Indian Institute of Technology, Madras - BS in Data Science and Applications

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 QUALIFIER AN EXAM QDQ2 27 Oct 2024
Subject Name :	2024 Oct27: IIT M AN EXAM QDQ2
Creation Date :	2024-10-15 20:44:23
Duration :	240
Total Marks :	190
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 :	64065321590
Group Maximum Duration :	0
Group Minimum Duration :	90

Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	190
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

Maths 1

Section Id :	64065369204
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	12
Number of Questions to be attempted :	12
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 :	640653145625
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 640653990857 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "QUALIFIER LEVEL : MATHEMATICS FOR DATA SCIENCE I (COMPUTER BASED EXAM)"

MANDATORILY YOU HAVE TO ATTEND ALL THE SECTIONS

Options :

6406533348444. ✔ YES

6406533348445. ✸ NO

Question Number : 2 Question Id : 640653990858 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 :

6406533348446. ✔ Instructions has been mentioned above.

6406533348447. ✸ This Instructions is just for a reference & not for an evaluation.

Sub-Section Number :	2
Sub-Section Id :	640653145626
Question Shuffling Allowed :	Yes

Question Number : 3 Question Id : 640653990868 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the polynomials $p(x) = x^5 - 3x^4 + 100x - 1$ and $q(x) = x^5 + x + 5$ then which of the following statements are correct?

Options :

6406533348462. ✖ $p(x) + q(x) \to \infty$ as $x \to -\infty$.

6406533348463. ✔ $p(x) - q(x) \to -\infty$ as $x \to \infty$.

6406533348464. ✖ $-5p(x) \to -\infty$ as $x \to -\infty$.

6406533348465. ✖ $\dfrac{1}{2}q(x) \to \infty$ as $x \to -\infty$.

Question Number : 4 Question Id : 640653990869 Question Type : MCQ
Correct Marks : 4
Question Label : Multiple Choice Question

Consider a polynomial $p(x) = -0.3x^3(x^2 - 1)(x - 2)^2(x - 3)$ and the following figures.
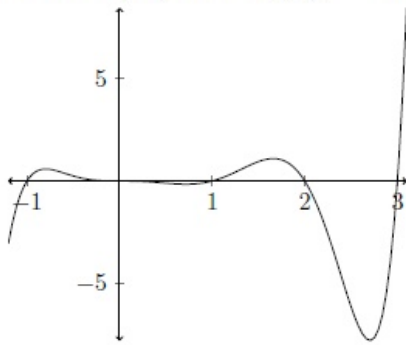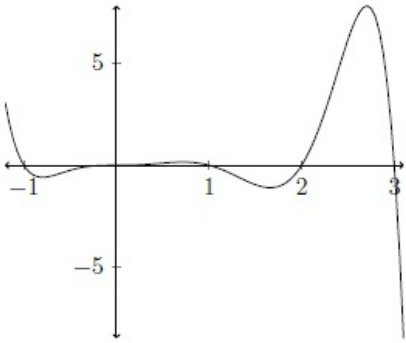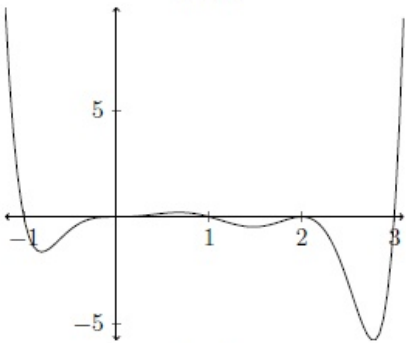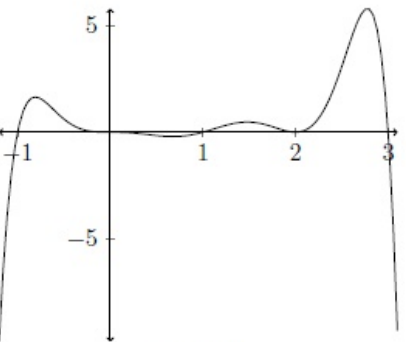

Figure 1

Figure 2

Figure 3

Figure 4

Which of the figure represents the polynomial $p(x)$?

Options :

6406533348466. ✷ Figure 1

6406533348467. ✷ Figure 2

6406533348468. ✷ Figure 3

6406533348469. ✔ Figure 4

Sub-Section Number :   3

Sub-Section Id :   640653145627

Question Shuffling Allowed :   Yes

Question Number : 5 Question Id : 640653990862 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Suppose A is the set of odd positive integers less than or equal to 30, and B is the set of positive integers less than or equal to 20 which are divisible by 6. Consider the following relations from A to B:

$R_1 = \{(a,b) \mid a \in A, b \in B, \ a \text{ is a factor of } b\}$
$R_2 = \{(a,b) \mid a \in A, b \in B, \ (a+b) \bmod 15 = 0\}$

Which of the following statements are correct?

Options :

6406533348450. ✖ (6, 14) is an element in R_2.

6406533348451. ✔ R_2 is not symmetric.

6406533348452. ✔ R_1 is transitive.

6406533348453. ✖ R_2 is reflexive.

Question Number : 6 Question Id : 640653990866 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following options is/are true?

Options :

6406533348457. ✔ If T is the set $\{a, b, c, d\}$, then cardinality of the set $T \times T$ is 16.

6406533348458. ✔ The minimum value of the quadratic expression $f(x) = 3x^2 - 18x + 7$ is -20.

6406533348459. ✔ For a quadratic equation $ax^2 + bx + c = 0$, where a, b, c are integers with $a \neq 0$ If $b^2 - 4ac > 0$ and a perfect square then there exists a rational root of the quadratic equation.

6406533348460. ✖ A line with an undefined slope is parallel to the X-axis.

