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 QDQ1 27 Oct 2024
Subject Name :	2024 Oct27: IIT M AN EXAM QDQ1
Creation Date :	2024-10-15 20:41:43
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 :	64065321589
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 :	64065369200
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 :	640653145602
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 640653990763 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 :

6406533348173. ✔ YES

6406533348174. ✖ NO

Question Number : 2 Question Id : 640653990764 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 :

6406533348175. ✔ Instructions has been mentioned above.

6406533348176. ✖ This Instructions is just for a reference & not for an evaluation.

Sub-Section Number :	2
Sub-Section Id :	640653145603
Question Shuffling Allowed :	Yes

Question Number : 3 Question Id : 640653990774 Question Type : MCQ

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the polynomials $p(x) = x^3 - 3x^2 + 100x - 1$ and $q(x) = x^3 + x + 5$ then which of the following statements are correct?

Options :

6406533348194. ✖ $p(x) + q(x) \to \infty$ as $x \to -\infty$.

6406533348195. ✔ $p(x) - q(x) \to -\infty$ as $x \to \infty$.

6406533348196. ✖ $5p(x) \to \infty$ as $x \to -\infty$.

6406533348197. ✖ $\frac{1}{2}q(x) \to \infty$ as $x \to -\infty$.

Question Number : 4 Question Id : 640653990775 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.

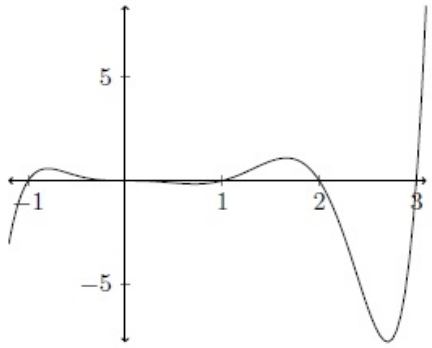

Figure 1

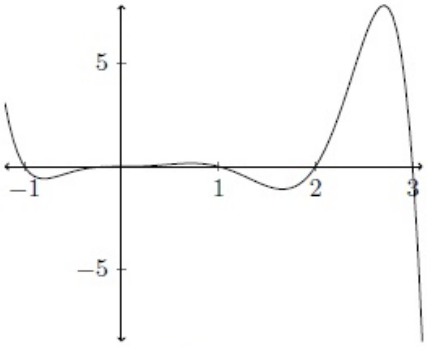

Figure 2

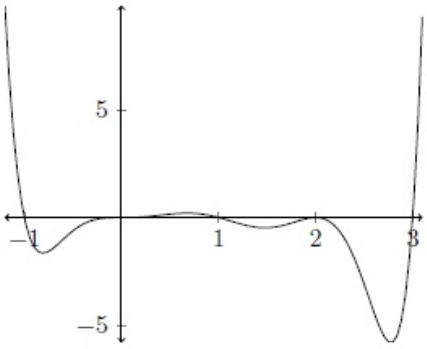

Figure 3

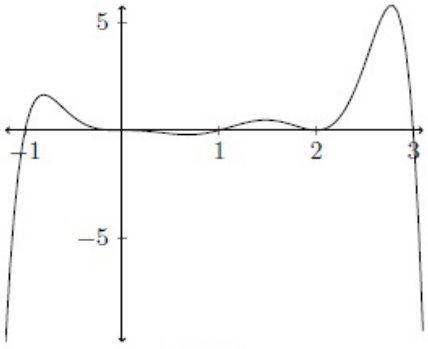

Figure 4

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

Options :

6406533348198. ✖ Figure 1

6406533348199. ✖ Figure 2

6406533348200. ✔ Figure 3

6406533348201. ✖ Figure 4

Sub-Section Number :	3
Sub-Section Id :	640653145604
Question Shuffling Allowed :	Yes

Question Number : 5 Question Id : 640653990772 Question Type : MCQ
Correct Marks : 5
Question Label : Multiple Choice Question

If α and β are the roots of the equation $x^2 + 4x + 1 = 0$, then the equation whose roots are α^2 and β^2 is:

Options :

6406533348186. ✔ $x^2 - 14x + 1 = 0$

6406533348187. ✖ $x^2 - 18x + 16 = 0$

6406533348188. ✖ $x^2 - 10x + 2 = 0$

6406533348189. ✖ $x^2 - 8x + 5 = 0$

Sub-Section Number : 4
Sub-Section Id : 640653145605
Question Shuffling Allowed : Yes

Question Number : 6 Question Id : 640653990768 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 20, and B is the set of positive integers less than or equal to 30 which are divisible by 5. 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 :

6406533348179. ✖ (6, 14) is an element in R_2.

6406533348180. ✔ R_2 is not symmetric.

6406533348181. ✔ R_1 is transitive.

6406533348182. ✖ R_2 is reflexive.

Question Number : 7 Question Id : 640653990773 Question Type : MSQ
Correct Marks : 5 Max. Selectable Options : 0
Question Label : Multiple Select Question
Which of the following options is/are true?

Options :

6406533348190. ✔ If T is the set $\{a, b, c, d\}$, then cardinality of the set $T \times T$ is 16.

6406533348191. ✖ The minimum value of the quadratic expression $f(x) = 3x^2 - 18x + 20$ is -20.

6406533348192. ✔ 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.

6406533348193. ✔ A line with an undefined slope is parallel to the Y-axis.

