



Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPSC



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

SSC CHSL 2021 (Tier-I) Previous Year Paper (07-Jun-2022) (Shift 3)

Total Time: 1 Hour

Total Marks: 200

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	English Language	25	50	0.5	2
2	General Intelligence	25	50	0.5	2
3	Quantitative Aptitude	25	50	0.5	2
4	General Awareness	25	50	0.5	2

- 1.) A total of 60 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

English Language

1. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. (+2, -0.5)

The train was already left before we reached the platform.

- a. train will have left
- b. train had already left
- c. the train left
- d. No substitution required

2. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph (+2, -0.5)

A. The two children were so like, that without much difficulty it could not be discerned of their proper parents, which was Titus from Gisippus, or Gisippus from Titus.

B. There was in the city of Rome a noble senator, named Fulvius, who sent his son, called Titus, being a child, to the city of Athens, in Greece (which was the fountain of all manner of doctrine), there to learn good letters : and caused him to be hosted with a worshipful mart of that city, called Chremes.

C. This Chremes happened to have also a son named Gisippus, who not only was equal to the said young Titus in years, but also in stature, proportion of body, favour, and colour of visage, countenance, and speech

D. These two young gentlemen, as they seemed to be one in form and personage, so shortly after acquaintance, the same nature wrought in their

hearts such a mutual affection, and their wills and appetites daily more and more so confederated themselves, that it seemed none other, when their names were declared, but that they had only changed their places, issuing (as I might say) out of the one body, and entering into the other.

- a. BACD
- b. DBCA
- c. ADBC
- d. BCAD

3. Select the most appropriate ANTONYM of the given word. (+2, -0.5)

Absurd

- a. Amaze
- b. Anxious
- c. Sensible
- d. Ramble

4. Select the most appropriate synonym of the given word. (+2, -0.5)

Quintessential

- a. Fantastic
- b. Typical
- c. Initial
- d. Charming

5. Select the option that expresses the given sentence in passive voice. (+2, -0.5)

Their behaviour vexes us.

- a. We had been vexed by their behaviour.
- b. We are vexed by their behaviour.
- c. We have been vexed by their behaviour.
- d. We are being vexed by their behaviour

6. Select the most appropriate meaning of the idiom. (+2, -0.5)

To bite the bullet

- a. To reject doing something difficult or unpleasant
- b. To be upset or annoyed
- c. To be brave in a difficult situation
- d. To state your opinion openly

7. Select the INCORRECTLY spelt word. (+2, -0.5)

- a. Succesion
- b. Assassinate
- c. Complacent
- d. Aquarium

8. Complete the sentence with an appropriate ANTONYM of the word mentioned in the bracket. (+2, -0.5)

Many Bollywood movies show _____ (cheerful) stories nowadays.

- a. radiant
- b. jaunty
- c. chirpy
- d. gloomy

-
9. Select the most appropriate ANTONYM of the word given in bold in the following sentence. (+2, -0.5)

Her father was quick to detect her **concealed** emotion.

- a. disclosed
- b. arrogant
- c. annoyed
- d. excited

-
10. Select the most appropriate synonym of the word given in bold in the following sentence. (+2, -0.5)

The patient complained of **giddiness** after surgery.

- a. pride
- b. enthusiasm

- c. opponent
- d. unsteadiness

-
11. Spot the error in the given sentence and select the correct sentence from the options given. (+2, -0.5)

When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately fled the spot

- a. When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately flew the spot.
- b. When the villagers putted up a firm resistance to the fearsome bandit with all their might, he ultimately fled the spot.
- c. When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately flown the spot.
- d. When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately fled the spot.

-
12. Select the option that can be used as a one-word substitute for the given group of words. (+2, -0.5)

The art of beautiful handwriting

- a. Calligraphy
- b. Monography
- c. Epigraphy
- d. Catastrophe

13. Select the most appropriate option that can substitute the underlined segment in the given sentence. (+2, -0.5)

I can see lots of colours on the picture.

- a. over
- b. at
- c. for
- d. in

14. Select the option that can be used as a one-word substitute for the given group of words. (+2, -0.5)

The work inscribed on the tomb in the memory of the person

- a. Epigraph
- b. Excerpt
- c. Euphoria
- d. Epitaph

15. Select the option that expresses the given sentence in active voice. (+2, -0.5)

The meal is being prepared by the chef.

- a. The chef is preparing the meal.
- b. The chef will prepare the meal.
- c. The chef did prepare the meal.

- d. The chef was preparing the meal.

-
16. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

The app gets Larry's parents involved in the learning and improvement process, sending them advice about Larry's behaviours and progress, and recommending motivational _____ they might undertake that are _____ to Larry's situation and the program's _____ about his attitudes and behaviours.

- a. intermissions, directed, injunctions
b. interpolations, disrupted, inventions
c. interventions, targeted, inferences
d. interruptions, disillusioned, invasions

-
17. Select the most appropriate option to substitute the underline segment in the given sentence. (+2, -0.5)

I cannot sit up with this sort of insult in office.

- a. go up with
b. put up with
c. get up with
d. do up with

-
18. Select the correct homonym from the given options to fill in the blank. (+2, -0.5)

The athlete's _____ was badly injured due to a fall on the track.

- a. toe
- b. toad
- c. tow
- d. to

-
19. In the following questions a statement has been given with highlighted text. Select the options that can replace the text with correct idiom or phrase. (+2, -0.5)

He is known for **talking too frankly** .

- a. Lose one's marbles
- b. Go the extra mile
- c. Snug as a bug in a rug
- d. Call a spade a spade

-
20. Select the most appropriate option to fill in the blank. (+2, -0.5)

She swallowed _____ her breakfast in a hurry.

- a. in
- b. up
- c. into
- d. down

21. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

One of the most devastating periods in European history came (1)_____ the fourteenth century, with the epidemic of bubonic plague, also known as the 'Great Plague' and later dubbed the 'Black Death'. At the time of its first pandemic, the bubonic plague was a terrifying disease, killing indiscriminately (2)_____ cities and towns devastated in its wake. It appeared to spread just by touching clothes and people who (3)_____ healthy one day might be dead the next. Faced with such a mysterious and horrifying illness, many believed that this was a divine (4)_____ for their sins. Researchers in Hong Kong at the end of the nineteenth century discovered that the disease is caused by the bacteria 'Yersinia Pestis'. Modern (5)_____ practices and medicine have greatly subdued the impact of the bubonic plague, but have never completely eliminated it.

Select the most appropriate option to fill in the blank number 1.

- a. by
- b. at
- c. through
- d. during

22. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

One of the most devastating periods in European history came (1)_____ the fourteenth century, with the epidemic of bubonic plague, also known as the 'Great Plague' and later dubbed the 'Black Death'. At the

time of its first pandemic, the bubonic plague was a terrifying disease, killing indiscriminately (2) _____ cities and towns devastated in its wake. It appeared to spread just by touching clothes and people who (3) _____ healthy one day might be dead the next. Faced with such a mysterious and horrifying illness, many believed that this was a divine (4) _____ for their sins. Researchers in Hong Kong at the end of the nineteenth century discovered that the disease is caused by the bacteria 'Yersinia Pestis'. Modern (5) _____ practices and medicine have greatly subdued the impact of the bubonic plague, but have never completely eliminated it.