Sub-Section Number : 4

Sub-Section Id : 640653145628

Question Shuffling Allowed : Yes

Question Number : 7 Question Id : 640653990863 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

In a college of 500 students, 285 took Mathematics, 195 took Statistics, 115 took English, 70 took Mathematics and Statistics, 45 took Mathematics and English, 50 took Statistics and English, and 10 took all three courses. What is the total number of students who took none of these three subjects?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

60

Sub-Section Number :	5
Sub-Section Id :	640653145629
Question Shuffling Allowed :	Yes

Question Number : 8 Question Id : 640653990864 Question Type : SA

Correct Marks : 5

Question Label : Short Answer Question

You have been closely monitoring your bike's mileage recently. Here is a table showing two rows representing the amount paid for fuel (in currency units) and the corresponding mileage (in Km). Consider y as the amount paid and x as the corresponding mileage in Km. You have noted down the distance traveled each time when the fuel meter falls back to a fixed reference mark and predicted that the equation of the best fit line is $y = 4x + 2$. What will be the value of SSE with respect to the best-fit line?

Table: 1

Amount paid (in currency units)	Distance (in Km)
80	20
60	15
62	16
100	25
55	14

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

37

Question Number : 9 Question Id : 640653990865 Question Type : SA

Correct Marks : 5

Question Label : Short Answer Question

A bird is flying along the straight line $2y - 6x = 6$. After some time an aeroplane also follows the straight line path with a slope of 2 and passes through the point $(4, 8)$. Let (α, β) be the point where the bird and aeroplane can collide. Then find the value of $\alpha + \beta$.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-9

Question Number : 10 Question Id : 640653990867 Question Type : SA

Correct Marks : 5

Question Label : Short Answer Question

The polynomial $p(x) = a(x - 4)(x - 6)(x - 8)(x - 10)$ passes through the vertex of the quadratic function $q(x) = -(x - 7)^2 - 9$. Calculate the value of a.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

-1

Sub-Section Number :	6
Sub-Section Id :	640653145630
Question Shuffling Allowed :	No

Question Id : 640653990859 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (11 to 12)

Question Label : Comprehension

Consider a set $S = \{a \mid a \in \mathbb{N}, a \leq 14\}$. Let R_1 and R_2 be relations on $S \times S$ defined as $R_1 = \{(x, y) \mid x, y \in S, y = 2x\}$ and $R_2 = \{(x, y) \mid x, y \in S, y = x^2\}$. Find the cardinality of the given sets in the subquestions.

Sub questions

Question Number : 11 Question Id : 640653990860 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

$R_1 \setminus R_2$

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

6

Question Number : 12 Question Id : 640653990861 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

R_2

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Sub-Section Number :	7
Sub-Section Id :	640653145631
Question Shuffling Allowed :	No

Question Id : 640653990870 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (13 to 14)

Question Label : Comprehension

Consider the polynomial $p(x) = -(x + 2)^5(x - 11)^7(x + 19)^2$.

Answer the given subquestions ?

Sub questions

Question Number : 13 Question Id : 640653990871 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the degree of $p(x)$?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

14

Question Number : 14 Question Id : 640653990872 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

Calculate the number of turning points $p(x)$ can have?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

3

English 1

Section Id :	64065369205
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 : 640653145632

Question Shuffling Allowed : No

Question Number : 15 Question Id : 640653990873 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "QUALIFIER LEVEL : ENGLISH I (COMPUTER BASED EXAM)"

MANDATORILY YOU HAVE TO ATTEND ALL THE SECTIONS

Options :

6406533348472. ✔ YES

6406533348473. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 640653145633

Question Shuffling Allowed : No

Question Id : 640653990874 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (16 to 25)

Question Label : Comprehension

Read the following passage and answer the given subquestions.

What a Comb Can Tell Us about the History of the Written Word

The knotty question of the origins of our alphabet has been partly straightened out by the discovery of a comb. In June 2016, an archaeological excavation of the ancient Canaanite city of Lachish led by Yosef Garfinkel of the Hebrew University of Jerusalem and Michael Hasel of Southern Adventist University uncovered what was initially misidentified as a small bone. On closer inspection, Edward Maher, a zooarchaeologist, surmised the object was an ivory comb, though the teeth had broken off. Microscopic examination revealed the fossilized remains of lice, confirming Maher's theory. Two experts verified that the comb, which is 1.44 by 0.99 inches, is made of ivory. So it must have been an import—there were no elephants then in Canaan.

But the comb's true significance wouldn't become apparent until Hebrew University archaeologist Madeleine Mumcuoglu discovered 17 faintly inscribed characters on it. Epigraphist Daniel Vainstub at Israel's Ben-Gurion University translated the inscription: "May this tusk root out the lice of the hair and the beard."

Researchers estimate that the comb dates from 1700 B.C., making this humble statement the oldest-known complete sentence written in a Canaanite script. Previously, we had only fragments from this period. (Attempts to definitively identify the artifact's age using radiocarbon dating have proved unsuccessful.)

While the history of the development of the modern alphabet remains frustratingly opaque, the

Canaanite writing system—generally agreed to have emerged between 1900 and 1400 B.C.—offered a clear improvement in user-friendliness compared with earlier pictorial scripts such as cuneiform and hieroglyphics. With their simple association between a character and a specific sound, Canaanite writing proved the basis from which modern Western alphabets evolved. Finding a complete Canaanite sentence "is one of the most important discoveries made in recent years," Garfinkel says. "This is a landmark in the evolution of the alphabet."

Sourced from:

Klimek, Chris. "What a Comb Can Tell Us about the History of the Written Word." *Smithsonian Magazine,* Mar 2023.

Sub questions

Question Number : 16 Question Id : 640653990875 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
Where, according to the article, was the ancient comb discovered?
Options :
6406533348474. ✖ Egypt
6406533348475. ✖ Balakot
6406533348476. ✔ Lachish
6406533348477. ✖ None of these

Question Number : 17 Question Id : 640653990876 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
Edward Maher is a _____ by profession
Options :
6406533348478. ✖ Zoologist
6406533348479. ✖ Archaeologist
6406533348480. ✖ Historian
6406533348481. ✔ Zooarchaeologist

Question Number : 18 Question Id : 640653990877 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
Microscopic examination of the comb revealed _____.
Options :
6406533348482. ✖ Fossilized remains of ants
6406533348483. ✔ Fossilized remains of lice
6406533348484. ✖ Fossilized remains of lizards
6406533348485. ✖ Fossilized remains of butterflies

Question Number : 19 Question Id : 640653990878 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The ancient comb is made of _____.