Sub-Section Number : 5
Sub-Section Id : 640653145606
Question Shuffling Allowed : Yes

Question Number : 8 Question Id : 640653990769 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 : 6
Sub-Section Id : 640653145607
Question Shuffling Allowed : Yes

Question Number : 9 Question Id : 640653990770 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 noted the distance travelled each time the fuel meter falls back to a fixed reference mark and predicted that the best-fit line equation is $y = 4x + 1$. 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
60	16
100	25
58	14

Response Type : Numeric
Evaluation Required For SA : Yes
Show Word Count : Yes
Answers Type : Equal
Text Areas : PlainText
Possible Answers :
29

Question Number : 10 Question Id : 640653990771 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

Sub-Section Number : 7
Sub-Section Id : 640653145608
Question Shuffling Allowed : No

Question Id : 640653990765 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 $S = \{a \mid a \in \mathbb{N}, a \leq 18\}$. Let R_1 and R_2 are 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 : 640653990766 Question Type : SA
Correct Marks : 3

Question Label : Short Answer Question

R_1

Response Type : Numeric
Evaluation Required For SA : Yes
Show Word Count : Yes
Answers Type : Equal
Text Areas : PlainText
Possible Answers :

10

Question Number : 12 Question Id : 640653990767 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 :

8

Sub-Section Number :	8
Sub-Section Id :	640653145609
Question Shuffling Allowed :	No

Question Id : 640653990776 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 $p(x) = -(x+4)^8(x-4)^3(x+12)^5$.

Answer the given subquestions.

Sub questions

Question Number : 13 Question Id : 640653990777 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 :

16

Question Number : 14 Question Id : 640653990778 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 :	64065369201
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 :	640653145610
Question Shuffling Allowed :	No

Question Number : 15 Question Id : 640653990779 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 :
6406533348204. ✔ YES
6406533348205. ✖ NO

Sub-Section Number :	2
Sub-Section Id :	640653145611
Question Shuffling Allowed :	No

Question Id : 640653990780 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 Emoji Tell Us about the History of Tea

When searching for a tea emoji on most text messaging apps, a range of options appear. One shows what looks like green liquid in a white bowl. Another features a saucer and a cup filled with a darker liquid that doubles as coffee. These emoji's designs allude to the long history of tea, tracing how this centerpiece of a cherished Asian tradition grew into a global beverage. For most of recorded history, the word "tea" referred to green tea from China and later Japan—illustrated by the emoji officially called "teacup without handle." Black tea is represented by the second, more generically named "hot beverage" emoji.

The tea plant, Camellia sinensis, is indigenous to a region spanning present-day China, India, Myanmar and Cambodia. All types of tea are derived from the same plant. But different methods

of processing the plant's leaves produce different types of teas, with the level of oxidation affecting the color and flavor of the resulting beverage. To make green tea, manufacturers dehydrate, heat and shape the leaves, preventing oxidation and preserving the plant's original color. At the other end of the spectrum, black tea leaves are fully oxidized, changing hue from green to a darker brown. Oolong tea, which can appear green or black in color, is a distinct variation that falls somewhere in the middle, with leaves undergoing partial oxidation.

Initially a medicinal beverage, tea became a daily drink by the third century C.E., with elite members of Chinese society viewing tea drinking as a leisurely pastime. By the eighth century, during the Tang dynasty, China's tea culture was flourishing, giving rise to tea ceremonies and social events, as well as art and literature inspired by the drink. To the east of China, in Japan, elite citizens started drinking tea in the eighth century. But wider domestic cultivation and appreciation of tea only came to the country in the late 12th century, when Buddhist monk Eisai popularized the drink. While studying Zen Buddhism at a monastery in China, Eisai learned of a beverage the other monks drank to help stay alert for meditation: green tea. "Tea is the most wonderful medicine for nourishing one's health," Eisai wrote in a treatise on tea. "It is the secret of long life." Today, its enduring popularity is reflected in the "teacup without handle" emoji.

The "hot beverage" emoji, meanwhile, takes its cue from another tea tradition: black tea, which gained a foothold in the West through trade between Europe and Asia. In the early 17th century, Portuguese and Dutch traders returning from Asia brought green tea back home, where it quickly gained traction as a curative beverage. Tea enjoyed similar prominence in the Americas following its introduction by colonial powers and their trading companies, including the British East India Company (EIC) and the Dutch East India Company (VOC). By the 18th century, Europeans and Americans were primarily drinking green or oolong teas known by colonial trading names like hyson, singlo, bohea, congou and souchong.

The U.S.'s founders were no strangers to tea. George Washington enjoyed drinking Chinese green teas out of porcelain tea bowls. All 342 chests of tea dumped overboard during the Boston Tea Party in 1773 were imported from China by the EIC. The three tea ships targeted by the Patriots held 265 chests of oolong tea and 75 chests of green tea. When tea was first introduced to Europe and North America, its appearance mirrored the "teacup without handle" emoji, much as the drink is still enjoyed in Asia today. As the global tea trade ramped up in the following centuries, tea in Europe and the U.S. came to look more like the "hot beverage" emoji.

Excerpted from:

Wang de Chen, Charlene. "What Emoji Tell Us about the History of Tea." *Smithsonian Magazine*.

Sub questions

Question Number : 16 Question Id : 640653990781 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The word "*emoji*" used in the title of this article is:

Options :

6406533348206. ✖ A singular noun

6406533348207. ✔ A plural noun

Question Number : 17 Question Id : 640653990782 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
According to the passage, the tea plant is NOT indigenous to _____.
Options :
6406533348208. ✖ India
6406533348209. ✖ Myanmar
6406533348210. ✔ Japan
6406533348211. ✖ Cambodia

Question Number : 18 Question Id : 640653990783 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
Which of the following rightly describes the role played by tea in China through the course of history?
Options :
6406533348212. ✖ A medicinal drink
6406533348213. ✖ A leisurely pastime drink of the elite
6406533348214. ✖ A beverage that helped monks stay alert for meditation
6406533348215. ✔ All of these

Question Number : 19 Question Id : 640653990784 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
Which of the following did not occur during the rule of the Tang dynasty in China?
Options :
6406533348216. ✔ The origin of congou tea
6406533348217. ✖ The flourishing of China’s tea culture
6406533348218. ✖ The advent of tea ceremonies and social events
6406533348219. ✖ The emergence of art and literature inspired by the drink

Question Number : 20 Question Id : 640653990785 Question Type : MCQ
Correct Marks : 2
Question Label : Multiple Choice Question
What is the difference between green tea and black tea?
Options :
6406533348220. ✖ Tea leaves are fully oxidized to make green tea; tea leaves are partially oxidized to make black tea.
6406533348221. ✖ Oxidation of tea leaves is prevented to make green tea; tea leaves are partially oxidized to make black tea.