Select the most appropriate option to fill in blank number 2.

- a. settling
- b. reckoning
- c. keeping
- d. leaving

23. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

One of the most devastating periods in European history came (1) _____ the fourteenth century, with the epidemic of bubonic plague, also known as the 'Great Plague' and later dubbed the 'Black Death'. At the time of its first pandemic, the bubonic plague was a terrifying disease, killing indiscriminately (2) _____ cities and towns devastated in its wake. It appeared to spread just by touching clothes and people who (3) _____ healthy one day might be dead the next. Faced with such a mysterious and horrifying illness, many believed that this was a divine (4) _____ for their sins. Researchers in Hong Kong at the end of the nineteenth century discovered that the disease is caused by the bacteria

'Yersinia Pestis'. Modern (5) _____ practices and medicine have greatly subdued the impact of the bubonic plague, but have never completely eliminated it.

Select the most appropriate option to fill in blank number 3.

- a. departed
- b. seemed
- c. became
- d. kept

24. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

One of the most devastating periods in European history came (1) _____ the fourteenth century, with the epidemic of bubonic plague, also known as the 'Great Plague' and later dubbed the 'Black Death'. At the time of its first pandemic, the bubonic plague was a terrifying disease, killing indiscriminately (2) _____ cities and towns devastated in its wake. It appeared to spread just by touching clothes and people who (3) _____ healthy one day might be dead the next. Faced with such a mysterious and horrifying illness, many believed that this was a divine (4) _____ for their sins. Researchers in Hong Kong at the end of the nineteenth century discovered that the disease is caused by the bacteria 'Yersinia Pestis'. Modern (5) _____ practices and medicine have greatly subdued the impact of the bubonic plague, but have never completely eliminated it.

Select the most appropriate option to fill in blank number 4.

- a. order

- b. accolade
- c. oracle
- d. punishment

25. In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. (+2, -0.5)

One of the most devastating periods in European history came (1) _____ the fourteenth century, with the epidemic of bubonic plague, also known as the 'Great Plague' and later dubbed the 'Black Death'. At the time of its first pandemic, the bubonic plague was a terrifying disease, killing indiscriminately (2) _____ cities and towns devastated in its wake. It appeared to spread just by touching clothes and people who (3) _____ healthy one day might be dead the next. Faced with such a mysterious and horrifying illness, many believed that this was a divine (4) _____ for their sins. Researchers in Hong Kong at the end of the nineteenth century discovered that the disease is caused by the bacteria 'Yersinia Pestis'. Modern (5) _____ practices and medicine have greatly subdued the impact of the bubonic plague, but have never completely eliminated it.

Select the most appropriate option to fill in blank number 5.

- a. cultural
- b. unhygienic
- c. ongoing
- d. sanitary

General Intelligence

26. Select the correct mirror image of the given combination when the mirror is placed at MN as shown below (+2, -0.5)



- a. 1əðΣps
- b. 1əðΣas
- c. 1ə9Σps
- d. 1ə6Zgs

27. Select the correct mirror image of the given combination when the mirror is placed at XY as shown. (+2, -0.5)



- a. Σ1W&T2
- b. 2T&W1Σ
- c. Z1W3T5

d. Z1M319

28. In a certain code language, 'KITCHEN' is written as 'NJUDIFK' and 'RESPECT' is written as 'TFTQFDR'. How will 'WELCOME' be written in that language? (+2, -0.5)

a. EFMDQNE

b. EFMDPNW

c. ZLEOCEW

d. ZDMBONW

29. Select the correct combination of mathematical signs to replace the * signs and to balance the given equation. (+2, -0.5)

$$45 * 17 * 3 * 41 * 81 * 9 * 56$$

a. +, =, -, ×, ÷, +

b. +, -, =, ×, +, -

c. =, -, ×, +, -, +

d. =, ×, +, +, ÷, -

30. Which of the following numbers will replace the question mark (?) in the given series? (+2, -0.5)

14, 28, 31, ?, 129, 774

a. 124

b. 117

- c. 119
- d. 106

31. Select the correct mirror image of the given combination when the mirror is placed at MN as shown (+2, -0.5)



- a. rat164
- b. rat164
- c. rat164
- d. rat164

32. Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation. (+2, -0.5)

$$65 * 50 * 5 * 2 * 4 * 63$$

- a. $\div, -, \times, +, =$
- b. $+, \times, \div, -, =$
- c. $+, \times, -, \div, =$
- d. $-, \div, +, \times, =$

33. Select the option that represents the letters that, when sequentially placed from left to right in the blanks below, will complete the letter series. (+2, -0.5)

C _ _ r E _ t C U r _ _ n t C _ r _ E n t

- a. E r n r E U r
- b. U r U r E U r
- c. U r n r U U r
- d. U r n r E U r

34. Study the given pattern carefully and select the number that can replace the question mark (?) in it. (+2, -0.5)

First row: 7, 9, 39

Second row: 4, 8, 28

Third row: 6, 7, ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the number into its constituent digits. For example, 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

- a. 32
- b. 38
- c. 40
- d. 37

35. The second number in the given number pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) are followed in all the number pairs except one. Find that odd number pair. (+2, -0.5)

- a. 14 : 512
- b. 22 : 1728
- c. 46 : 12167
- d. 38 : 8000

36. The second number in the given number-pairs is obtained by performing certain mathematical operation(s) on the first number. The same operations(s) are followed in all the number-pairs EXCEPT one. Find that odd number-pair. (+2, -0.5)

- a. 64 : 6
- b. 25 : 2
- c. 225 : 12
- d. 169 : 10

37. Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation. (+2, -0.5)

$$93 * 65 * 3 * 56 * 14 * 146$$

- a. $\times, +, -, \div, =$
- b. $+, -, \div, \times, =$

c. $-, +, \times, \div, =$

d. $+, -, \times, \div, =$

38. Which letter-cluster will replace the question mark (?) to complete the given series? (+2, -0.5)

IZDK, OHVO, UPNS, AXFW, ?

a. EEYZ

b. GFXA

c. EEXZ

d. EEYA

39. Select the option that represents the correct order of the given words as they would appear in an English dictionary. (+2, -0.5)

1. Sarcastic

2. Satisfaction

3. Salutation

4. Sanction

5. Sacrifice

a. 3, 5, 4, 1, 2

b. 5, 3, 4, 1, 2

c. 4, 5, 3, 1, 2

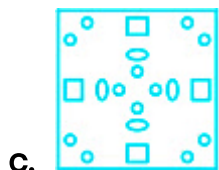
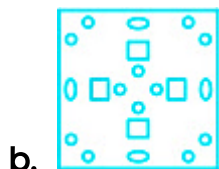
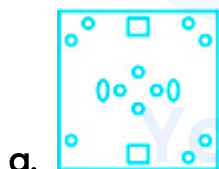
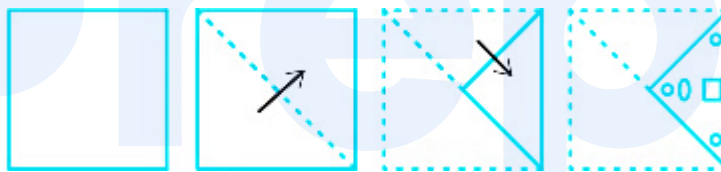
d. 4, 5, 2, 1, 3

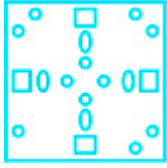
40. Which of the following numbers will replace the question mark (?) in the given series? (+2, -0.5)

134, 186, 238, 290, 342, ?

