The

6406533776707. ✘ No article

Question Number : 45 Question Id : 6406531114650 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Select the most appropriate idiom of the given meaning.

To exaggerate a minor difficulty.

Options :

6406533776708. ✘ Turn a deaf ear to

6406533776709. ✘ Tooth and nail

6406533776710. ✘ On cloud nine

6406533776711. ✓ Make a mountain out of a molehill

Question Number : 46 Question Id : 6406531114651 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option.

The phrase 'it takes two to tango' means _____.

Options :

6406533776712. ✓ A situation or argument involving two people, both of them are responsible for it.

6406533776713. ✗ To play a subordinate role to someone.

Question Number : 47 Question Id : 6406531114652 Question Type : MCQ**Correct Marks : 1**

Question Label : Multiple Choice Question

In primary school, the older kids would often _____ the younger ones during the lunch break.

Options :

6406533776714. ✗ Pick out

6406533776715. ✓ Pick on

6406533776716. ✗ Pick at

6406533776717. ✗ Pick through

Question Number : 48 Question Id : 6406531114653 Question Type : MCQ**Correct Marks : 1**

Question Label : Multiple Choice Question

"Bring up" is an example of a separable phrasal verb.

Options :

6406533776718. ✓ TRUE

6406533776719. ✗ FALSE

Sub-Section Number :

4

Sub-Section Id :

640653168798

Question Shuffling Allowed :

No

Question Id : 6406531114654 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (49 to 53)

Question Label : Comprehension

Fill in the blanks in List A with the most contextually appropriate modal verbs in List B.

List A	List B
(i) "You don't suppose he _____ give us one, do you?" Hint: To express someone's willingness to do something.	[a] Ought to
(ii) "You _____ know that you cannot walk barefoot in the snow." Hint: To indicate what is ideally expected of someone.	[b] Should not
(iii) "You _____ join the music club." Hint: To make a suggestion.	[c] Will
(iv) "You _____ leave." Hint: To formally give permission.	[d] Could
(v) "They _____ suspect an innocent man." Hint: To advise or instruct what is correctly required of someone.	[e] May

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 49 Question Id : 6406531114655 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"You don't suppose he _____ give us one, do you?"

Hint: To express someone's willingness to do something.

Options :

6406533776720. ✘ Ought to

6406533776721. ✘ Should not

6406533776722. ✓ Will

6406533776723. ✘ Could

6406533776724. ✘ May

Question Number : 50 Question Id : 6406531114656 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"You _____ know that you cannot walk barefoot in the snow."

Hint: To indicate what is ideally expected of someone.

Options :

6406533776725. ✓ Ought to

6406533776726. ✘ Should not

6406533776727. ✘ Will

6406533776728. ✘ Could

6406533776729. ✘ May

Question Number : 51 Question Id : 6406531114657 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"You ____ join the music club."

Hint: To make a suggestion.

Options :

6406533776730. ✘ Ought to

6406533776731. ✘ Should not

6406533776732. ✘ Will

6406533776733. ✓ Could

6406533776734. ✘ May

Question Number : 52 Question Id : 6406531114658 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"You ____ leave."

Hint: To formally give permission.

Options :

6406533776735. ✘ Ought to

6406533776736. ✘ Should not

6406533776737. ✘ Will

6406533776738. ✘ Could

6406533776739. ✓ May

Question Number : 53 Question Id : 6406531114659 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

"They ____ suspect an innocent man."

Hint: To advise or instruct what is correctly required of someone.

Options :

6406533776740. ✘ Ought to

6406533776741. ✓ Should not

6406533776742. ✘ Will

6406533776743. ✘ Could

6406533776744. ✘ May

Sub-Section Number :	5
Sub-Section Id :	640653168799
Question Shuffling Allowed :	No

Question Id : 6406531114660 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (54 to 58)

Question Label : Comprehension

Complete the telephonic conversation given below with most polite and correct responses.

Sharanya: Hello, is this Golden Dragon restaurant?

Host: Yes, ma'am. (1) _____

Sharanya: Hello, I'd like to make a reservation for two.

Host: (2) _____ For which date and time?

Customer: This Saturday at 7 PM.

Host: Ma'am, (3) _____ I will check for the availability.

Customer: Sure.

[A few moments later]

Host: Ma'am, we have a table available. (4) _____

Sharanya: Sure, it's Sharanya Kumar.

Host: (5) _____

Customer: Great, thanks a lot.

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 54 Question Id : 6406531114661 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (1) with an appropriate response.

Options :

6406533776745. ❌ What's the matter with you?

6406533776746. ✓ How may I help you?

6406533776747. ❌ What do you want?

6406533776748. ❌ Want some help?

Question Number : 55 Question Id : 6406531114662 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (2) with an appropriate response.

Options :

6406533776749. ✓ Certainly, ma'am

6406533776750. ❌ Yeah, buddy

6406533776751. ✎ Whatever!