Options :

6406533348486. ✔ Ivory

6406533348487. ✸ Rock

6406533348488. ✸ Wood

6406533348489. ✸ Fishbone

Question Number : 20 Question Id : 640653990879 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The comb confirms the presence of elephants in Canaan in 1700 BC.
State true or false.

Options :

6406533348490. ✸ TRUE

6406533348491. ✔ FALSE

Question Number : 21 Question Id : 640653990880 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The inscription on the comb was:

Options :

6406533348492. ✸ May wealth and long life be yours

6406533348493. ✸ May your hair be lustrous and long

6406533348494. ✸ May this comb root out all evil from your head

6406533348495. ✔ May this tusk root out the lice of the hair and the beard

Question Number : 22 Question Id : 640653990881 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Daniel Vainstub's occupation is _____.

Options :

6406533348496. ✔ To study words that are written or cut into hard materials

6406533348497. ✸ To inscribe tombstones with memorial text in honor of the deceased

6406533348498. ✸ To study insects

6406533348499. ✸ To study pathogens

Question Number : 23 Question Id : 640653990882 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the relevance of the sentence on the comb?

Options :

6406533348500. � It sheds light on Canaanite theology

6406533348501. � It reveals the exact birth date of King Tutankhamun

6406533348502. ✔ It is the oldest-known complete sentence written in a Canaanite script

6406533348503. � It gives us insights into Canaanite poetry

Question Number : 24 Question Id : 640653990883 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following is a feature of the Canaanite writing system?

Options :

6406533348504. � User friendly, compared to earlier pictorial scripts like cuneiform and hieroglyphics

6406533348505. � Emerged between 1900 and 1400 B.C.

6406533348506. � It provided the basis from which modern Western alphabets evolved

6406533348507. ✔ All of these

Question Number : 25 Question Id : 640653990884 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

"Hebrew University archaeologist Madeleine Mumcuoglu discovered 17 faintly inscribed characters on it."
In this sentence, 'faintly' is an example of a/an?

Options :

6406533348508. � Adjective

6406533348509. ✔ Adverb

6406533348510. � Qualifier

6406533348511. � Preposition

Sub-Section Number :	3
Sub-Section Id :	640653145634
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 640653990885 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.

_Sh_ape

Options :

6406533348512. �8 Chorus

6406533348513. ✔ Charade

6406533348514. �8 Pleasure

6406533348515. �8 Chapel

Question Number : 27 Question Id : 640653990886 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the odd one out: pet, bet, threat.

Options :

6406533348516. � Pet

6406533348517. �8 Bet

6406533348518. ✔ Threat

Question Number : 28 Question Id : 640653990887 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

The vowel sound between *b* and *n* in the word *bun* is the same as:

Options :

6406533348519. �8 That which occurs between *w* and *n* in the word *wan*

6406533348520. ✔ That which occurs between *r* and *m* in the word *crumb*

6406533348521. �8 That which occurs between *b* and *n* in the word *bean*

6406533348522. �8 That which occurs between *b* and *n* in the word *bin*

Question Number : 29 Question Id : 640653990888 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the word with a "ng" sound from the following.

Options :

6406533348523. � Song

6406533348524. � Hang

6406533348525. �8 Feign

6406533348526. ✔ Both Song and Hang

Question Number : 30 Question Id : 640653990889 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which among the following words has the same sound as that which is underlined in "p<u>ai</u>n"?

Options :

6406533348527. ✔ Weight

6406533348528. ✱ Might

6406533348529. ✱ Plight

6406533348530. ✱ Both Weight and Might

Question Number : 31 Question Id : 640653990890 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

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

Options :

6406533348531. ✱ CVCCVC

6406533348532. ✱ CCVCCVC

6406533348533. ✔ CVCVCC

6406533348534. ✱ CVCCVCC

Question Number : 32 Question Id : 640653990891 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word.

John lives in a red <u>house</u> on the hill.

Options :

6406533348535. ✱ Proper noun

6406533348536. ✔ Class noun

6406533348537. ✱ Abstract noun

6406533348538. ✱ Material noun

Question Number : 33 Question Id : 640653990892 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which one of the following words is a noun?

Options :

6406533348539. ✔ Book

6406533348540. ✱ Quietly

6406533348541. ✱ Frequently

6406533348542. ✱ Repeatedly

Question Number : 34 Question Id : 640653990893 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word.
They killed him.

Options :

6406533348543. ✱ Noun

6406533348544. ✔ Pronoun

6406533348545. ✱ Adjective

6406533348546. ✱ Conjunction

Question Number : 35 Question Id : 640653990894 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

He was advised _____ the seminar without preparation.

Options :

6406533348547. ✱ To not to attend

6406533348548. ✔ Not to attend

6406533348549. ✱ Not to attended

Question Number : 36 Question Id : 640653990895 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word:
She *kicked* the ball powerfully.

Options :

6406533348550. ✱ Noun

6406533348551. ✱ Pronoun

6406533348552. ✔ Verb

6406533348553. ✱ Conjunction

Question Number : 37 Question Id : 640653990896 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Select the appropriate option:
"These speakers were the _____ he had ever heard."

Options :

6406533348554. ✱ Loud

6406533348555. ✱ Louder

6406533348556. ✔ Loudest

6406533348557. ✱ None of these

Question Number : 38 Question Id : 640653990897 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which of the following is NOT an adjective?

Options :

6406533348558. ✻ Fierce

6406533348559. ✻ Fiery

6406533348560. ✔ Foot

6406533348561. ✻ Feeble

Question Number : 39 Question Id : 640653990898 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the appropriate option:
I found my wallet, it was _____ the chair.

Options :

6406533348562. ✔ Under

6406533348563. ✻ Into

6406533348564. ✻ Next

6406533348565. ✻ As

Question Number : 40 Question Id : 640653990899 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify part of speech of the underlined word:
As soon as he entered the room, he went and sat beside his best friend.

Options :

6406533348566. ✔ Preposition

6406533348567. ✻ Adjective

6406533348568. ✻ Adverb

6406533348569. ✻ Article

Question Number : 41 Question Id : 640653990900 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option:
_____ crow entered my kitchen through the window.