- a. 370
- b. 386
- c. 394
- d. 378

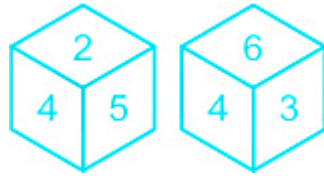
41. A paper is folded and cut as shown. How will it appear when unfolded? (+2, -0.5)





d.

42. Two different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be on the face opposite to the one showing '4'. (+2, -0.5)



- a. 2
- b. 5
- c. 1
- d. 3

43. Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term. (+2, -0.5)

ANOXIC : ONACIX :: EQUITY : UQEYTI :: REFUND : ?

- a. FERDUN
- b. UNDFER
- c. DREFND
- d. FERDNU

44. Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number. (+2, -0.5)

3 : 19 :: 2 : 7 :: 5 : ?

- a. 69
- b. 51
- c. 59
- d. 61

45. If 28 February 2020 was Friday, then what was the day of the week on 30 December 2015? (+2, -0.5)

- a. Wednesday
- b. Tuesday
- c. Sunday
- d. Monday

46. Seven friends S, T, U, V, W, X and Y, each has a different height. W is taller than X but shorter than V. Only three people are taller than V. T is taller than U but shorter than S. Y is the shortest among all. How many persons are taller than U? (+2, -0.5)

- a. 1
- b. 5
- c. 2

d. 4

47. In a certain code language, 'PEN' is written as 'OCK', and 'ZEN' is written as 'YCK'. How will 'TON' be written in that language? (+2, -0.5)

a. RNJ

b. SNK

c. SMK

d. RMK

48. Which of the following numbers will replace the question mark (?) in the given series? (+2, -0.5)

249, 255, 238, ?, 227, 277

a. 241

b. 257

c. 266

d. 229

49. Select the correct mirror image of the given combination when the mirror is placed at MN as shown (+2, -0.5)



- a. jld45a
- b. jld45a
- c. jld429
- d. jld45a

50. Which letter-cluster will replace the question mark (?) in the following series? (+2, -0.5)

UYBD, ZDGI, ?, JNQS

- a. DHKM
- b. FJMO
- c. CGJL
- d. EILN

Your Personal Exams Guide

Quantitative Aptitude

51. In an examination, Gopal secured 15% more marks than Asha, and Asha secured 10% more marks than Sachin. How much per cent more marks did Gopal secure than Sachin? (+2, -0.5)
- a. 25.5%
 - b. 26.5%
 - c. 25%
 - d. 24.5%
-
52. Pranjal takes twice as much time as Vikram or thrice as much time as Ashwin to finish a piece of work. Working together, they can finish the work in 6 days. Vikram can do the work alone in: (+2, -0.5)
- a. 18 days
 - b. 9 days
 - c. 15 days
 - d. 12 days
-
53. If 60% of a number is equal to three-fourth of another number, what is the ratio of the first number to the second number? (+2, -0.5)
- a. 3 : 7
 - b. 2 : 5
 - c. 7 : 3

d. $5 : 4$

54. It is given that the average of 19 numbers is 8.5. If one number with value 63 was entered incorrectly as 25, then the corrected average is: (+2, -0.5)

a. 9.5

b. 11.5

c. 7.5

d. 10.5

55. The volume of a sphere is 38808 cm^3 . What is its surface area (in cm^2)? (+2, -0.5)
(Take $\pi = 22/7$)

a. 6655

b. 5544

c. 5040

d. 5599

56. Find the value of $(625)^{0.07} \times (625)^{0.18}$ (+2, -0.5)

a. 25

b. 625

c. 5

d. 125

57. Which of the following numbers is divisible by 360? (+2, -0.5)

- a. 171720
- b. 176600
- c. 166200
- d. 171080

58. Under a sale offer, Suresh was offered 20% discount on the part of the marked price that was paid in cash, but was charged 0.5% on the part marked price paid through a credit card. If Suresh paid 40% of the marked price in cash and the rest through a credit card, what percentage of the marked price was his total final payment? (+2, -0.5)

- a. 93.2%
- b. 92.6%
- c. 92.8%
- d. 92.3%

59. A woman can row 36 km downstream in 4 hours and 49 km upstream in 7 hours. What is the speed of the current? (+2, -0.5)

- a. 2 km/h
- b. 1.5 km/h
- c. 3 km/h
- d. 1 km/h

60. The marked price of a cell phone is Rs. 23,000. The shopkeeper offers successive discounts of 14% and 16%. How much, approximately, does a customer have to pay? (+2, -0.5)
- a. Rs. 16,615
 - b. Rs. 16,100
 - c. Rs. 16,425
 - d. Rs. 16,585
61. The expenses of a family on rice, vegetables and cooking oil are in the ratio 9 : 11 : 5. If the prices of these items increases by 10%, 20% and 30%, respectively, then the total expenses of the family on these items will increase by: (+2, -0.5)
- a. 14.8 %
 - b. 19.2%
 - c. 18.4%
 - d. 16.2%
62. A library has an average of 330 visitors on Sundays and 240 on the other days. Find the average of the number of visitors per day in a month of 30 days, beginning with a Saturday. (+2, -0.5)
- a. 260
 - b. 255
 - c. 270

d. 265

63. Simplify $\frac{3294}{(226+506) \text{ of } \frac{3}{4}} + 500$

(+2, -0.5)

a. 506

b. 444

c. 501

d. 502

64. If $x + y + z = 0$, then find the value of $\frac{x^2}{x^2-yz} + \frac{y^2}{y^2-zx} + \frac{z^2}{z^2-xy}$.

(+2, -0.5)

a. 2

b. 1

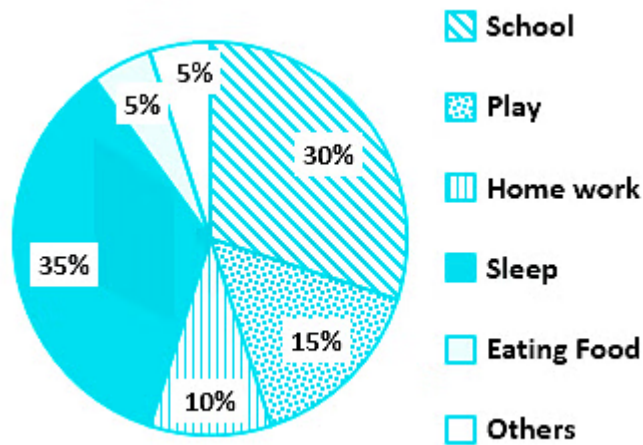
c. 3

d. 0

Your Personal Exams Guide

65. The pie-chart below represents the number of hours as a percent of 24 hours of a day, spent on different activities by a student, study the pie chart and answer the question that follows.