6406533348222. ✔ Oxidation of tea leaves is prevented to make green tea; tea leaves are fully oxidized to make black tea.

6406533348223. ✖ Tea leaves are partially oxidized to make green tea; oxidation of tea leaves is prevented to make black tea.

Question Number : 21 Question Id : 640653990786 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Select the odd one out.

Options :

6406533348224. ✔ Oolong

6406533348225. ✖ Singlo

6406533348226. ✖ Bohea

6406533348227. ✖ Souchong

Question Number : 22 Question Id : 640653990787 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Which of the following is true about the Boston Tea Party?

Options :

6406533348228. ✖ George Washington drank Chinese green tea out of a porcelain bowl for the first time during the Boston Tea Party.

6406533348229. ✔ The Patriots threw 342 chests of tea imported by the East India Company overboard into the Boston harbor.

6406533348230. ✖ A Chinese tea ceremony was held in Boston for the first time in 1773.

6406533348231. ✖ None of these

Question Number : 23 Question Id : 640653990788 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

Buddhist monk Eisai is credited with the popularization of tea in _____.

Options :

6406533348232. ✖ China

6406533348233. ✖ Portugal

6406533348234. ✖ The Netherlands

6406533348235. ✔ Japan

Question Number : 24 Question Id : 640653990789 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

"*Cue*" rhymes with ____.

Options :

6406533348236. ✖ Segue

6406533348237. ✖ Sew

6406533348238. ✔ Queue

6406533348239. ✖ Beau

Question Number : 25 Question Id : 640653990790 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

The word "*curative*" is closest in meaning to ___.

Options :

6406533348240. ✔ Therapeutic

6406533348241. ✖ Selective

6406533348242. ✖ Causative

6406533348243. ✖ Derivative

Sub-Section Number :	3
Sub-Section Id :	640653145612
Question Shuffling Allowed :	Yes

Question Number : 26 Question Id : 640653990791 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.

Thoroughfare

Options :

6406533348244. ✖ Path

6406533348245. ✖ Wrath

6406533348246. ✔ Both Path and Wrath

6406533348247. ✖ Neither Path nor Wrath

Question Number : 27 Question Id : 640653990792 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

The word '*thermometer*' begins with a _____ sound.

Options :

6406533348248. ✖ Palatal

6406533348249. ✖ Velar

6406533348250. ✔ Dental

6406533348251. ✖ Labial

Question Number : 28 Question Id : 640653990793 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
The vowel sound between *b* and *n* in the word *born* is the same as:
Options :
6406533348252. ✖ That which occurs between *w* and *n* in the word *win*
6406533348253. ✖ That which occurs between *b* and *n* in the word *bone*
6406533348254. ✖ That which occurs between *w* and *n* in the word *wean*
6406533348255. ✔ That which occurs between *th* and *n* in the word *thorn*

Question Number : 29 Question Id : 640653990794 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Choose the word with a “ng” sound from the following.
Options :
6406533348256. ✖ Neat
6406533348257. ✖ Fin
6406533348258. ✔ Thing
6406533348259. ✖ Sound

Question Number : 30 Question Id : 640653990795 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Which among the following words has the same sound as underlined in “p<u>our</u>”?
Options :
6406533348260. ✔ Score
6406533348261. ✖ Scour
6406533348262. ✖ Crowd
6406533348263. ✖ Both Score and Scour

Question Number : 31 Question Id : 640653990796 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Identify the sequence of consonant and vowel sounds in the word *succumb*.
Options :
6406533348264. ✔ CVCVC
6406533348265. ✖ CVCCVCC
6406533348266. ✖ CVCVCC
6406533348267. ✖ CVCCVC

Question Number : 32 Question Id : 640653990797 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word.
They laughed at my idea.

Options :

6406533348268. ✖ Material Noun

6406533348269. ✔ Abstract Noun

6406533348270. ✖ Proper Noun

6406533348271. ✖ Class Noun

Question Number : 33 Question Id : 640653990798 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word.
The teacher is here.

Options :

6406533348272. ✔ Noun

6406533348273. ✖ Pronoun

6406533348274. ✖ Adjective

6406533348275. ✖ Preposition

Question Number : 34 Question Id : 640653990799 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Select the correct pronoun.
What did ____ say about the work?

Options :

6406533348276. ✔ She

6406533348277. ✖ Me

Question Number : 35 Question Id : 640653990800 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Fill in the blank with the appropriate option.
The phrasal verb '*see about*' means _____.

Options :

6406533348278. ✖ To say goodbye to someone

6406533348279. ✔ To deal with or organize something

Question Number : 36 Question Id : 640653990801 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the part of speech of the underlined word:
They ran after the bus.

Options :

6406533348280. ✖ Noun

6406533348281. ✖ Pronoun

6406533348282. ✔ Verb

6406533348283. ✖ Conjunction

Question Number : 37 Question Id : 640653990802 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Select the appropriate option:
The rooms in this hotel are _____ than the ones that we stayed in earlier.

Options :

6406533348284. ✖ Clean

6406533348285. ✔ Cleaner

6406533348286. ✖ Cleanest

6406533348287. ✖ None of these

Question Number : 38 Question Id : 640653990803 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Which of the following is NOT an adjective?

Options :

6406533348288. ✖ Sharp

6406533348289. ✖ Dull

6406533348290. ✖ Deep

6406533348291. ✔ Doubt

Question Number : 39 Question Id : 640653990804 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the appropriate option:
The professor did not reply to my email, she is away __ holiday.