6406533776752. ✎ Okay!

Question Number : 56 Question Id : 6406531114663 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (3) with an appropriate response.

Options :

6406533776753. ✎ Wait!

6406533776754. ✎ Hang on!

6406533776755. ✓ Could you please hang on?

6406533776756. ✎ Don't wait!

Question Number : 57 Question Id : 6406531114664 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (4) with an appropriate response.

Options :

6406533776757. ✎ Name?

6406533776758. ✎ Your name?

6406533776759. ✓ Can I have your name, please?

6406533776760. ✎ Who are you?

Question Number : 58 Question Id : 6406531114665 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (5) with an appropriate response.

Options :

6406533776761. ✓ Thank you, ma'am. Your reservation is confirmed

6406533776762. ✎ Hey, your reservation is confirmed

6406533776763. ✎ Hi, buddy. Your reservation is confirmed

6406533776764. ✎ Hey, sir. Your reservation is confirmed

Sem1 CT

Section Id :	64065379168
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	14

Number of Questions to be attempted :	14
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653168800
Question Shuffling Allowed :	No

Question Number : 59 Question Id : 6406531114666 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER I: COMPUTATIONAL THINKING (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 :

6406533776765. ✓ YES

6406533776766. ✗ NO

Question Number : 60 Question Id : 6406531114667 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

Scores

SeqNo	Name	Gender	DateOfBirth	TownCity	Mathematics	Physics	Chemistry	Total
0	Bhuvanesh	M	7 Nov	Erode	68	64	78	210
					■ ■ ■			

29 Naveen M 13 Oct Vellore 72 66 81 219

Words

SeqNo	Word	PartOfSpeech	LetterCount
0	It	Pronoun	2
			■ ■ ■

64 cane. Noun 4

Library

SeqNo	Name	Author	Genre	Language	Pages	Publisher	Year
0	Igniting Minds	Kalam	Nonfiction	English	178	Penguin	2002
					■ ■ ■		

29 Malgudi Days Narayan Fiction English 150 Indian Thought 1943

Olympics

SeqNo	Name	Gender	Nationality	Host country	Year	Sport	Medal
0	Karnam Malleswari	F	Indian	Australia	2000	Weightlifting	Bronze
- - -							
49	Michael Phelps	M	American	China	2008	Swimming	Gold

Three sample cards out of 30 for Shopping Bills dataset

Item List

SV Stores		Srivatsan 1		
Item	Category	Qty	Price	Cost
Carrots	Vegetables/Food	1.5	50	75
Soap	Toiletries	4	32	128
Tomatoes	Vegetables/Food	2	40	80
Bananas	Vegetables/Food	8	8	64
Socks	Footwear/Apparel	3	56	168
Curd	Dairy/Food	0.5	32	16
Milk	Dairy/Food	1.5	24	36
				567

Sun General		Vignesh 14		
Item	Category	Qty	Price	Cost
Phone Charger	Utilities	1	230	230
Razor Blades	Grooming	1	12	12
Razor	Grooming	1	45	45
Shaving Lotion	Grooming	0.8	180	144
Earphones	Electronics	1	210	210
Pencils	Stationery	3	5	15
				656

Big Bazaar		Sudeep 2		
Item	Category	Qty	Price	Cost
Baked Beans	Canned/Food	1	125	125
Chicken Wings	Meat/Food	0.5	600	300
Cocoa powder	Canned/Food	1	160	160
Capsicum	Vegetables/Food	0.8	180	144
Tie	Apparel	2	390	780
Clips	Household	0.5	32	16
				1525

Options :

6406533776767. ✓ Useful Data has been mentioned above.

6406533776768. ✗ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number :

2

Sub-Section Id :

640653168801

Question Shuffling Allowed :

Yes

Question Number : 61 Question Id : 6406531114668 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "Words" dataset. What will **count** represent at the end of the execution?

```
1 count = 0
2 while(Table 1 has more rows){
3     flag1 = False, flag2 = False
4     Read the first row X in Table 1
5     if(X.PartofSpeech == "Adverb"){
6         flag1 = True
7     }
8     if(X.LetterCount <= 5){
9         flag2 = True
10    }
11    if(flag1 and flag2){
12        count = count + 1
13    }
14    Move X to Table 2
15 }
```

Options :

- 6406533776769. ✓ Number of words which are adverbs and have at most five letters
- 6406533776770. ✗ Number of words which are either adverbs or have at most five letters but not both
- 6406533776771. ✗ Number of words which are either adverbs or have at least five letters or both
- 6406533776772. ✗ Number of words which are adverbs and have at least five letters

Question Number : 62 Question Id : 6406531114670 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "**Scores**" dataset. At the end of the execution of below pseudocode, if **count2** represents the number of male students whose Chemistry marks are greater than or equal to their Mathematics marks, then select the correct code fragment for A and B.

```
1 count1 = 0
2 count2 = 0
3 while(Table 1 has more rows){
4     Read the first row X in Table 1
5     if(....A.... or ....B....){
6         count1 = count1 + 1
7     }
8     else{
9         count2 = count2 + 1
10    }
11    Move X to Table 2
12 }
```