(+2, -0.5)



if the pie-chart is a visual representation of the number of hours spent on different activities by a student during a day, then the student spends the maximum number of hours in a day:

- a. doing homework
- b. playing
- c. sleeping
- d. at school

Your Personal Exams Guide

66. The value of $\sin 35^\circ \cos 55^\circ + \cos 35^\circ \sin 55^\circ$ is: (+2, -0.5)

- a. 0
- b. $\frac{3}{4}$
- c. $\frac{1}{2}$
- d. 1

67. If $r + \frac{1}{r} = 11$, then the vale of $\frac{r^3 + \frac{1}{r}}{r^2 - r + 1}$ is ----- (+2, -0.5)

a. $\frac{119}{10}$

b. $\frac{10}{119}$

c. $\frac{19}{10}$

d. $\frac{10}{109}$

68. Three smaller cubes with sides of 3, 4 and 5 cm are melted together to form a large cube. What is the ratio of the smaller cubes' total surface area to the larger cube's total surface area? (+2, -0.5)

a. 16 : 21

b. 5 : 4

c. 25 : 18

d. 3 : 5

69. Rajesh purchased a machine for Rs. 5,000 and paid Rs. 250 for its transportation. If he sells the machine for Rs. 5,075, what is his percentage profit or loss? (Correct to two decimal places) (+2, -0.5)

a. Profit of 3.33%

b. Profit of 6.66%

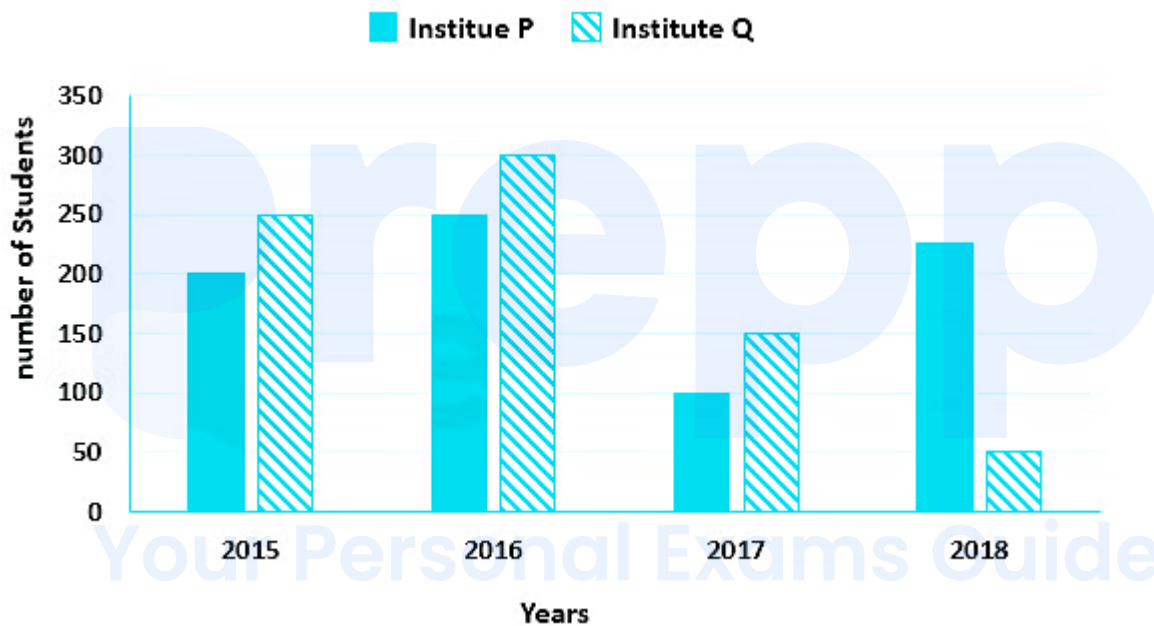
c. Loss of 3.33%

d. Loss of 6.66%

70. The effective annual rate of interest, corresponding to a nominal rate of 6% per annum, compounded half-yearly, is: (+2, -0.5)

- a. 0.0608
- b. 0.0609
- c. 0.0606
- d. 0.0607

71. The given graph shows the number of students who passed SSC in two institutes (P and Q) during four years. (+2, -0.5)



What is the difference between the average number of students who passed in institute P in 2015 and 2016 and that in institute Q in 2017 and 2018?

- a. 200
- b. 275
- c. 125
- d. 150

72. An arc on a circle that is 18 cm long, subtends a 28.8° angle at the centre. (+2, -0.5)
What is the circumference of the circle?

- a. 180 cm
- b. 216 cm
- c. 225 cm
- d. 240 cm

73. The following table gives data about literacy rates of four different states obtained during four censuses in the country. (+2, -0.5)

Years	States			
	Karnataka	Gujarat	Andhra Pradesh	Kerala
2011	75.6	79.3	67.7	93.9
2001	66.6	69.1	60.5	90.9
1991	56.0	61.3	44.1	89.8
1981	46.2	44.9	35.7	78.9

Which state has the lowest literacy rates as per all the four censuses from

which data is provided

- a. Gujarat
 - b. Andhra Pradesh
 - c. Karnataka
 - d. Kerala
-

74. Find the volume of the cylinder circumscribing a sphere with a diameter of 14 cm. (Use $\pi = 22/7$) (+2, -0.5)

- a. 2156 cm^3
 - b. 2158 cm^3
 - c. 2155 cm^3
 - d. 2157 cm^3
-

75. A sum of money was invested at 10% interest per year, compounded half-yearly for 18 months. If the amount payable on maturity was Rs. 83,349, what was the sum invested? (+2, -0.5)

- a. Rs. 80,000
- b. Rs. 68,000
- c. Rs. 75,000
- d. Rs. 72,000

General Awareness

76. Alarmel Velli is recognised as a classical dancer of _____ dance form. (+2, -0.5)

- a. Manipuri
- b. Sattriya
- c. Kuchipudi
- d. Bharatanatyam

77. Identify the alga that is NOT a marine algae. (+2, -0.5)

- a. Sargassum
- b. Porphyra
- c. Chlorella
- d. Laminaria

78. In the given main characteristics of farming of India, which is the characteristic of primitive subsistence farming? (+2, -0.5)

- a. Slash and burn
- b. Chemical fertilisers
- c. Insecticides and pesticides
- d. High yielding variety seeds

79. Match column A with column B.

(+2, -0.5)

Column – A		Column – B	
i.	Peptidoglycan	a.	Cell wall of plants
ii.	Pectin	b.	Bacterial cell wall
iii.	Chitin	c.	Cell wall of fruits
iv.	Cellulose	d.	Insect cell wall

a. i - b, ii - a, iii - d, iv - c

b. i - b, ii - a, iii - c, iv - d

c. i - b, ii - c, iii - d, iv - a

d. i - a, ii - b, iii - c, iv - d

80. Who among the following personalities, also associated with poetry and Music has been conferred with the Noble Prize?