Options :

6406533348292. ✖ At

6406533348293. ✔ On

6406533348294. ✖ For

6406533348295. ✖ In

Question Number : 40 Question Id : 640653990805 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the preposition in the following sentence:
As soon as I reached, I jumped into the pool.

Options :

6406533348296. ✖ I

6406533348297. ✖ Reached

6406533348298. ✖ Jumped

6406533348299. ✔ Into

Question Number : 41 Question Id : 640653990806 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Choose the correct option:
There is __ cup of coffee on the table.

Options :

6406533348300. ✔ A

6406533348301. ✖ An

6406533348302. ✖ The

6406533348303. ✖ none of these

Question Number : 42 Question Id : 640653990813 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Consider the following sentence:
The new building has become an expensive white elephant. In this sentence, what does the phrase *'white elephant'* mean?

Options :

6406533348329. ✔ Something that has cost a lot of money but has no useful purpose

6406533348330. ✖ Something that is quite different

Question Number : 43 Question Id : 640653990814 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Identify the suitable phrasal verb for the following meaning.

To accept something unpleasant.

Options :

6406533348331. ✖ Live by

6406533348332. ✖ Live down

6406533348333. ✖ Line up

6406533348334. ✔ Live with

Question Number : 44 Question Id : 640653990815 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

They had to _____ the outdoor concert due to the heavy rain

Options :

6406533348335. ✖ Calls off

6406533348336. ✖ Call out

6406533348337. ✔ Call off

6406533348338. ✖ Call up

Question Number : 45 Question Id : 640653990816 Question Type : MCQ

Correct Marks : 1

Question Label : Multiple Choice Question

Fill in the blank with the most suitable modal verb.

Let me see what I _____ find in the pantry.
Hint: To talk about general possibilities.

Options :

6406533348339. ✖ Shall

6406533348340. ✖ Would

6406533348341. ✔ Can

Sub-Section Number : 4

Sub-Section Id : 640653145613

Question Shuffling Allowed : No

Question Id : 640653990807 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 with the correct **antonyms** in List B.

List A	List B
(i) Explain	(a) Commence
(ii) Repudiate	(b) Evade
(iii) Finish	(c) Obscure
(iv) Yield	(d) Confirm
(v) Accost	(e) Resist

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 46 Question Id : 640653990808 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Explain
Options :
6406533348304. ✖ Commence
6406533348305. ✖ Evade
6406533348306. ✔ Obscure
6406533348307. ✖ Confirm
6406533348308. ✖ Resist

Question Number : 47 Question Id : 640653990809 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Repudiate
Options :
6406533348309. ✖ Commence
6406533348310. ✖ Evade
6406533348311. ✖ Obscure
6406533348312. ✔ Confirm
6406533348313. ✖ Resist

Question Number : 48 Question Id : 640653990810 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Finish

Options :

6406533348314. ✔ Commence

6406533348315. ✖ Evade

6406533348316. ✖ Obscure

6406533348317. ✖ Confirm

6406533348318. ✖ Resist

Question Number : 49 Question Id : 640653990811 Question Type : MCQ
Correct Marks : 1

Question Label : Multiple Choice Question

Yield

Options :

6406533348319. ✖ Commence

6406533348320. ✖ Evade

6406533348321. ✖ Obscure

6406533348322. ✖ Confirm

6406533348323. ✔ Resist

Question Number : 50 Question Id : 640653990812 Question Type : MCQ
Correct Marks : 1

Question Label : Multiple Choice Question

Accost

Options :

6406533348324. ✖ Commence

6406533348325. ✔ Evade

6406533348326. ✖ Obscure

6406533348327. ✖ Confirm

6406533348328. ✖ Resist

Question Id : 640653990817 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.

Receptionist: Good afternoon, Verma Enterprises. (i) _____
Caller: Hello, this is Usha Patel from Vision Tech. Can I speak with Raghu Nath in IT?
Receptionist: Sure, ma'am. What's the purpose of your call?
Caller: I need to discuss the new software integration.
Receptionist: (ii) _____
Raghu: Hi, this is Raghu Nath in IT. How can I help?
Caller: Hello, Raghu. This is Usha from Bright Tech. I want to go over the new software integration

details.
Raghu: Sure, we plan to start next Monday and finish in two weeks. Does that work?
Caller: Yes, will there be any downtime?
Raghu: About an hour during setup, scheduled off-peak.
Caller: Great. (iii) _____
Raghu: I'll email it by the end of the day.
Caller: (iv) _____. I look forward to working with you.
Raghu: No problem, Usha. Reach out if you need anything.
Caller: Will do. Thanks. Bye.
Raghu: (v) _____

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 51 Question Id : 640653990818 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (i) with an appropriate response.
Options :
6406533348342. ✖ What's your problem?
6406533348343. ✔ How may I help you?
6406533348344. ✖ What do you expect me to do?
6406533348345. ✖ What's the matter with you?

Question Number : 52 Question Id : 640653990819 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (ii) with an appropriate response.
Options :
6406533348346. ✔ Please hold while I transfer your call
6406533348347. ✖ Stay on hold for a moment, and don't speak
6406533348348. ✖ Keep quiet!
6406533348349. ✖ Be on hold, buddy!

Question Number : 53 Question Id : 640653990820 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (iii) with an appropriate response.
Options :
6406533348350. ✖ I want to meet the manager
6406533348351. ✖ Send the schedule if you like!
6406533348352. ✖ Can we plan the meeting for this week?

6406533348353. ✔ Can you send me a detailed schedule?