Options :

A: X.Gender == 'M'

6406533776777. ❌ B: X.Mathematics > X.Chemistry

A: X.Gender == 'F'

6406533776778. ❌ B: X.Mathematics < X.Chemistry

A: X.Gender == 'F'

6406533776779. ✓ B: X.Mathematics > Chemistry

A: X.Gender == 'M'

6406533776780. ❌ B: X.Mathematics < Chemistry

Question Number : 63 Question Id : 6406531114671 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

At the end of the execution of the given procedure using the "Scores" dataset, what will A and B represent?

```
1 A = 100
2 B = 100
3 while(Table 1 has more cards){
4     Read top card X from Table 1
5     if(X.Physics <= A){
6         B = A
7         A = X.Physics
8     }
9     else{
10        if(X.Physics <= B){
11            B = X.Physics
12        }
13    }
14    Move card X to Table 2
15 }
```

Options :

- 6406533776781. ✗ A is the maximum Physics mark, and B is the minimum Physics mark.
- 6406533776782. ✗ A is the minimum Physics mark, and B is the maximum Physics mark.
- 6406533776783. ✗ A is the second minimum Physics mark, and B is the minimum Physics mark.
- 6406533776784. ✓ A is the minimum Physics mark, and B is the second minimum Physics mark.

Question Number : 64 Question Id : 6406531114672 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed on the "Library" dataset. What is the value of **Count** after the pseudocode below is executed?

```
1 Count = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     Move X to Table 2
5     while(Table 1 has more rows){
6         Read the first row Y in Table 1
7         if	verifyPair(X, Y) {
8             Count = Count + 1
9         }
10        Move Y to Table 3
11    }
12    Move all rows from Table 3 to Table 1
13 }
14
15 Procedure verifyPair(X, Y)
16     if(X.Genre == Y.Genre and X.Language != Y.Language){
17         return True
18     }
19     else{
20         return False
21     }
22 End verifyPair
```

Options :

- 6406533776785. ❌ Number of book pairs that have the same Genre and Languages
- 6406533776786. ❌ Number of book pairs that have different Genres and Languages
- 6406533776787. ✓ Number of book pairs that have the same Genre but are in different languages
- 6406533776788. ❌ Number of book pairs that have different genres but are in the same language

Question Number : 65 Question Id : 6406531114673 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "Words" dataset. Consider that procedure **vCount** returns the number of vowels and procedure **cCount** returns the number of consonants.

```
1 count = 0
2 Q = True
3 while(Table 1 has more rows){
4     Read the first row X in Table 1
5     Move X to Table 2
6     while(Table 1 has more rows){
7         Read the first row Y in Table 1
8         Move Y to Table 3
9         if(vCount(X) != vCount(Y)){
10            Q = False
11        }
12        if(cCount(X) != cCount(Y)){
13            Q = False
14        }
15        if(Q){
16            count = count + 1
17        }
18    }
19    Move all rows of Table 3 to Table 1
20 }
```

What will **count** represent at the end of execution?

Options :

6406533776789. ✘ Number of pairs of words that differ in number of vowels and number of consonants

6406533776790. ✘ Number of pairs of words either having an equal number of vowels or consonants or both

6406533776791. ✓ Number of pairs of words having an equal number of vowels and consonants

6406533776792. ✘ Number of pairs of words having an equal number of vowels but not consonants

Sub-Section Number :

3

Sub-Section Id :

640653168802

Question Shuffling Allowed :

Yes

Question Number : 66 Question Id : 6406531114669 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Match the following expressions in the **Column 1** with the appropriate values in **Column 2**.

Column 1	Column 2
a. $2 = 2$ or $2 > 3$	1. Invalid expression
b. $2 == 2$ and $2 > 3$	2. True
c. $2 == 2$ or $2 > 3$	3. False
d. $2 + '2'$	4. 4
e. $2 >= 2$	5. "22"

Options :

6406533776773. ✘ a - (2), b - (3), c - (1), d - (1), e - (2)

6406533776774. ✓ a - (1), b - (3), c - (2), d - (1), e - (2)

6406533776775. ✘ a - (2), b - (3), c - (1), d - (4), e - (2)

6406533776776. ✘ a - (1), b - (3), c - (2), d - (1), e - (1)

Sub-Section Number :

4

Sub-Section Id :

640653168803

Question Shuffling Allowed :

Yes

Question Number : 67 Question Id : 6406531114674 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "**Scores**" dataset.

```
1 A = 0, B = 0
2 while(Table 1 has more rows){
3     Read the first row X from Table 1
4     Flag = False
5     if(X.Gender == 'F' and X.Total > 250){
6         Flag = True
7     }
8     if(not Flag){
9         A = A + 1
10        if(X.Total > 250){
11            B = B + 1
12        }
13    }
14    Move X to Table 2
15 }
```

Which of the following statements is/are correct?