(+2, -0.5)

a. Rabindra Nath Tagore

b. Dwijendra Lal Ray

c. Bankim Chandra Chatterjee

d. Purandar Das

81. 'The Palace of Illusions' is an award-winning novel that retells the Hindu mythological epic Mahabharata from the perspective of Draupadi, its a lead female character. Who among the following is the author of this novel? (+2, -0.5)

- a. Kamala Markandaya
- b. Anita Desai
- c. Chitra Banerjee Divakaruni
- d. Arundhati Roy

82. Who among the following won the 'Dronacharya Award' (Regular Category) 2021 in the Athletics discipline? (+2, -0.5)

- a. Harbans Singh
- b. V R Beedu
- c. Radhakrishnan Nair P
- d. Purushotham Rai

83. Which singer and music director was awarded the Padma Vibhushan posthumously in 2021? (+2, -0.5)

- a. Sudarshan Sahoo
- b. Shravan Kumar Rathod
- c. SP Balasubrahmanyam
- d. Jagdish Chaudhary

84. Identify the shallowest part of the ocean. (+2, -0.5)

- a. Continental shelf
- b. Continental slope
- c. Deep sea plains
- d. Trenches

85. What was India's ranking in the Paralympic 2020 medal tally? (+2, -0.5)

- a. 20
- b. 24
- c. 13
- d. 10

86. Which of the following dance forms is performed by Sonal Mansingh? (+2, -0.5)

- a. Bharatanatyam and Mohiniyattam
- b. Bharatanatyam and Odissi
- c. Bharatanatyam and Kathak
- d. Kathak and Odissi

87. Name the classical dancer who is associated with the Kuchipudi classical dance. (+2, -0.5)

- a. Vempati Chinna Satyam
 - b. A Lakshmana Swamy
 - c. Sharmila Biswas
 - d. Sanchita Bhattacharya
-

88. Who among the following is an outstanding player to have mastered the surbahar instrument? (+2, -0.5)

- a. Ustad Imrat Khan
 - b. Allaudin Khan
 - c. Ali Akbar Khan
 - d. Abdul Karim Khan
-

89. Part III of the Constitution of India deals with: (+2, -0.5)

- a. Fundamental Duties
 - b. Fundamental Rights
 - c. Citizenship
 - d. Directive Principles of State Policy
-

90. Which of the following pairs of authors and autobiographies is CORRECTLY matched? (+2, -0.5)

- a. Jahangir – Baburnama

- b. Satyajit Ray – Living Shadows
 - c. JB Kripalani – My Times
 - d. Aribam Syam Sharma – Jakhan Choto Chilam
-

91. In November 2021 at Zonal Council Meet, Chief Minister N Rangaswamy made the statement regarding which union territory upgrading the status of the Union Territory is critical to its survival. (+2, -0.5)

- a. Andaman and Nicobar Islands
 - b. Dadra & Nagar Haveli
 - c. Puducherry
 - d. Lakshadweep
-

92. Which of the following leucoplasts store oil and fat? (+2, -0.5)

- a. Aleuroplasts
 - b. Plastids
 - c. Elaioplasts
 - d. Amyloplasts
-

93. _____ and _____ are called as narrow and broad money, respectively, in the context of money supply in an economy. (+2, -0.5)

- a. M1 and M3
- b. M1 and M2

- c. M0 and M3
 - d. M3 and M4
-

94. Who was appointed as the Chairman of ISRO in January 2022? (+2, -0.5)

- a. K Radhakrishnan
 - b. K Sivan
 - c. S Somanath
 - d. G Madhavan
-

95. Which of the following is the Galilean moon that was observed in 1610 by the Italian astronomer Galileo Galilei using a homemade telescope? (+2, -0.5)

- a. Namaka
 - b. Phobos
 - c. Titan
 - d. Ganymede
-

96. Famous playback singer Kishore Kumar was born in 1929 in _____. (+2, -0.5)

- a. Bhopal
- b. Calcutta
- c. Delhi
- d. Khandwa

97. The Amazon River, considered the longest river in the world, with a length of 6,400 km, is located in the northern part of _____ (+2, -0.5)

- a. North America
- b. Australia
- c. Africa
- d. South America

98. Australia won the 2020 ICC Women's T20 World Cup Cricket by defeating _____ (+2, -0.5)

- a. India
- b. Sri Lanka
- c. Pakistan
- d. New Zealand

99. 'Finding My Way' is a famous autobiography written by which of the following Gond artists of India with the help of Mukul S Anand? (+2, -0.5)

- a. Venkat Raman Singh Shyam
- b. Dhavat Singh Uikey
- c. Bhajju Shyam
- d. Jangra Singh Shyam

100. Maguni Charan Das was awarded Padma Shri for his contribution to which of the following forms of dances? (+2, -0.5)

- a. Gotipua
- b. Chhau
- c. Jhumair
- d. Kharia

Prepp

Your Personal Exams Guide

Answers

1. Answer: b

Explanation:

The correct answer is ' **train had left already** '.

★ Key Points

- The **most appropriate** substitute for the underlined segment is ' **train had already left** '.
- The given sentence, considering the timing, should be in **Past Perfect tense** .
- The **structure** of the Past Perfect tense is:
 - **Subject + had + V3 + Object.**
- So, the **correct formation** of the given sentence should be ' **The train had already left before we reached the platform** . '

2. Answer: d

Explanation:

The correct answer is " **BCAD** ".

★ Key Points

- Sentence **B** should come first as it is **introducing the characters** of the story.
- Sentence **C** is the second sentence because it is about Chremes.
- Sentence **A** is the third sentence as it talks about the **children and their likeness** .
- Sentence **D** is the last sentence as it is about the **closeness of these children after they have become men** .

★ Additional Information

- The paragraph after rearrangement is as follows.

- There was in the city of Rome a noble senator, named Fulvius, who sent his son, called Titus, being a child, to the city of Athens, in Greece (which was the fountain of all manner of doctrine), there to learn good letters: and caused him to be hosted with a worshipful mart of that city, called Chremes. This Chremes happened to have also a son named Gisippus, who not only was equal to the said young Titus in years, but also in stature, proportion of body, favour, and colour of visage, countenance, and speech. The two children were so like, that without much difficulty it could not be discerned of their proper parents, which was Titus from Gisippus, or Gisippus from Titus. These two young gentlemen, as they seemed to be one in form and personage, so shortly after acquaintance, the same nature wrought in their hearts such a mutual affection, and their wills and appetites daily more and more so confederated themselves, that it seemed none other, when their names were declared, but that they had only changed their places, issuing (as I might say) out of the one body, and entering into the other.

3. Answer: c

Explanation:

The correct answer is ' **Sensible** '.

★ Key Points

- The **most appropriate** antonym for the given word ' **Absurd** ' is ' **Sensible** '.
- The meaning of the word ' **Absurd** ' is ' **wildly unreasonable, illogical, or inappropriate** '.
- The meaning of the word ' **Sensible** ' is ' **done or chosen in accordance with wisdom or prudence; likely to be of benefit** '.
- Hence, the appropriate answer is ' **Sensible** '.

★ Additional Information

- Let's understand the other options.
 - **Amaze** – surprise (someone) greatly; fill with astonishment.

- **Anxious** – feeling or showing worry, nervousness, or unease about something with an uncertain outcome.
- **Ramble** – talk or write at length in a confused or inconsequential way.