Options :

6406533348570. ✔ A

6406533348571. ✻ An

6406533348572. ✳ No article

6406533348573. ✳ Both 'a' and 'an'

Question Number : 42 Question Id : 640653990907 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Consider the following sentence:
Her success as an actor was <u>a nine days' wonder</u>.
In this sentence, the phrase 'a nine days wonder' means 'something that arouses great interest, but only for a short period.'

Options :

6406533348599. ✔ True

6406533348600. ✳ False

Question Number : 43 Question Id : 640653990908 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the suitable phrasal verb for the following meaning.
To discover exact details about something.

Options :

6406533348601. ✔ Pin down

6406533348602. ✳ Pin on

6406533348603. ✳ Pin up

6406533348604. ✳ Pine away

Question Number : 44 Question Id : 640653990909 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

After several attempts, she finally _____ how to solve the complex puzzle.

Options :

6406533348605. ✔ figured out

6406533348606. ✳ figure

6406533348607. ✳ figures in

6406533348608. ✳ figure in

Question Number : 45 Question Id : 640653990910 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Fill in the blank with the most suitable modal verb.
You ____ obtain a refund from the office.
Hint: To indicate that someone has permission to do something in a formal sense.

Options :

6406533348609. ✖ Shan't

6406533348610. ✖ Would

6406533348611. ✔ May

6406533348612. ✖ Couldn't

Sub-Section Number :   4

Sub-Section Id :   640653145635

Question Shuffling Allowed :   No

Question Id : 640653990901 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (46 to 50)

Question Label : Comprehension

Match the words in List A to those words in List B which are most similar to them in meaning.

List A	List B
(i) Acquire	(a) Repartee
(ii) Banter	(b) Submit
(iii) Acquiesce	(c) Brutality
(iv) Bargain	(d) Attain
(v) Atrocity	(e) Haggle

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 46 Question Id : 640653990902 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Acquire

Options :

6406533348574. ✖ Repartee

6406533348575. ✖ Submit

6406533348576. ✖ Brutality

6406533348577. ✔ Attain

6406533348578. ✖ Haggle

Question Number : 47 Question Id : 640653990903 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Banter

Options :

6406533348579. ✔ Repartee

6406533348580. ✽ Submit

6406533348581. ✽ Brutality

6406533348582. ✽ Attain

6406533348583. ✽ Haggle

Question Number : 48 Question Id : 640653990904 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Acquiesce

Options :

6406533348584. ✽ Repartee

6406533348585. ✔ Submit

6406533348586. ✽ Brutality

6406533348587. ✽ Attain

6406533348588. ✽ Haggle

Question Number : 49 Question Id : 640653990905 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Bargain

Options :

6406533348589. ✽ Repartee

6406533348590. ✽ Submit

6406533348591. ✽ Brutality

6406533348592. ✽ Attain

6406533348593. ✔ Haggle

Question Number : 50 Question Id : 640653990906 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Atrocity

Options :

6406533348594. ✽ Repartee

6406533348595. ✽ Submit

6406533348596. ✔ Brutality

6406533348597. ✽ Attain

Question Id : 640653990911 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (51 to 55)
Question Label : Comprehension
Complete the telephonic conversation given below with most polite and correct responses.

Ramya: Hello, is this Spring Field International School?

HR: Yes. (i)_____

Ramya: Hello, my name is Ramya Narayan and I called you to enquire if there are any vacancies for the post of primary school teacher.

HR: There are currently no vacancies, Ms. Ramya. However, you could send us your resume and we will contact you if there are any vacancies in the upcoming month.

Ramya: (ii)_____.Could you give me the email address of the college?

HR: Please send it to …………

Ramya: Hello, the line seems a bit unclear. (iii) _____

HR: Hello. Am I audible?

Ramya: Yes, you are audible now.

HR: You can send your resume to the email ID hrspringfieldsschool@gmail.com

Ramya: (iv)_____

HR: Thank you. We will review it and get back to you.

Ramya: (v) _____

HR: You are welcome. Have a great day!

Based on the above data, answer the given subquestions.
Sub questions

Question Number : 51 Question Id : 640653990912 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (i) with an appropriate response.
Options :

6406533348613. ✔ May I know who I am speaking to?

6406533348614. ✳ Your name?

6406533348615. ✳ And your name is?

6406533348616. ✳ Who's this?

Question Number : 52 Question Id : 640653990913 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (ii) with an appropriate response.

Options :

6406533348617. ✔ Sure, I will send my resume

6406533348618. ✳ I don't want to send my resume!

6406533348619. ✳ Sure, I will send my email ID

6406533348620. ✳ Take my resume, please!

Question Number : 53 Question Id : 640653990914 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (iii) with an appropriate response.

Options :

6406533348621. ✳ Repeat what you said!

6406533348622. ✳ Say it again!

6406533348623. ✔ Can you say that again, please?

6406533348624. ✳ Repeat the words!

Question Number : 54 Question Id : 640653990915 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (iv) with an appropriate response.

Options :

6406533348625. ✳ Sure, I will submit my report by Monday

6406533348626. ✳ Fine!

6406533348627. ✳ Yeah fine!

6406533348628. ✔ Sure, I will send my resume by Monday

Question Number : 55 Question Id : 640653990916 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Complete blank (v) with an appropriate response.

Options :

6406533348629. ✳ I will join the meeting shortly

6406533348630. ✳ Thanks, buddy!

6406533348631. ✳ I will come for the interview

6406533348632. ✔ Thanks for your help

CT

Section Id :	64065369206
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 :	640653145636
Question Shuffling Allowed :	No

Question Number : 56 Question Id : 640653990917 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "QUALIFIER LEVEL : COMPUTATIONAL THINKING (COMPUTER BASED EXAM)"

MANDATORILY YOU HAVE TO ATTEND ALL THE SECTIONS

Options :

6406533348633. ✔ YES

6406533348634. ✳ NO

Question Number : 57 Question Id : 640653990918 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 :

6406533348635. ✔ Useful Data has been mentioned above.