Options :

6406533776793. ✖ A represents number of male students whose total marks are at most 250.

6406533776794. ✓ B represents number of male students whose total marks are greater than 250.

6406533776795. ✖ B represents number of students whose total marks are greater than 250.

6406533776796. ✖ In line 8, if we remove **not** from **if** condition, then A represent number of male students and number of female students whose total marks are greater than 250.

Question Number : 68 Question Id : 6406531114675 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Shopping Bills" dataset. At the end of execution, A captures the lowest price across all items purchased from "Big Bazaar". But the pseudocode may have mistakes in one or more lines. Identify all such lines (if any). Assume that all statements not listed in the options below are free of errors. It is a Multiple Select Question (MSQ).

```
1 A = 0
2 while(Pile 1 has more cards){
3     Read the top card X in Pile 1
4     if(X.shopName == "Big Bazaar"){
5         temp = findItem(X)
6         if(temp > A){
7             A = temp
8         }
9     }
10    Move X to Pile 2
11 }
12
13 Procedure findItem(Y)
14     minPrice = 0
15     while(Card Y has more items){
16         Read an item Z from ItemList of card Y
17         if(minPrice > Z.Price ){
18             minPrice = Z.Price
19         }
20         Remove Z from ItemList of card Y
21     }
22     return(minPrice)
23 End findItem
```

Options :

6406533776797. ✓ Line 1: Incorrect initialization of A

6406533776798. ✓ Line 6: Incorrect conditional statement

6406533776799. ✓ Line 14: Incorrect initialization of minPrice

6406533776800. ✖ Line 17: Incorrect conditional statement

Question Number : 69 Question Id : 6406531114678 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using a dataset similar to the "Words" dataset, based on the following paragraph.

"Surrounded by nature, Susan often takes a stroll, savoring the soothing sounds of chirping birds. Rustlings in the trees suggest squirrels beginning their day, searching for sustenance. Surely, the beauty of a sunrise holds unparalleled magic."

```
1 count = 0, flag = False
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     Move X to Table 2
5     if(1st letter of X.word == 's' and flag){
6         if(2nd letter of X.word == 'u'){
7             count = count + 1
8         }
9     }
10    if(X.word ends with full stop){
11        flag = True
12    }
13 }
```

Assume that upper case and lower case are ignored during comparison of letters.

Which of the following words will **not** be considered in the **count** at the end of execution?

Options :

6406533776809. ✓ surrounded

6406533776810. ✗ suggest

6406533776811. ✗ sustenance

6406533776812. ✗ surely

Question Number : 70 Question Id : 6406531114679 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The given pseudocode is executed using the "Scores" dataset. There is a hypothesis that if a student performs well overall (i.e., scores at least total 180 marks), then he/she must have performed well in all the subjects (i.e., scored at least 60 marks in each subject).

At the end of execution, **fracTrue** stores the fraction of students who satisfy this hypothesis. Choose the correct code fragment to complete the pseudocode.

```
1 countoverall = 0, countPerSub = 0
2 while(Table 1 has more rows){
3     Read the first row X in Table 1
4     if(X.Total >= 180) {
5         *****
6         * Fill the code *
7         *****
8     }
9     Move X to Table 2
10 }
11 fracTrue = countPerSub / countoverall
```

Options :

```
1 if(x.Physics >= 60 and x.Chemistry >= 60 and x.Mathematics >= 60){
2     countPerSub = countPerSub + 1
3     countoverall = countoverall + 1
4 }
```

6406533776813. ✘

```
1 if(x.Physics >= 60 and x.Chemistry >= 60 and x.Mathematics >= 60){
2     countPerSub = countPerSub + 1
3 }
4 countoverall = countoverall + 1
```

6406533776814. ✓

```
1 if(x.Physics >= 60 or x.Chemistry >= 60 or x.Mathematics >= 60){
2     countPerSub = countPerSub + 1
3 }
4 countoverall = countoverall + 1
```

6406533776815. ✘

```
1 if(x.Physics >= 60 and x.Chemistry >= 60 and x.Mathematics >= 60){
2     countoverall = countoverall + 1
3 }
4 countPerSub = countPerSub + 1
```

6406533776816. ✘

Sub-Section Number :

5

Sub-Section Id :

640653168804

Question Shuffling Allowed :

Yes

Question Number : 71 Question Id : 6406531114676 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Library" dataset. Procedure **biGenre(A)** returns True if the author A has written a more number of non-fiction books than fiction books.