Question Number : 54 Question Id : 640653990821 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (iv) with an appropriate response.
Options :
6406533348354. ✖ I am not working on the project, Raghu
6406533348355. ✖ How can I help you, Raghu?
6406533348356. ✔ Thanks, Raghu
6406533348357. ✖ I will not be attending the meeting, Raghu

Question Number : 55 Question Id : 640653990822 Question Type : MCQ
Correct Marks : 1
Question Label : Multiple Choice Question
Complete blank (v) with an appropriate response.
Options :
6406533348358. ✖ I am on a conference call
6406533348359. ✔ Bye, Usha
6406533348360. ✖ I will be speaking with the manager
6406533348361. ✖ I will handle the project, Usha

CT

Section Id :	64065369202
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 : 640653145614

Question Shuffling Allowed : No

Question Number : 56 Question Id : 640653990823 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)"

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Options :

6406533348362. ✔ YES

6406533348363. ✖ NO

Question Number : 57 Question Id : 640653990824 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

Options :

6406533348364. ✔ Useful Data has been mentioned above.

6406533348365. ✖ This data attachment is just for a reference & not for an evaluation.

Sub-Section Number : 2

Sub-Section Id : 640653145615

Question Shuffling Allowed : Yes

Question Number : 58 Question Id : 640653990826 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?

```
P = 0, Q = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.TotalBillAmount <= AvgT){
        P = P + 1
    }
    else{
        if(X.ShopName == "Big Bazaar" or X.ShopName == "SV Stores"){
            Q = Q + 1
        }
    }
}
```

Options :

6406533348370. ✔ Number of bills from "Big Bazaar" or "SV Stores" with total bill amount greater than the average total bill amount.

6406533348371. ✖ Number of bills from either "Big Bazaar" or "SV Stores" with total bill amount lesser than the average total bill amount.

6406533348372. ✖ Number of bills from either "Big Bazaar" or "SV Stores".

6406533348373. ✖ Number of bills from either "Big Bazaar" or "SV Stores" with total bill amount lesser than or equal to the average total bill amount.

Question Number : 59 Question Id : 640653990829 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?

```
A = 0, Flag = True
while(Table 1 has more cards){
    Read the first row X from Table 1
    if(X.LetterCount > A){
        A = X.LetterCount
    }
    Move X to Table 2
}
B = 0, Count = 0
while(Table 2 has more cards){
    Read the first row X from Table 2
    if(X.LetterCount == A){
        B = B + 1
    }
    if(X.Word ends with a full stop and B >= 2){
        Count = Count + 1
        B = 0
    }
    Move X to Table 3
}
```

Options :

6406533348382. ✖ Number of sentences with at most two longest words

6406533348383. ✔ Number of sentences with at least two longest words

6406533348384. ✖ Number of sentences with at most two shortest words

6406533348385. ✖ Number of sentences with at least two shortest words

Question Number : 60 Question Id : 640653990831 Question Type : MCQ Correct Marks : 4

Question Label : Multiple Choice Question

The following pseudocode is executed using the "Words" dataset. At the end of the execution, **A** captures the maximum letter count of a word which is not noun. Choose the correct code fragment to complete the pseudocode.

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

Options :

6406533348387. ✖

```
if(X.PartOfSpeech == "Noun" and X.LetterCount > A){
    A = X.LetterCount
}
```

6406533348388. ✖

```
if(X.PartOfSpeech != "Noun" and X.LetterCount < A){
    A = X.LetterCount
}
```

6406533348389. ✖

```
if(X.PartOfSpeech == "Noun" and X.LetterCount < A){
    A = X.LetterCount
}
```

6406533348390. ✔

```
if(X.PartOfSpeech != "Noun" and X.LetterCount > A){
    A = X.LetterCount
}
```

Question Number : 61 Question Id : 640653990834 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?

```
count = 0, A = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    if(X.Gender == 'F' or X.Mathematics > X.Physics){
        A = A + 1
    }
    else{
        count = count + 1
    }
    Move X to Table 2
}
```

Options :

6406533348400. ✖ Number of male students whose Physics marks are greater than Mathematics marks

6406533348401. ✔ Number of male students whose Physics marks are greater than or equal to Mathematics marks

6406533348402. ✖ Number of female students whose Physics marks are greater than or equal to Mathematics marks

6406533348403. ✖ Number of female students whose Physics marks are less than or equal to Mathematics marks

Question Number : 62 Question Id : 640653990836 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?

```
count = 0
while(Pile 1 has more cards){
    Read the top card X from Pile 1
    C = 0
    if(X.Mathematics < 75){
        C = C + 1
    }
    if(X.Physics < 75){
        C = C + 1
    }
    if(X.Chemistry < 75){
        C = C + 1
    }
    if(C == 1){
        count = count + 1
    }
    Move X to Pile 2
}
```

Options :

6406533348408. ✖ Number of students who scored less than 75 marks in all three subjects.

6406533348409. ✖ Number of students who scored less than 75 marks in atmost one subject.

6406533348410. ✖ Number of students who scored less than 75 marks in atleast one subject.

6406533348411. ✔ Number of students who scored less than 75 marks in exactly one subject.

Sub-Section Number : 3

Sub-Section Id : 640653145616

Question Shuffling Allowed : Yes

Question Number : 63 Question Id : 640653990828 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?

```
Count = 0, Flag = True
while(Table 1 has more cards){
    Read the first row X from Table 1
    if(CountVowels(X) != X.LetterCount - CountVowels(X)){
        Flag = False
    }
    if(X.Word ends with a full stop){
        if(Flag){
            Count = Count + 1
        }
        Flag = True
    }
    Move X to Table 2
}
Procedure CountVowels(Y)
    i = 1
    B = 0
    while(i ≤ Y.LetterCount){
        if(ith letter of Y.Word is a vowel){
            B = B + 1
        }
        i = i + 1
    }
    return(B)
End CountVowels
```

Options :

6406533348378. ✖ Number of sentences with equal number of vowels and consonants

6406533348379. ✔ Number of sentences with each word having equal number of vowels and consonants

6406533348380. ✖ Number of sentences with different number of vowels and consonants