6406533348636. ✖ This data attachment is just for a reference & not for an evaluation

Sub-Section Number : 2

Sub-Section Id : 640653145637

Question Shuffling Allowed : Yes

Question Number : 58 Question Id : 640653990919 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Let **X** and **Y** be two rows in the "Scores" table. We call **X** and **Y** partially matching if student **X** and **Y** are either from the same city or have the same total marks but not both. Let **partialMatch(X, Y)** be a procedure to find whether **X** and **Y** are matching. Choose the correct implementation of the procedure **partialMatch.**

Options :

6406533348637. ✖

```
1   Procedure partialMatch(X, Y)
2       A = False, B = False
3       if(X.CityTown == Y.CityTown){
4           A = True
5       }
6       if(X.Total == Y.Total){
7           B = True
8       }
9       if(A and B){
10          return (True)
11      }
12      return(False)
13  End partialMatch
```

```
1   Procedure partialMatch(X, Y)
2       A = False, B = False
3       if(X.CityTown == Y.CityTown){
4           A = True
5       }
6       if(X.Total == Y.Total){
7           B = True
8       }
9       if(A or B){
10          return(True)
11      }
12      return(False)
13  End partialMatch
```

6406533348638. ✖

```
1   Procedure partialMatch(X, Y)
2       A = 0, B = 0
3       if(X.CityTown == Y.CityTown){
4           A = 1
5       }
6       if(X.Total == Y.Total){
7           B = 1
8       }
9       if(A + B == 1){
10          return(True)
11      }
12      return(False)
13  End partialMatch
```

6406533348639. ✔

6406533348640. ✖

```
 1  Procedure partialMatch(X, Y)
 2      A = 0, B = 0
 3      if(X.CityTown == Y.CityTown){
 4          A = 1
 5      }
 6      if(X.Total == Y.Total){
 7          B = 1
 8      }
 9      if((A + B) > 1){
10          return(True)
11      }
12      return(False)
13  End partialMatch
```

Question Number : 59 Question Id : 640653990920 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "Shopping Bills" dataset. Assume that the variable **AvgT** holds the value of the average total bill amount. What will **Q** represent at the end of execution?

```
 1  P = 0, Q = 0
 2  while(Table 1 has more rows){
 3      Read the first row X in Table 1
 4      if(X.TotalBillAmount > AvgT){
 5          P = P + 1
 6      }
 7      else{
 8          if(X.ShopName == "Big Bazaar" or X.ShopName == "SV Stores"){
 9              Q = Q + 1
10          }
11      }
12  }
```

Options :

6406533348641. ✳ Number of bills from "Big Bazaar" or "SV Stores" with total bill amount greater than the average total bill amount.

6406533348642. ✳ Number of bills from "Big Bazaar" or "SV Stores" with total bill amount lesser than the average total bill amount.

6406533348643. ✳ Number of bills from "Big Bazaar" or "SV Stores".

6406533348644. ✔ Number of bills from "Big Bazaar" or "SV Stores" with total bill amount lesser than or equal to the average total bill amount.

Question Number : 60 Question Id : 640653990923 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 execution?

```
1    A = 1001
2    while(Table 1 has more cards){
3        Read the first row X from Table 1
4        if(X.LetterCount < A){
5            A = X.LetterCount
6        }
7        Move X to Table 2
8    }
9    B = 0, Count = 0
10   while(Table 2 has more cards){
11       Read the first row X from Table 2
12       if(X.LetterCount == A){
13           B = B + 1
14       }
15       if(X.Word ends with a full stop and B <= 2){
16           Count = Count + 1
17           B = 0
18       }
19       Move X to Table 3
20   }
```

Options :

6406533348653. ✹ Number of sentences with at most two longest words

6406533348654. ✹ Number of sentences with at least two longest words

6406533348655. ✔ Number of sentences with at most two shortest words

6406533348656. ✹ Number of sentences with at least two shortest words

Question Number : 61 Question Id : 640653990928 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

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

```
1   count = 0, A = 0
2   while(Table 1 has more rows){
3       Read the first row X in Table 1
4       if(X.Gender == 'M' or X.Physics > X.Mathematics){
5           A = A + 1
6       }
7       else{
8           count = count + 1
9       }
10      Move X to Table 2
11  }
```

Options :

6406533348671. �ખ Number of male students whose Physics marks are greater than Mathematics marks

6406533348672. ✕ Number of male students whose Mathematics marks are greater than or equal to Physics marks

6406533348673. ✕ Number of female students whose Physics marks are greater than or equal to Mathematics marks

6406533348674. ✔ Number of female students whose Physics marks are less than or equal to Mathematics marks

Question Number : 62 Question Id : 640653990930 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

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

```
1   count = 0
2   while(Pile 1 has more cards){
3       Read the top card X from Pile 1
4       C = 0
5       if(X.Mathematics > 75){
6           C = C + 1
7       }
8       if(X.Physics > 75){
9           C = C + 1
10      }
11      if(X.Chemistry > 75){
12          C = C + 1
13      }
14      if(C == 2){
15          count = count + 1
16      }
17      Move X to Pile 2
18  }
```

Options :

6406533348679. ✳ Number of students who scored greater than 75 marks in atmost two subjects.

6406533348680. ✔ Number of students who scored greater than 75 marks in exactly two subjects.

6406533348681. ✳ Number of students who scored greater than 75 marks in atleast two subjects.

6406533348682. ✳ Number of students who scored greater than 75 marks in all three subjects.