Choose the correct code fragment(s) to complete the pseudocode. Assume that the dataset has only two possible genres.

```
1 Procedure biGenre(A)
2     count = 0
3     while(Table 1 has more rows){
4         Read the first row X in Table 1
5         Move X to Table 2
6         *****
7         * Fill the code *
8         *****
9     }
10    if(count < 0){
11        return(True)
12    }
13    return(False)
14 End biGenre
```

Options :

```
1 if(X.Author == A and X.Genre == "Fiction"){
2     count = count + 1
3 }
4 else{
5     if(X.Author == A){
6         count = count - 1
7     }
8 }
```

6406533776801. ✓

```
1 if(X.Author == A and X.Genre == "Fiction"){
2     count = count + 1
3 }
4 else{
5     count = count - 1
6 }
```

6406533776802. ✗

6406533776803. ✗

```
1 if(x.Author == A){  
2     count = count + 1  
3 }  
4 if(x.Genre == "Fiction"){  
5     count = count + 1  
6 }  
7 else{  
8     count = count - 1  
9 }
```

```
1 if(x.Author == A ){  
2     if(x.Genre == "Non-Fiction"){  
3         count = count + 1  
4     }  
5     else{  
6         count = count - 1  
7     }  
8 }
```

6406533776804. ✘

Question Number : 72 Question Id : 6406531114677 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Words" dataset. At the end of the execution, A is set to True if there exist a pair of words with same part of speech and same letter count. Choose the correct code fragment to complete the pseudocode.

```
1 A = False  
2 while(Table 1 has more rows){  
3     Read the first row X in Table 1  
4     Move X to Table 2  
5     while(Table 1 has more rows){  
6         Read the first row Y in Table 1  
7         *****  
8         * Fill the code *  
9         *****  
10        Move Y to Table 3  
11    }  
12    Move all rows from Table 3 to Table 1  
13 }
```

Options :

6406533776805. ✓

```
1 if(X.Partofspeech == Y.Partofspeech and X.LetterCount == Y.LetterCount){  
2     A = True  
3 }
```

```
1 if(X.PartofSpeech == Y.PartofSpeech or X.LetterCount == Y.LetterCount){  
2     A = True  
3 }
```

6406533776806. ✘

```
1 if(X.Partofspeech == Y.Partofspeech){  
2     if(X.LetterCount == Y.LetterCount){  
3         A = True  
4     }  
5 }  
6
```

6406533776807. ✓

```
1 if(X.Partofspeech <> Y.Partofspeech and X.LetterCount <> Y.LetterCount){  
2     A = False  
3 }  
4 else{  
5     A = True  
6 }
```

6406533776808. ✘

Sem1 Statistics1

Section Id :	64065379169
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	13
Number of Questions to be attempted :	13
Section Marks :	40
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0

Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653168805
Question Shuffling Allowed :	No

Question Number : 73 Question Id : 6406531114680 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER I: STATISTICS FOR DATA SCIENCE I (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 :

6406533776817. ✓ YES

6406533776818. ✗ NO

Sub-Section Number :	2
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Sub-Section Id :	640653168806
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Question Shuffling Allowed :	Yes
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Question Number : 74 Question Id : 6406531114681 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

A researcher collects data on the number of books read by students in a semester. The data collected is:

Options :

6406533776819. ✗ Nominal and Qualitative

6406533776820. ✗ Ordinal and Qualitative

6406533776821. ✗ Interval and Quantitative

6406533776822. ✓ Ratio and Quantitative

Question Number : 75 Question Id : 6406531114682 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

A study was conducted to investigate the association between smoking habits and lung disease within a population. The collected data is presented in Table Q.3.

	Have Lung Disease	Do Not Have Lung Disease	Total
Smoker	40	x	100
Non-Smoker	y	180	200
Total	60	240	300

Table Q.3 : Smoking Habits and Lung Disease Contingency Table

What proportion of non-smokers have lung disease?

Options :

6406533776823. ✓ 0.10

6406533776824. ✗ 0.60

6406533776825. ✗ 0.20

6406533776826. ✗ 0.30

Sub-Section Number :

3

Sub-Section Id :

640653168807

Question Shuffling Allowed :

Yes

Question Number : 76 Question Id : 6406531114683 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

Consider a dataset of 40 items. Suppose the sum of the squared deviations from the mean is 10 and total sum of all the items in the dataset is 80. Find the mean \bar{x} and population standard deviation σ of the dataset.

Options :

6406533776827. ✗ $\bar{x} = 2, \sigma = 0.25$

6406533776828. ✓ $\bar{x} = 2, \sigma = 0.5$

6406533776829. ✗ $\bar{x} = 3200, \sigma = 0.5$

6406533776830. ✗ $\bar{x} = 0.5, \sigma = 0.25$

Sub-Section Number :

4

Sub-Section Id :

640653168808

Question Shuffling Allowed :

Yes

Question Number : 77 Question Id : 6406531114684 Question Type : MSQ

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

Suppose a survey asks respondents to indicate their favorite type of food (e.g., Italian, Chinese, Indian, Mexican). Which of the following option(s) is (are) true?