4. Answer: b

Explanation:

The correct answer is **Typical**.

★ Key Points

- The **most appropriate synonym** for the given word ' **Quintessential** ' is ' **Typical** '.
- The meaning of the word ' **Quintessential** ' is ' **representing the most perfect or typical example of a quality or class** '. (किसी गुण या वर्ग के सबसे उत्तम या विशिष्ट उदाहरण का प्रतिनिधित्व करना।)
- The meaning of the word ' **Typical** ' is ' **having the distinctive qualities of a particular type of person or thing** '. ('किसी विशेष प्रकार के व्यक्ति या वस्तु के विशिष्ट गुण होना'।)
- Hence, the appropriate answer is ' **Typical** '.

★ Additional Information

- Let's understand the other options.
 - **Fantastic** – extraordinarily good or attractive. (असाधारण रूप से अच्छा या आकर्षक।)
 - **Initial** – existing or occurring at the beginning. (शुरुआत में विद्यमान या घटित होना।)
 - **Charming** – very pleasant or attractive. (बहुत ही सुखद या आकर्षक।)

5. Answer: b

Explanation:

The correct answer is ' **We are vexed by their behaviour** '.

★ Key Points

- The given sentence is in **Present Tense and in Active voice** .
- The **rule** for changing a sentence in **Present Tense** from **Active voice** to **Passive voice** :
 - Interchange the object and the subject with each other, i.e. Object of the active sentence becomes the subject of the passive sentence.
 - The helping verb comes before the object in the passive voice as the passive voice starts with the object of the active voice.
 - Convert the verb into past participle or 3rd form of the verb.
 - **Structure: Subject + V1 + s/es + Object (Active voice)**

Object + is/am/are/ + V3 + by + Subject (Passive voice)

- **Solution :** *Their behaviour vexes us. (Active Voice)*

We are vexed by their behaviour. (Passive Voice)

6. Answer: c

Explanation:

The correct answer is '**To be brave in a difficult situation**' .

★ Key Points

- The most appropriate meaning of the given idiom '**To bite the bullet**' is '**To be brave in a difficult situation**'. (कठिन परिस्थिति में बहादुर बनना ।)
- **To bite a bullet** : *to force yourself to perform an unpleasant or difficult action or to be brave in a difficult situation* (अपने आप को एक अप्रिय या कठिन कार्य करने के लिए मजबूर करना या कठिन परिस्थिति में बहादुर होना)
 - E.g. I decided I had to bite the bullet and take a couple of math classes even though I knew they were hard.
- Therefore, as per the points mentioned above, we find the correct answer is **option 3**.

★ Additional Information

- Let's look at some similar idioms.

- **Be man enough** – *to be brave enough to do something* (कुछ करने के लिए पर्याप्त बहादुर होना)
 - He was man enough to admit he had made a mistake.
- **Faint heart never won fair lady** – *timidity will prevent you from achieving your objective* (कायरता आपको अपने लक्ष्य को प्राप्त करने से रोकेगी)
 - Rebecca: Remember that faint heart never won fair lady. He'll probably be flattered and impressed if you approach him first.

7. Answer: a

Explanation:

The correct answer is ' **Succesion** '.

★ Key Points

- The correct spelling of ' **Succesion** ' according to the English Dictionary is ' **Succession** '.
- The word ' **Succession** ' means ' **the action or process of inheriting a title, office, property, etc** '.
- Hence, the most appropriate answer is ' **Succesion** '.

★ Additional Information

- Let's understand the other options.
 - **Assassinate** – murder (an important person) for political or religious reasons.
 - **Complacent** – showing smug or uncritical satisfaction with oneself or one's achievements.
 - **Aquarium** – a transparent tank of water in which live fish and other water creatures and plants are kept.

8. Answer: d

Explanation:

The correct answer is 'gloomy'.

★ Key Points

- The **most appropriate** antonym for the given word 'cheerful' is 'gloomy'.
- The meaning of the word 'cheerful' is 'noticeably happy and optimistic'.
- The meaning of the word 'gloomy' is 'dark or poorly lit, especially so as to appear depressing or frightening'.
- Hence, the most appropriate answer is 'gloomy'.

★ Additional Information

- **Chirpy** – cheerful and lively.
- **Radiant** – sending out light; shining or glowing brightly.
- **Jaunty** – having or expressing a lively, cheerful, and self-confident manner.

9. Answer: a

Explanation:

The correct answer is 'disclosed'.

★ Key Points

- The most appropriate antonym for the given word 'concealed' is 'disclosed'.
- The meaning of the word 'concealed' is 'kept secret; hidden'.
- The meaning of the word 'disclosed' is 'make (secret or new information) known'.
- Hence, the most appropriate answer is 'disclosed'.

★ Additional Information

- **Annoyed** – slightly angry; irritated.

- Arrogant – having or revealing an exaggerated sense of one's own importance or abilities.
 - Excited – very enthusiastic and eager.
-

10. Answer: d

Explanation:

The correct answer is 'unsteadiness'.

★ Key Points

- The most appropriate synonym for the given word 'giddiness' is 'unsteadiness'.
- The meaning of the word 'giddiness' is 'a sensation of whirling and a tendency to fall or stagger; dizziness'.
- The meaning of the word 'unsteadiness' is 'Loss of one's equilibrium in regard to the environment, often with a feeling of almost falling, or the result of bumping into things'.
- Hence, the most appropriate answer is 'unsteadiness'.

★ Additional Information

- Opponent – someone who competes with or opposes another in a contest, game, or argument.
 - Enthusiasm – intense and eager enjoyment, interest, or approval.
 - Pride – consciousness of one's own dignity.
-

11. Answer: d

Explanation:

The correct answer is "When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately fled the spot."

★ Key Points

- The past tense of "flee" is "fled".
- "Fled" means "escape".
 - **Example:** *The thief **fled** from the spot when people began to crowd.*
- Moreover, there is no verb in English like "flead".
- Therefore the appropriate option is "When the villagers put up a firm resistance to the fearsome bandit with all their might, he ultimately fled the spot."

★ Additional Information

- The past tense of the verb is formed either by adding "ed" or changing the vowel.
- Not only "ed", but words ending in "e" also has its past tense by simply adding a "-d" and words ending in "y" has its past tense as "-ied".
 - **Example:** *cook - cook **ed**, like - like **d**, empty - empty **ied**.*
- Some verbs change their vowel to get past tense.
 - **Example:** *drive - dr **ove**, eat - **ate**, swim - sw **am**.*

12. Answer: a

Explanation:

The correct answer is 'Calligraphy'.

★ Key Points

- The **most appropriate** one-word substitute for 'The art of beautiful handwriting' is 'Calligraphy'.
- Let's understand the other options.
 - **Monography** - *a long article or a short book on a particular subject.*
 - **Epigraphy** - *the study of inscriptions, or epigraphs, as writing.*
 - **Catastrophe** - *an event causing great and usually sudden damage or suffering; a disaster.*

13. Answer: d

Explanation:

The correct answer is 'in'.

★ Key Points

- The **most appropriate** option to substitute the underlined word 'on' is 'in'.
- The **preposition** 'on' is used 'to indicate that something is already in the position'.
- The **preposition** 'in' is used 'at a point within an area or a space, within the shape of something'.
- Hence, the appropriate preposition is 'in'.