Sub-Section Number :   3
Sub-Section Id :   640653145638
Question Shuffling Allowed :   Yes

Question Number : 63 Question Id : 640653990922 Question Type : MCQ
Correct Marks : 5

Question Label : Multiple Choice Question

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

```
1   Count = 0, Flag = True
2   while(Table 1 has more cards){
3       Read the first row X from Table 1
4       if(CountVowels(X) == X.LetterCount - CountVowels(X)){
5           Flag = False
6       }
7       if(X.Word ends with a full stop){
8           if(Flag){
9               Count = Count + 1
10          }
11          Flag = True
12      }
13      Move X to Table 2
14  }
15  Procedure CountVowels(Y)
16      i = 1
17      B = 0
18      while(i ≤ Y.LetterCount){
19          if(ith letter of Y.Word is a vowel){
20              B = B + 1
21          }
22          i = i + 1
23      }
24      return(B)
25  End CountVowels
```

Options :

6406533348649. ✳ Number of sentences with equal number of vowels and consonants

6406533348650. ✳ Number of sentences with each word having equal number of vowels and consonants

6406533348651. �֎ Number of sentences with different number of vowels and consonants

6406533348652. ✔ Number of sentences with each word having different number of vowels and consonants

Sub-Section Number : 4

Sub-Section Id : 640653145639

Question Shuffling Allowed : Yes

Question Number : 64 Question Id : 640653990921 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Library" dataset. At the end of the execution, **A** captures the number of non fictional books which were published between 2005 and 2010 (including 2005 and 2010) and are written in English. Choose the correct code for procedure **doSomething** to complete the pseudocode.

```
1  A = 0
2  while (Table 1 has more rows) {
3      Read the first row X in Table 1
4      A = A + doSomething(X)
5      Move X to Table 2
6  }
```

Options :

```
1   Procedure doSomething(X)
2       B = 0
3       if(X.Year >= 2005 and X.Year <= 2010){
4           if(X.Genre != "Fiction"){
5               if(X.Language == "English"){
6                   B = 1
7               }
8           }
9       }
10      return B
11  End doSomething
```

6406533348645. ✔

6406533348646. ✖

```
1  Procedure doSomething(X)
2      B = 0
3      if(X.Year >= 2005 or X.Year <= 2010){
4          if(X.Genre != "Fiction"){
5              if(X.Language == "English"){
6                  B = 1
7              }
8          }
9      }
10     return B
11 End doSomething
```

```
1  Procedure doSomething(X)
2      B = 0
3      if(X.Year >= 2005 or X.Year <= 2010 and X.Genre != "Fiction" and
       X.Language == "English"){
4          B = 1
5      }
6      return B
7  End doSomething
```

6406533348647. ✖

```
1  Procedure doSomething(X)
2      B = 0
3      if(X.Year >= 2005 and X.Year <= 2010 and X.Genre != "Fiction" and
       X.Language == "English"){
4          B = 1
5      }
6      return B
7  End doSomething
```

6406533348648. ✔

Question Number : 65 Question Id : 640653990925 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following pseudocode(s) is/are executed on the 'Words' dataset, such that by the end of execution, **A** stores the maximum letter count of a word that is a noun? Choose the correct code.

Options :

6406533348658. ✔

```
1  A = 0
2  while(Table 1 has more rows){
3      Read the first row X in Table 1
4      if(X.PartOfSpeech == "Noun" and X.LetterCount > A){
5          A = X.LetterCount
6      }
7      Move X to Table 2
8  }
```

```
1  A = 0
2  while(Table 1 has more rows){
3      Read the first row X in Table 1
4      if(X.PartOfSpeech == "Noun" and X.LetterCount < A){
5          A = X.LetterCount
6      }
7      Move X to Table 2
8  }
```

6406533348659. ✖

```
1   A = 0
2   while(Table 1 has more rows){
3       Read the first row X in Table 1
4       if(X.PartOfSpeech == "Noun"){
5           if(X.LetterCount > A){
6               A = X.LetterCount
7           }
8       }
9       Move X to Table 2
10  }
```

6406533348660. ✔

```
1   A = 0
2   while(Table 1 has more rows){
3       Read the first row X in Table 1
4       if(X.PartOfSpeech == "Noun"){
5           if(X.LetterCount < A){
6               A = X.LetterCount
7           }
8       }
9       Move X to Table 2
10  }
```

6406533348661. ✖

Question Number : 66 Question Id : 640653990927 Question Type : MSQ
Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The given information represents a "Shopping Bill" and it may have some mistakes with respect to the sanity of data. Identify all rows with such mistakes. It is a Multiple Select Question (MSQ).

Row no.	Item	Category	Qty	Price	Cost
Row 1	Cereal	Packed/Food	2	220	440
Row 2	Milk	Fruits/Food	1.5	24	24
Row 3	Cupcakes	Packed/Food	1	25	50
Row 4	Chocolates	Packed/Food	1	10	10
Row 5	Shirts	Women/Apparel	1	1350	1350

Options :

6406533348666. ✱ Row 1

6406533348667. ✔ Row 2

6406533348668. ✔ Row 3

6406533348669. ✱ Row 4

6406533348670. ✱ Row 5

Question Number : 67 Question Id : 640653990929 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Library" dataset. At the end of the execution, **A** captures the number of books which are published by "Penguin" or written by the author "Narayan". The pseudocode may have mistakes. Identify all such mistakes (if any). It is a Multiple Select Question (MSQ).

```
1   A = 1
2   while(Table 1 has more rows){
3       Read the first row X in Table 1
4       C = False
5       if(X.Publisher == "Penguin"){
6           C = True
7       }
8       if(X.Author == "Narayan"){
9           C = True
10      }
11      if(not(C){
12          A = A + 1
13      }
14      Move X to Table 2
15  }
```

Options :

6406533348675. ✔ Error in Line 1

6406533348676. ✖ Error in Line 9

6406533348677. ✔ Error in Line 11

6406533348678. ✖ Error in Line 12

Sub-Section Number :	5
Sub-Section Id :	640653145640
Question Shuffling Allowed :	Yes

Question Number : 68 Question Id : 640653990926 Question Type : MSQ

Correct Marks : 5 Max. Selectable Options : 0

Question Label : Multiple Select Question

The following pseudocode is executed using the "Scores" dataset. At the end of the execution, **A** captures the highest Chemistry marks scored by a female student from Vellore. Choose the correct code fragment(s) to complete the pseudocode.

```
1  A = 0
2  while (Table 1 has more rows) {
3      Read the first row X in Table 1
4      *********************
5      *   Fill the code   *
6      *********************
7      Move X to Table 2
8  }
```

Options :

```
1  if(X.Gender == 'F' and X.CityTown == "Vellore"){
2      if(X.Chemistry > A){
3          A = X.Chemistry
4      }
5  }
```

6406533348662. ✔

```
1  if(X.Gender != 'M' and X.Chemistry < A ){
2      if(X.CityTown == "Vellore"){
3          A = X.Chemistry
4      }
5  }
```