Options :

- 6406533776831. ✓ The data is nominal.
- 6406533776832. ✗ The data is ordinal.
- 6406533776833. ✗ The data is quantitative.
- 6406533776834. ✓ The data is qualitative.

Question Number : 78 Question Id : 6406531114685 Question Type : MSQ**Correct Marks : 2 Max. Selectable Options : 0**

Question Label : Multiple Select Question

A teacher randomly selects 5 students from each class in a school. Based on the performance of these students, she wants to assess the overall performance of the school. Which of the following option(s) is (are) true?

Options :

- 6406533776835. ✗ Students of a particular class will represent the population.
- 6406533776836. ✗ Students of a particular class form the sample.
- 6406533776837. ✓ The school as a whole represents the population.
- 6406533776838. ✓ The 5 students from each class form the sample.

Question Number : 79 Question Id : 6406531114686 Question Type : MSQ**Correct Marks : 2 Max. Selectable Options : 0**

Question Label : Multiple Select Question

Table Q.4 presents the frequency distribution of various T-shirt sizes among a group of 50 students.

Sizes	Frequency
Small	10
Medium	25
Large	15

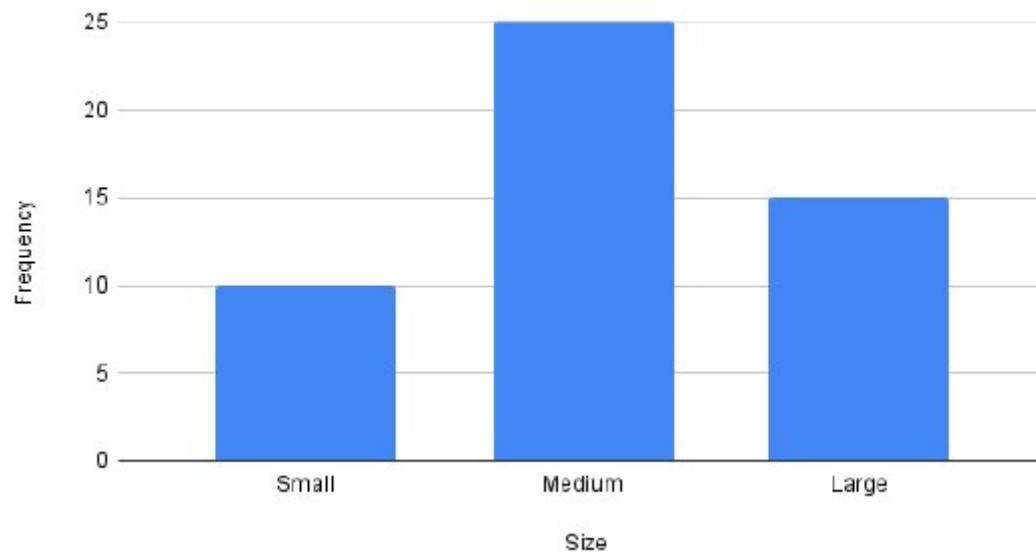
Table Q.4

According to this data which is the correct graphical representation of this data?
(More than one option can be correct)

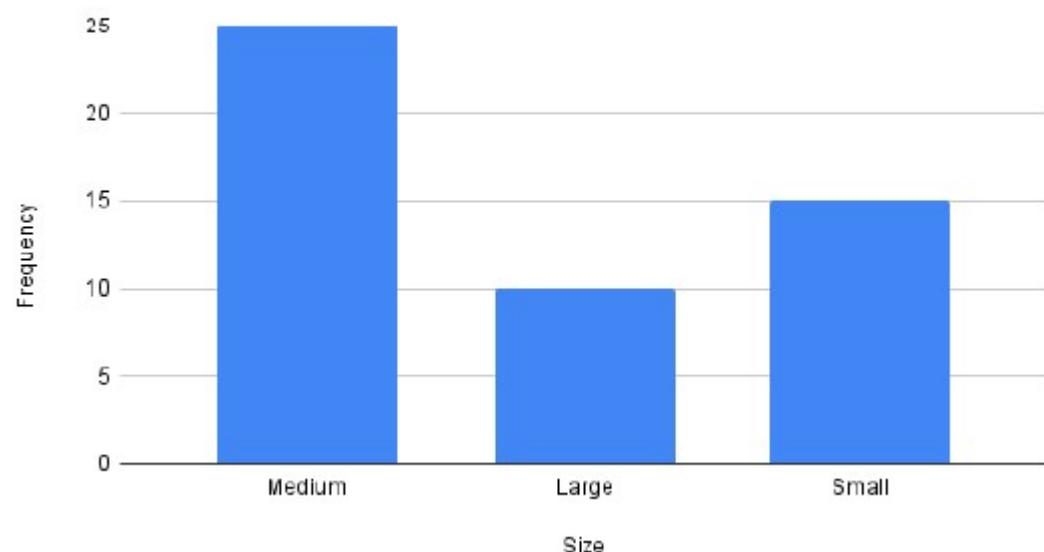
Options :