6406533348381. ✖ Number of sentences with each word having different number of vowels and consonants

Sub-Section Number : 4

Sub-Section Id : 640653145617

Question Shuffling Allowed : Yes

Question Number : 64 Question Id : 640653990825 Question Type : MSQ

Correct Marks : 4 Max. Selectable Options : 0

Question Label : Multiple Select 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 or 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 :

6406533348366. ✖

```
Procedure partialMatch(X, Y)
    A = False, B = False
    if(X.CityTown == Y.CityTown){
        A = True
    }
    if(X.Total == Y.Total){
        B = True
    }
    if(A and B){
        return (True)
    }
    return(False)
End partialMatch
```

6406533348367. ✔

```
Procedure partialMatch(X, Y)
    A = False, B = False
    if(X.CityTown == Y.CityTown){
        A = True
    }
    if(X.Total == Y.Total){
        B = True
    }
    if(A or B){
        return(True)
    }
    return(False)
End partialMatch
```

6406533348368. ✖

```
Procedure partialMatch(X, Y)
    A = 0, B = 0
    if(X.CityTown == Y.CityTown){
        A = 1
    }
    if(X.Total == Y.Total){
        B = 1
    }
    if(A + B == 1){
        return(True)
    }
    return(False)
End partialMatch
```

6406533348369. ✔

```
Procedure partialMatch(X, Y)
    A = 0, B = 0
    if(X.CityTown == Y.CityTown){
        A = 1
    }
    if(X.Total == Y.Total){
        B = 1
    }
    if((A + B) >= 1){
        return(True)
    }
    return(False)
End partialMatch
```

Question Number : 65 Question Id : 640653990827 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 fiction books which were published between 2000 and 2010 (including 2000 and 2010) and are written in a language other than English. Choose the correct code for procedure doSomething to complete the pseudocode.

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

Options :

6406533348374. ✔

```
Procedure doSomething(X)
    B = 0
    if(X.Year >= 2000 and X.Year <= 2010){
        if(X.Genre == "Fiction"){
            if(X.Language != "English"){
                B = 1
            }
        }
    }
    return B
End doSomething
```

6406533348375. ✖

```
Procedure doSomething(X)
    B = 0
    if(X.Year >= 2000 or X.Year <= 2010){
        if(X.Genre == "Fiction"){
            if(X.Language != "English"){
                B = 1
            }
        }
    }
    return B
End doSomething
```

6406533348376. ✖

```
Procedure doSomething(X)
    B = 0
    if(X.Year >= 2000 or X.Year <= 2010 and X.Genre == "Fiction" and X.Language != "English"){
        B = 1
    }
    return B
End doSomething
```

6406533348377. ✔

```
Procedure doSomething(X)
    B = 0
    if(X.Year >= 2000 and X.Year <= 2010 and X.Genre == "Fiction" and X.Language != "English"){
        B = 1
    }
    return B
End doSomething
```

Question Number : 66 Question Id : 640653990833 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	220
Row 2	Milk	Fruits/Food	1	24	24
Row 3	Cupcakes	Packed/Food	1	25	25
Row 4	Chocolates	Packed/Food	1	10	10
Row 5	Shirts	Women/Apparel	1.5	1350	2025

Options :

6406533348395. ✔ Row 1

6406533348396. ✔ Row 2

6406533348397. ✖ Row 3

6406533348398. ✖ Row 4

6406533348399. ✔ Row 5

Question Number : 67 Question Id : 640653990835 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).

```
A = 0
while(Table 1 has more rows){
    Read the first row X in Table 1
    C = True
    if(X.Publisher == "Penguin"){
        C = True
    }
    if(X.Author == "Narayan"){
        C = False
    }
    if(C){
        A = A + 1
    }
    Move X to Table 2
}
```

Options :

6406533348404. ✔ Error in Line 4

6406533348405. ✔ Error in Line 9

6406533348406. ✖ Error in Line 12

6406533348407. ✖ No error

Sub-Section Number : 5

Sub-Section Id : 640653145618

Question Shuffling Allowed : Yes

Question Number : 68 Question Id : 640653990832 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 lowest Chemistry marks scored by a male student from Vellore. Choose the correct code fragment(s) to complete the pseudocode.

```
A = 101
while (Table 1 has more rows) {
    Read the first row X in Table 1
    **********************
    *   Fill the code    *
    **********************
    Move X to Table 2
}
```

Options :

6406533348391. ✖

```
if(X.Gender != 'F' and X.CityTown == "Vellore"){
    if(X.Chemistry > A){
        A = X.Chemistry
    }
}
```

6406533348392. ✔

```
if(X.Gender == 'M' and X.CityTown == "Vellore"){
    if(X.Chemistry < A){
        A = X.Chemistry
    }
}
```

6406533348393. ✖

```
if(X.Gender == 'M' and X.CityTown == "Vellore"){
    if(X.Chemistry > A){
        A = X.Chemistry
    }
}
```

6406533348394. ✔

```
if(X.Gender != 'F'){
    if(X.CityTown == "Vellore"){
        if(X.Chemistry < A){
            A = X.Chemistry
        }
    }
}
```

Sub-Section Number : 6
Sub-Section Id : 640653145619
Question Shuffling Allowed : Yes

Question Number : 69 Question Id : 640653990830 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."

```
count = 0, flag = True
while(Table 1 has more rows){
    Read the first row X in Table 1
    Move X to Table 2
    if(1st letter of X.Word == 's' and flag){
        if(2nd letter of X.Word == 'o'){
            count = count + 1
        }
    }

    if(X.Word ends with full stop){
        flag = False
    }
}
```

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 :

Stats-1

Section Id :	64065369203
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 :	640653145620
Question Shuffling Allowed :	No

Question Number : 70 Question Id : 640653990837 Question Type : MCQ

Correct Marks : 0

Question Label : Multiple Choice Question

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

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Options :

6406533348412. ✔ YES

6406533348413. ✖ NO

Sub-Section Number :	2
Sub-Section Id :	640653145621
Question Shuffling Allowed :	No

Question Id : 640653990839 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (71 to 72)

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 above data, answer the given subquestions.