★ Additional Information

- Let's understand the other options.
 - **Over** – *at or to a place that is higher than someone or something*
 - A beautiful white bird flew over the lake.
 - **At** – *expressing location or arrival in a particular place or position*
 - I will see you at 8:00 pm.
 - **For** – *because of or as a result of something*
 - I'm going for some breakfast. I'm really hungry.

14. Answer: d

Explanation:

The correct answer is 'Epitaph'.

★ Key Points

- The **most appropriate** one-word substitute for 'The work inscribed on the tomb in the memory of the person' is 'Epitaph'.

- Let's understand the other options.
 - Epigraph – *an inscription on a building, statue, or coin.*
 - Excerpt – *a short extract from a film, broadcast, or piece of music or writing.*
 - Euphoria – *a feeling or state of intense excitement and happiness.*
-

15. Answer: a

Explanation:

The correct answer is 'The chef is preparing the meal .'

★ Key Points

- The given sentence is in the Present Continuous Tense and in Active voice .
- The rule for changing a sentence in Present Continuous Tense from Passive voice to Active voice :
 - Interchange the object and the subject with each other, i.e. Object of the passive sentence becomes the subject of the active sentence.
 - The helping verb comes before the object in the passive voice as the passive voice starts with the object of the active voice.
 - Convert the verb into present/base form or 1st form of the verb.
 - Structure: Subject + is/am/are + V1 + ing + Object (Active voice)

Object + is/am/are/ + being + V3 + by + Subject (Passive voice)

- Solution : *The meal is being prepared by the chef. (Passive Voice)*

The chef is preparing the meal . (Active Voice)

16. Answer: c

Explanation:

The correct answer is 'interventions, targeted, inferences'.

★ Key Points

- The **most appropriate** options to fill in the blanks are 'interventions, targeted, inferences'.
- The word 'interventions' means 'interference by a state in another's affairs'.
- The word 'targeted' means 'select as an object of attention or attack'.
- The word 'Interference' means 'the action of interfering or the process of being interfered with'.
- Hence, the correct answer is 'interventions, targeted, inferences'.

★ Additional Information

- Let's understand the other options.
 - **Option 1 :**
 - **Intermissions** - *a pause or break.*
 - **Directed** - *control the operations of; manage or govern.*
 - **Injunctions** - *a judicial order restraining a person from beginning or continuing an action threatening or invading the legal right of another, or compelling a person to carry out a certain act.*
 - **Option 2 :**
 - **Interpolations** - *the insertion of something of a different nature into something else.*
 - **Disrupted** - *drastically alter or destroy the structure of.*
 - **Inventions** - *the action of inventing something, typically a process or device.*
 - **Option 4 :**
 - **Interruptions** - *the action of interrupting or being interrupted.*
 - **Disillusioned** - *disappointed in someone or something that one discovers to be less good than one had believed.*
 - **Invasions** - *an incursion by a large number of people or things into a place or sphere of activity.*

17. Answer: b

Explanation:

The correct answer is ' **put up with** '.

★ Key Points

- The **most appropriate** substitute for the underlined segment ' **sit up with** ' is ' **put up with** '.
- The meaning of the **phrasal verb** ' **put up with** ' means ' **tolerate or endure something** '.
- Hence, the appropriate answer is ' **put up with** '.

★ Additional Information

- The other options are just to confuse they do not mean anything.

18. Answer: a

Explanation:

The correct answer is ' **toe** '.

★ Key Points

- The **most appropriate** homonym to fill in the blank is ' **toe** '.
- The word ' **toe** ' means ' **any of the five jointed parts at the front of the human foot** '.
- Hence, the correct word is ' **toe** '.

★ Additional Information

- Let's understand the other options.
 - **Toad** – *a tailless amphibian with a short stout body and short legs, typically having dry warty skin that can exude poison; a species of frogs.*
 - **Tow** – *(of a motor vehicle or boat) pull (another vehicle or boat) along with a rope, chain, or tow bar.*

- **To** – *to indicate a goal or a direction of movement, as well as a place of arrival.*

19. Answer: d

Explanation:

The correct answer is " **call a spade a spade** " .

★ Key Points

- The appropriate idiom which means " **talking too frankly** " is " **call a spade a spade** " .
- **Call a spade a spade** – speak plainly without leaving out anything.
 - **Example:***The stand-up comedian was very honest. He **called a spade a spade** .*
- Therefore the correct answer is **Option 4** .

★ Additional Information

- **Lose one's marbles** – become insane.
 - **Example:***John **lost his marbles** during the fight.*
- **Go the extra mile** – take extra effort.
 - **Example:***Mary **went the extra mile** to buy a present for her parents.*
- **Snug as a bug in a rug** – in a very comfortable situation.
 - **Example:***Jim was **snug as a bug in a rug** in the debate.*

20. Answer: d

Explanation:

The correct answer is ' **down** ' .

★ Key Points

- The **most appropriate** word to fill in the blank is ' **down** '.
- The idiom 'Swallowed down ' means ' To eat or drink something, especially very quickly '.
- Hence, the correct option is ' **down** '.

★ Additional Information

- Let's look at some similar idioms.
 - **Made a pig of themselves** – *When someone eats way too much, then this expression is used informally.*
E.g. I made a real pig of myself at the party.
 - **Eat like a horse** – *Someone who eats a lot regularly.*
E.g. Rohit is thin as a stick yet he eats like a horse.
 - **Wolf food down** – *Eating a lot very quickly.*
E.g. The kids wolfed the burgers down and then started on the pizza.

21. Answer: d

Explanation:

The correct answer is ' **during** '.

★ Key Points

- The **most appropriate** word to fill in the blank is ' **during** '.
- The word ' **during** ' means ' **throughout the course or duration of (a period of time)** '.
- Hence, the correct answer is ' **during** '.

★ Additional Information

- Let's look at the other options.
 - **By** – *identifying the agent performing an action.*
 - **At** – *expressing location or arrival in a particular place or position.*
 - **Through** – *moving in one side and out of the other side of (an opening, channel, or location).*

22. Answer: d

Explanation:

The correct answer is 'leaving'.

★ Key Points

- The most appropriate word to fill in the blank is 'leaving'.
- The word 'leaving' means 'go away from'.
- Hence, the correct answer is 'leaving'.

★ Additional Information

- Let's look at the other options.
 - Settling – *resolve or reach an agreement about (an argument or problem).*
 - Reckoning – *the action or process of calculating or estimating something.*
 - Keeping – *the action or fact of owning, maintaining, or protecting something.*

23. Answer: b

Explanation:

The correct answer is 'seemed'.

★ Key Points

- The most appropriate word to fill in the blank is 'seemed'.
- The word 'seemed' means 'give the impression of being something or having a particular quality'.
- Hence, the correct answer is 'seemed'.

★ Additional Information

- Let's look at the other options.
 - Departed – *move away from a place into another direction.*
 - Became – *begin to be.*
 - Kept – *the action or fact of owning, maintaining, or protecting something.*
-

24. Answer: d

Explanation:

The correct answer is 'punishment'.