- 6406533776839. ✓

Frequency vs. Size

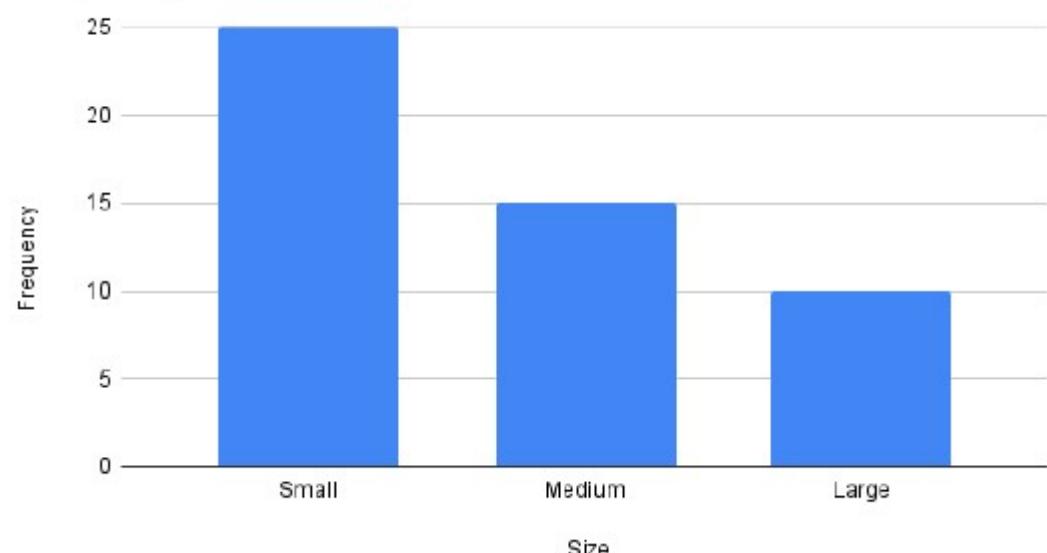


Frequency vs. Size



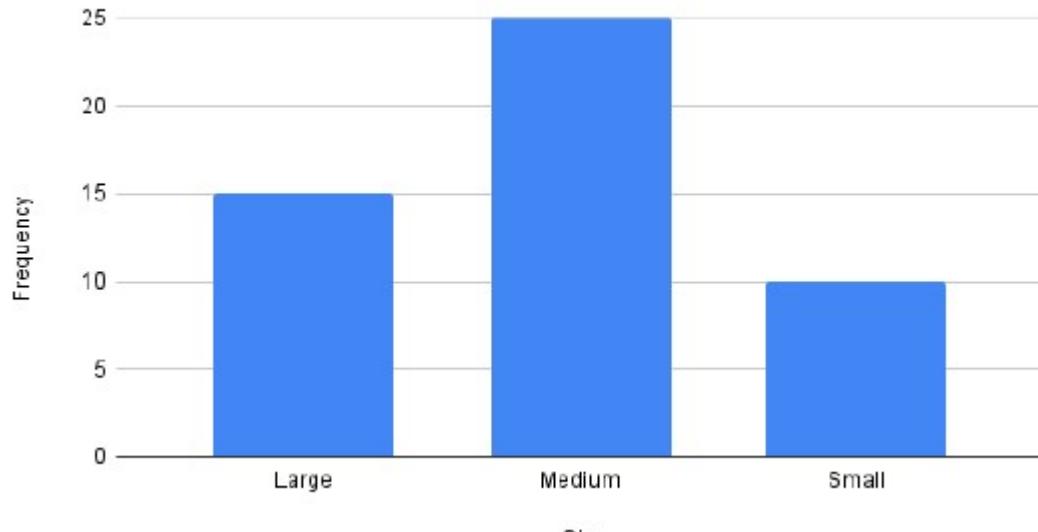
6406533776840. ✶

Frequency vs. Size



6406533776841. ✶

Frequency vs. Size



6406533776842. ✓

Sub-Section Number :

5

Sub-Section Id :

640653168809

Question Shuffling Allowed :

Yes

Question Number : 80 Question Id : 6406531114687 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

If we have a dataset 18, 37, 24, 56, 62, 120, then choose the correct option(s):

Options :

6406533776843. ✓ Range of the dataset is 102.

6406533776844. ✓ Median of the dataset is 46.5.

6406533776845. ✓ 25th percentile of the dataset is 24.

6406533776846. ✗ IQR (Inter-quartile range) of the dataset is 59.

Sub-Section Number :

6

Sub-Section Id :

640653168810

Question Shuffling Allowed :

Yes

Question Number : 81 Question Id : 6406531114688 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

A researcher collected data on the amount of fertilizer (in kilograms) applied and the crop yield (in kilograms per hectare) for 5 different fields. The data is summarized in Table Q.2.

X: Fertilizer Applied (kg)	Y: Crop Yield (kg/hectare)
2	30
3	35
4	45
5	50
6	60

Table Q.2

Calculate population covariance between X and Y .