Sub questions

Question Number : 71 Question Id : 640653990840 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 the analyst is based on which kind of statistical analysis ?

Options :

6406533348418. ✖ Descriptive statistics

6406533348419. ✔ Inferential statistics

Question Number : 72 Question Id : 640653990841 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 :

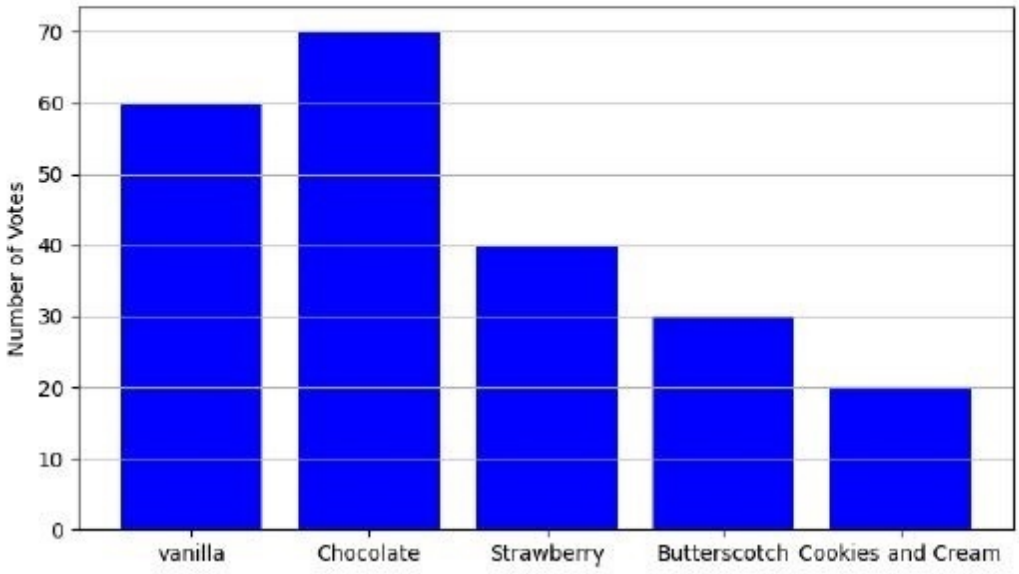
12.22 to 12.28

Question Id : 640653990842 Question Type : COMPREHENSION Sub Question Shuffling

Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (73 to 74)

Question Label : Comprehension

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



Sub questions

Question Number : 73 Question Id : 640653990843 Question Type : MCQ

Correct Marks : 2

Question Label : Multiple Choice Question

What is the mode of the dataset?

Options :

6406533348421. ✖ Strawberry

6406533348422. ✖ 40

6406533348423. ✔ Chocolate

6406533348424. ✖ 70

Question Number : 74 Question Id : 640653990844 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 :

6406533348425. ✔ 31.81%

6406533348426. ✖ 20%

6406533348427. ✖ 22.72%

6406533348428. ✖ 50%

Question Id : 640653990850 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (75 to 76)

Question Label : Comprehension

Please answer the subquestions based on the given 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 : 75 Question Id : 640653990851 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 : 76 Question Id : 640653990852 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 : 3
Sub-Section Id : 640653145622
Question Shuffling Allowed : No

Question Id : 640653990847 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix
Question Numbers : (77 to 78)
Question Label : Comprehension
Please answer the subquestions based on the given frequency distribution table for different types of cusines 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 : 77 Question Id : 640653990848 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 : 78 Question Id : 640653990849 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 : 640653990854 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Question Numbers : (79 to 80)
Question Label : Comprehension
Please answer the subquestions based on the given dataset:

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

Table 2

Sub questions

Question Number : 79 Question Id : 640653990855 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 : 80 Question Id : 640653990856 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 :	4
Sub-Section Id :	640653145623
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 640653990838 Question Type : MSQ

Correct Marks : 3 Max. Selectable Options : 0

Question Label : Multiple Select Question

Which of the following statements is/are true?

Options :

6406533348414. ✔ A sample is the subset of a population.

6406533348415. ✔ Numerical variables can have all the properties of ordinal and nominal scales of measurement.

6406533348416. ✖ Descriptive measures like Mean, Median, and Mode all of them can be used to summarize the categorical variable.

6406533348417. ✔ The correlation coefficient measures the strength of the linear association between two numerical variables.

Question Number : 82 Question Id : 640653990845 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(are) appropriate?

Options :

6406533348429. ✖ Mean

6406533348430. ✔ Median

6406533348431. ✔ Mode

6406533348432. ✖ Variance

Question Number : 83 Question Id : 640653990846 Question Type : MSQ

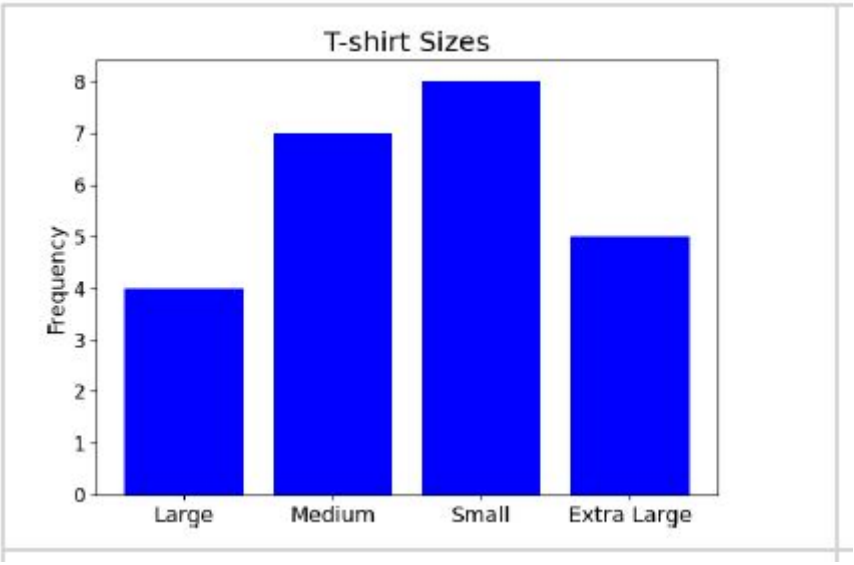
Correct Marks : 3 Max. Selectable Options : 0