6406533348663. ✖

6406533348664. ✖

```
1  if(X.Gender == 'F' and X.CityTown == "Vellore"){
2      if(X.Chemistry < A){
3          A = X.Chemistry
4      }
5  }
```

```
1  if(X.Gender == 'F'){
2      if(X.CityTown == "Vellore"){
3          if(X.Chemistry > A){
4              A = X.Chemistry
5          }
6      }
7  }
```

6406533348665. ✔

Sub-Section Number :	6
Sub-Section Id :	640653145641
Question Shuffling Allowed :	Yes

Question Number : 69 Question Id : 640653990924 Question Type : SA

Correct Marks : 4

Question Label : Short Answer 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
11      if(X.Word ends with full stop){
12          flag = True
13      }
14  }
```

What would be the value of **count** at the end of the execution of the above pseudocode? Assume

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

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Stats-1

Section Id :	64065369207
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
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 :	640653145642
Question Shuffling Allowed :	No

Question Number : 70 Question Id : 640653990931 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

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Options :

6406533348683. ✔ YES

6406533348684. ✖ NO

Sub-Section Number :	2

Question Number : 71 Question Id : 640653990932 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following statements is/are true?

Options :

6406533348685. ✔ A sample is the subset of a population.

6406533348686. ✔ Numerical variables can have all the properties of ordinal and nominal scales of measurement.

6406533348687. ✖ Descriptive measures like Mean, Median, and Mode all of them can be used to summarize the categorical variable.

6406533348688. ✔ The correlation coefficient measures the strength of the linear association between two numerical variables.

Question Number : 72 Question Id : 640653990939 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

If a categorical variable is measured on an ordinal scale, which of the following statistical measures is appropriate?

Options :

6406533348700. ✖ Mean

6406533348701. ✔ Median

6406533348702. ✔ Mode

6406533348703. ✖ Variance

Question Number : 73 Question Id : 640653990940 Question Type : MSQ
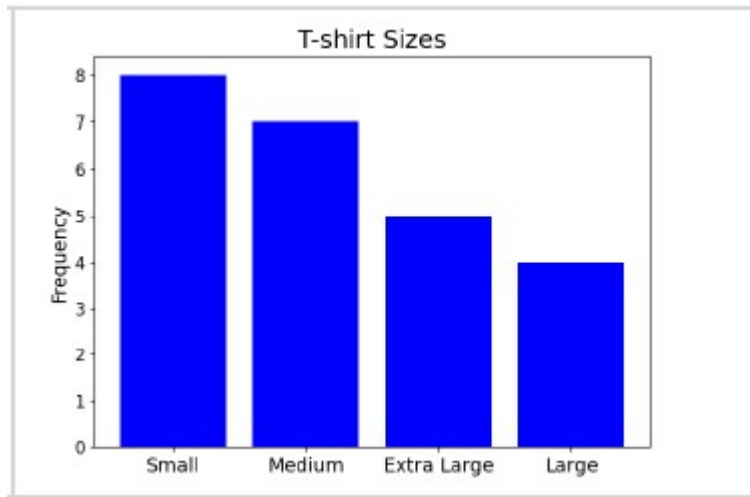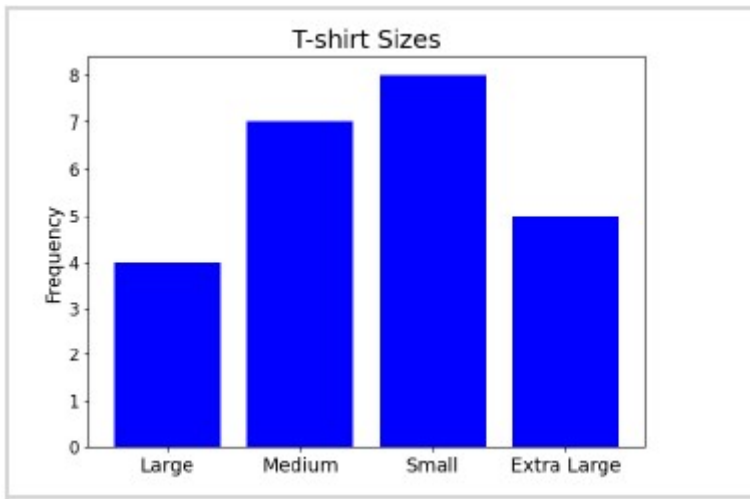
Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Given bar chart represent the T-Shirt sizes worn by the members of a sports club.Which of the following option(s) is(are) the best way to represent the data?
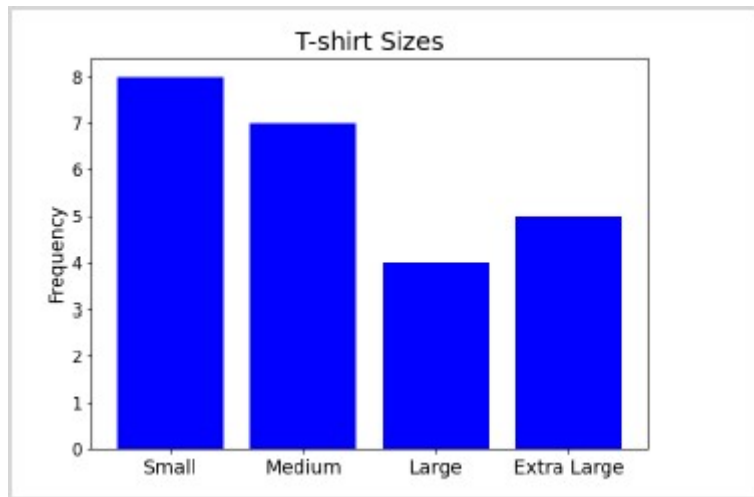
Options :

6406533348704. ✖

T-shirt Sizes

T-shirt Sizes

6406533348705. ✖

T-shirt Sizes

6406533348706. ✔

6406533348707. ✔

T-shirt Sizes

Sub-Section Number :	3
Sub-Section Id :	640653145644
Question Shuffling Allowed :	No

Question Id : 640653990933 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (74 to 75)

Question Label : Comprehension

An analyst want to analyse the salary of employees in different organizations in a city. To analyse this, he has selected an organization and the data of salaries is tabulated as shown in Table 1.

Employee name	Post	Salary (in thousands rupees)
Sagar	Assistant manager	80
Sanjana	Analyst	60
Rohit	Junior developer	50
Jenny	Senior developer	60
Ross	Consultant	50

Table 1

Based on the given information, answer the subquestions.

Sub questions

Question Number : 74 Question Id : 640653990934 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Based on the data collected from an organisation, an analyst made a statement that the average

salary of an employee is 50,000 rupees in different organizations in the city. The given statement of analyst is based on which kind of statistical analysis ?

Options :

6406533348689. ✖ Descriptive statistics

6406533348690. ✔ Inferential statistics

Question Number : 75 Question Id : 640653990935 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the sample standard deviation of salary (in thousand rupees)? (Enter the answer correct to 2 decimal accuracy)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range