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

15

Sub-Section Number : 7

Sub-Section Id : 640653168811

Question Shuffling Allowed : No

Question Id : 6406531114689 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (82 to 83)

Question Label : Comprehension

A grocery store owner wants to analyze the prices of different brands of packaged snacks in his store. He randomly collected 10 snack packets and their prices (in rupees) are 120, 450, 620, 200, 280, 670, 150, 190, 310, 400 respectively. Based on the given information, answer the given sub-questions:

Sub questions

Question Number : 82 Question Id : 6406531114690 Question Type : MSQ

Correct Marks : 2 Max. Selectable Options : 0

Question Label : Multiple Select Question

At what price do the top 25% of snack packets start? (More than one option can be correct)

Options :

640653776848. ✓ It corresponds to the third quartile.

640653776849. ✓ 450 Rupees.

640653776850. ✗ It corresponds to the first quartile.

Question Number : 83 Question Id : 6406531114691 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

What is the Interquartile Range (IQR) of the snack packet prices?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

260

Sub-Section Number : 8

Sub-Section Id : 640653168812

Question Shuffling Allowed : No

Question Id : 6406531114692 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (84 to 85)

Question Label : Comprehension

Figure Q.1 shows the pie chart representation of the percentage of participated students in a particular game from different states. Total number of participated student is 125.

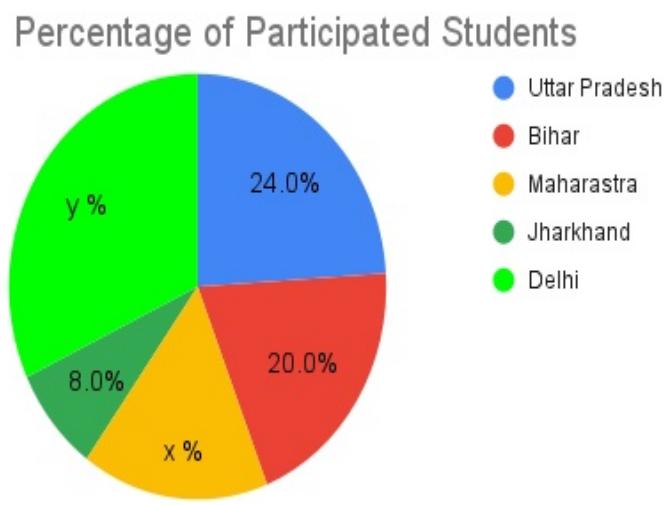


Figure Q.1: Percentage of Students Participated

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 84 Question Id : 6406531114693 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

Find the number of students from Uttar Pradesh.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

30

Question Number : 85 Question Id : 6406531114694 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

If the number of participated students from Delhi is twice than the number of students participated from Maharashtra, then find the value of y.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

32

Sub-Section Number : 9

Sub-Section Id : 640653168813

Question Shuffling Allowed : No

Question Id : 6406531114695 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (86 to 87)

Question Label : Comprehension

The monthly salaries (in thousands) offered to employees in a company are represented in the following stem-and-leaf plot:

Stem	Leaf
1	246
2	024
3	126

Here, 5|2 represents 52 .

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 86 Question Id : 6406531114696 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the average monthly salary of the employees if each observation is increased by 3 and then multiplied by 2?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

52

Question Number : 87 Question Id : 6406531114697 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the population variance of the given data if 10 is added to each observation?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

64

Question Id : 6406531114698 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (88 to 90)

Question Label : Comprehension

Table Q.1 represents the number of questions attempted by five students in an exam.

Name of the student	Number of attempted questions	Relative frequency
Jatin	$a + 3$	x
Astha	a	y
Ayushi	6	0.1
Rajat	$a + 3$	
Deepanshu	a	z

Table Q.1

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 88 Question Id : 6406531114699 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

Find the total number of questions attempted by Astha and Deepanshu together.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

24

Question Number : 89 Question Id : 6406531114700 Question Type : SA

Correct Marks : 1

Question Label : Short Answer Question

What is the value of x ? Enter the answer correct to two decimal places.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.22 to 0.28

Question Number : 90 Question Id : 6406531114701 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the value of $y + z$?

Options :

6406533776859. ✘ 0.2

6406533776860. ✘ 0.24

6406533776861. ✓ 0.4

6406533776862. ✘ Insufficient information.

Sem2 Maths2

Section Id :	64065379170
Section Number :	5
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	50
Display Number Panel :	Yes
Section Negative Marks :	0
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	No
Section Maximum Duration :	0
Section Minimum Duration :	0
Section Time In :	Minutes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	640653168814
Question Shuffling Allowed :	No

Question Number : 91 Question Id : 6406531114702 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "FOUNDATION LEVEL : SEMESTER II: MATHEMATICS FOR DATA SCIENCE II (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 :

6406533776863. ✓ YES