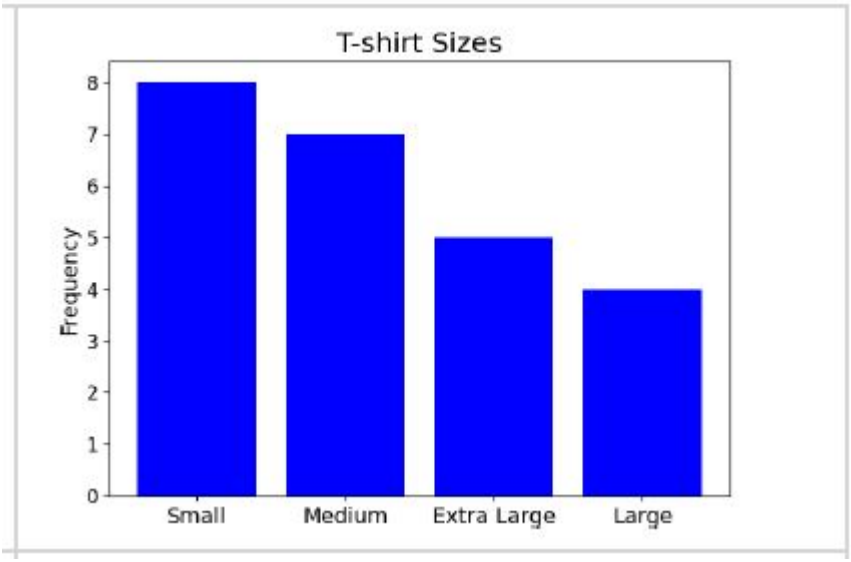
Question Label : Multiple Select Question

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?

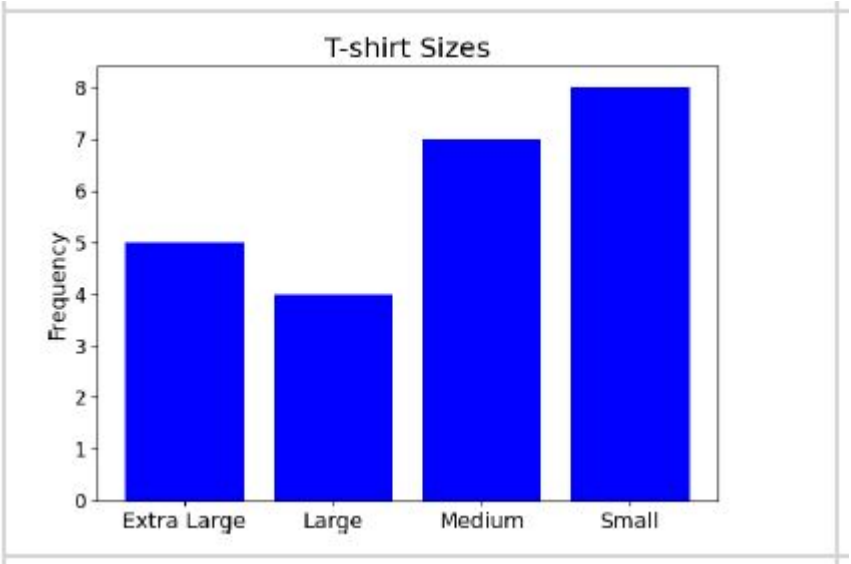
Options :

6406533348433. ✖



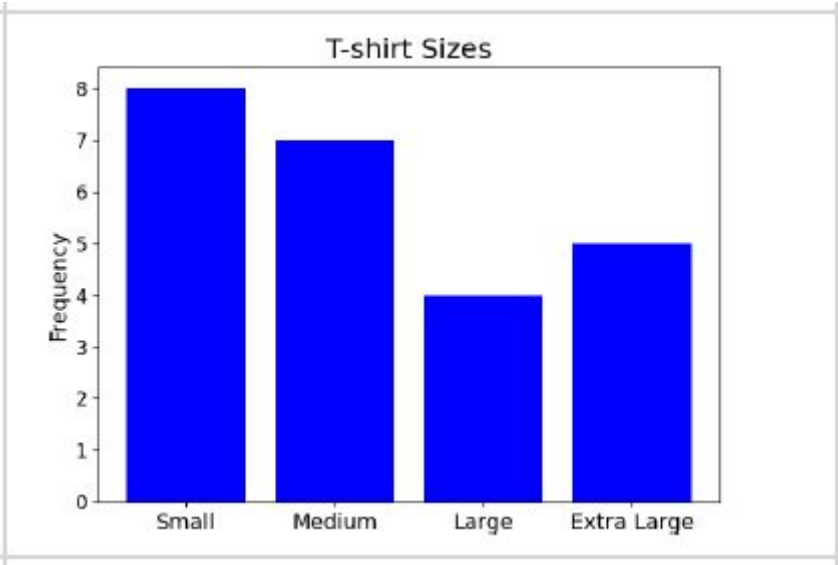


6406533348434. ✖



6406533348435. ✔

6406533348436. ✔



Sub-Section Number : 5
Sub-Section Id : 640653145624
Question Shuffling Allowed : Yes

Question Number : 84 Question Id : 640653990853 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