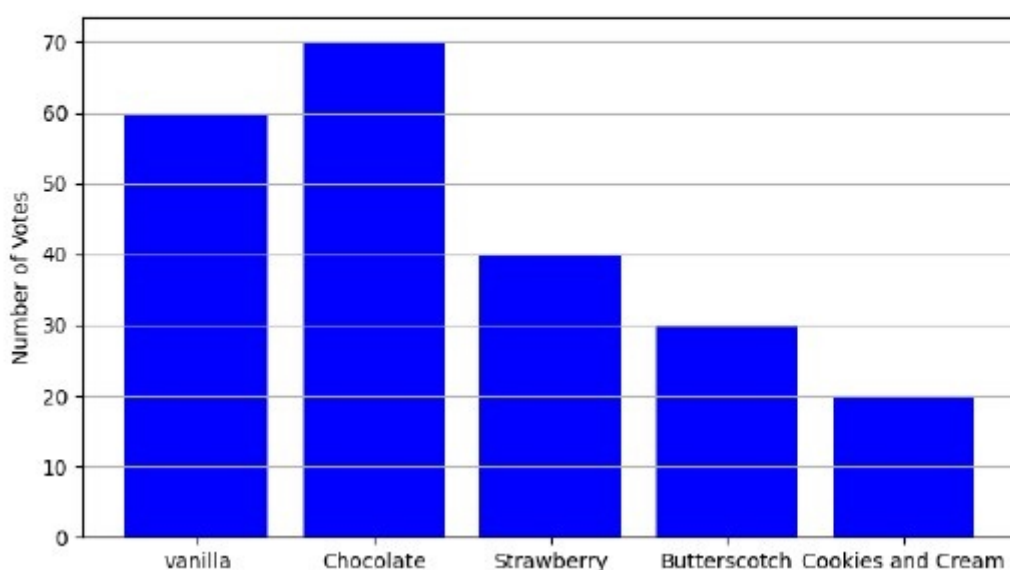
Text Areas : PlainText

Possible Answers :

12.22 to 12.28

Question Id : 640653990936 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (76 to 77)

Question Label : Comprehension

Refer to the bar chart displaying the Number of Votes for people's preferred Ice Cream Flavors

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 76 Question Id : 640653990937 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the mode of the dataset?

Options :

6406533348692. ✸ Strawberry

6406533348693. ✸ 40

6406533348694. ✔ Chocolate

6406533348695. ✸ 70

Question Number : 77 Question Id : 640653990938 Question Type : MCQ

Correct Marks : 3

Question Label : Multiple Choice Question

What percentage of the total votes is represented by Butterscotch and Strawberry ice creams combined?

Options :

6406533348696. ✔ 31.81%

6406533348697. ✸ 20%

6406533348698. ✸ 22.72%

6406533348699. ✸ 50%

Question Id : 640653990944 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (78 to 79)

Question Label : Comprehension

Please answer the subquestions based on the given below stem-and-leaf plot,

Stem	Leaf
1	2, 4, 5
2	0, 3, 4, 5
3	1, 5, 5, 7
4	0, 4, 6

Here 1 | 5 represents 15.

Sub questions

Question Number : 78 Question Id : 640653990945 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the median of the data set represented by the stem-and-leaf plot?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

28

Question Number : 79 Question Id : 640653990946 Question Type : SA

Correct Marks : 2

Question Label : Short Answer Question

Calculate the range of the data set.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

34

Sub-Section Number :	4
Sub-Section Id :	640653145645
Question Shuffling Allowed :	No

Question Id : 640653990941 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (80 to 81)

Question Label : Comprehension

Please answer the subquestions based on the given below frequency distribution table for different types of cuisines preferred by 150 people :

Cuisine	Frequency	Relative frequency
Italian	45	
Chinese	35	
Mexican		x
Indian	20	
Thai	y	0.1
Greek	10	

Sub questions

Question Number : 80 Question Id : 640653990942 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the value of y (frequency of Thai cuisine)?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

15

Question Number : 81 Question Id : 640653990943 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

What is the value of x (relative frequency of Mexican cuisine)?(write correct upto 2 decimal places)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.15 to 0.17

Question Id : 640653990948 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (82 to 83)

Question Label : Comprehension

Please answer the subquestions based on the given dataset below:

X	-5	-4	-3	3	4	5
Y	-13	-12	-5	13	12	5

Table 2

Sub questions

Question Number : 82 Question Id : 640653990949 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

Find the sample covariance between *X* and *Y* for the dataset given in Table 2.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

48

Question Number : 83 Question Id : 640653990950 Question Type : SA

Correct Marks : 3

Question Label : Short Answer Question

Find the sample correlation coefficient(*r*) between *X* and *Y* for the dataset given in Table 2. (Write correct upto 3 digits after the decimal)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.921 to 0.925

Sub-Section Number :	5
Sub-Section Id :	640653145646
Question Shuffling Allowed :	Yes

Question Number : 84 Question Id : 640653990947 Question Type : SA

Correct Marks : 4

Question Label : Short Answer Question

In an exam, students' scores have an interquartile range(IQR) of 20. The teacher decides to first add 5 marks to each student's score and then multiply each adjusted score by 2. What will be the interquartile range now?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

40