★ Key Points

- The most appropriate word to fill in the blank is 'punishment'.
- The word 'punishment' means **the infliction or imposition of a penalty as retribution for an offense**.
- Hence, the correct answer is 'punishment'.

★ Additional Information

- Let's look at the other options.
 - Order – *an authoritative command or instruction.*
 - Accolade – *an award or privilege granted as a special honor or as an acknowledgment of merit.*
 - Oracle – *a priest or priestess acting as a medium through whom advice or prophecy was sought from the gods in classical antiquity.*
-

25. Answer: d

Explanation:

The correct answer is 'sanitary'.

★ Key Points

- The most appropriate word to fill in the blank is 'sanitary'.
- The word 'sanitary' means '**relating to the conditions that affect hygiene and health, especially the supply of sewage facilities and clean drinking water**'.
- Hence, the correct answer is 'sanitary'.

★ Additional Information

- Let's look at the other options.
 - Cultural – *relating to the ideas, customs, and social behavior of a society.*
 - **Unhygienic** – *not clean or sanitary.*
 - Ongoing – *continuing; still in progress.*

26. Answer: a

Explanation:

Here, we are given the word and we need to find the mirror image of it.

First keep in mind that, in mirror image the first letter will be the last letter of the given word. Also, the size of the letters will not change i.e. capital letters will appear capital only.

Next, as we can see the given word ends with r, so the mirror image will have r as the first letter.

Again, letter e is water image in option 2 and 3, so both the options are eliminated.

Again, letter r is water image in option 4, so option 4 is eliminated.

Thus, we have only one option left i.e. option 1.



Hence, the mirror image of the given word is 'option 1'.

★ Confusion Points

Keep in mind what is the difference between mirror image and water image.

27. Answer: a

Explanation:

The logic followed here is:

Here, we are given the word and we need to find the mirror image of it.

First keep in mind that, in mirror image the first letter will be the last letter of the given word. Also, the size of the letters will not change i.e. capital letters will appear capital only.

Next, as we can see the given word ends with Z, so the mirror image will have Z as the first word. This shows that, option 2 and 3 are eliminated.

Again, number 5 is water image in option 4, so option 4 is eliminated..

Thus, we have only one option left i.e. option 1.

Hence, the mirror image of the given word is 'option 1'.

★ Confusion Points

Keep in mind what is the difference between mirror image and water image.

28. Answer: b

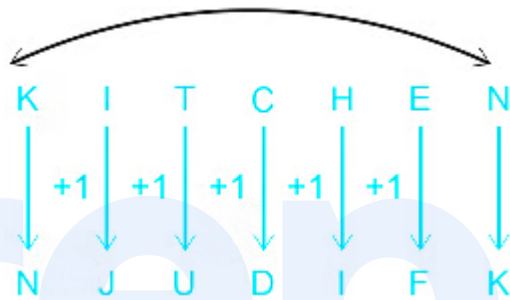
Explanation:

Here, the alphabets and their positions are shown as below:

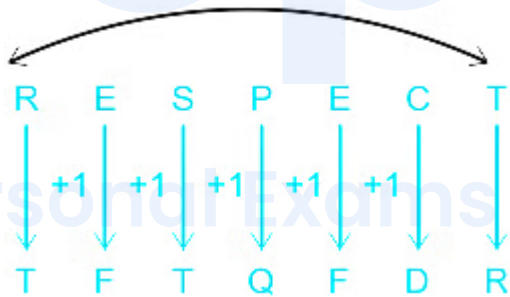
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic here is: The first and the last letter of each word interchange their places and the middle letters are increased by 1 to get the code language of that word.

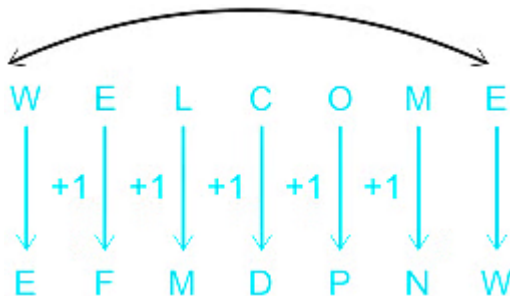
For the word KITCHEN is written as NJUDIFK



And, for the word RESPECT is written as TFTQFDR



Similarly, for the word WELCOME:



Thus , the code language is ' **EFMDPNW** ' for the given word.

Hence, the correct answer is 'option 2'.

29. Answer: d

Explanation:

Here, we need to apply the combination of signs to get the correct equation.

Given:

First we will check options one by one as below:

$$1) \ +, =, -, \times, \div, +$$

$$\Rightarrow 45 + 17 = 3 - 41 \times 81 \div 9 + 56$$

Applying BODMAS rule, we will get,

$$\Rightarrow 45 + 17 = 3 - 41 \times 9 + 56$$

$$\Rightarrow 45 + 17 = 3 - 369 + 56$$

$$\Rightarrow 62 = 59 - 369$$

$$\Rightarrow 62 = -310, \text{ is not possible. This is not true.}$$

$$2) \ +, -, =, \times, +, -$$

$$\Rightarrow 45 + 17 - 3 = 41 \times 81 + 9 - 56$$

Applying BODMAS rule, we will get,

$$\Rightarrow 45 + 17 - 3 = 3321 + 9 - 56$$

$$\Rightarrow 62 - 3 = 3330 - 56$$

$$\Rightarrow 59 = 3274, \text{ is not possible. This is not true.}$$

$$3) \ =, -, \times, +, -, +$$

$$\Rightarrow 45 = 17 - 3 \times 41 + 81 - 9 + 56$$

Applying BODMAS rule, we will get,

$$\Rightarrow 45 = 17 - 123 + 81 - 9 + 56$$

$$\Rightarrow 45 = 154 - 123 - 9$$

$$\Rightarrow 45 = 154 - 132$$

$$\Rightarrow 45 = 22, \text{ is not possible. This is not true.}$$

$$4) =, \times, +, +, \div, -$$

$$\Rightarrow 45 = 17 \times 3 + 41 + 81 \div 9 - 56$$

Applying BODMAS rule, we will get,

$$\Rightarrow 45 = 17 \times 3 + 41 + 9 - 56$$

$$\Rightarrow 45 = 51 + 41 + 9 - 56$$

$$\Rightarrow 45 = 101 - 56$$

$$\Rightarrow 45 = 45, \text{ is possible. This is true.}$$

Hence, the combination of signs ' $=, \times, +, +, \div, -$ ' is used to get correct balanced equation.

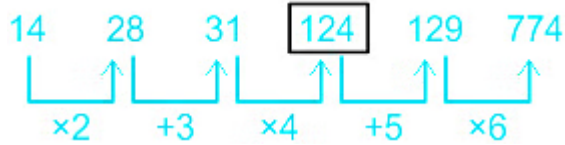
★ Confusion Points

Keep in mind to apply BODMAS rule, while solving these types of problems.

30. Answer: a

Explanation:

The logic followed here is:

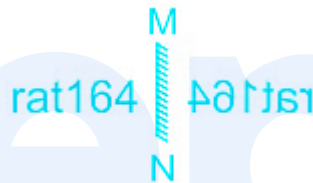


Hence, "124" is the correct answer.

31. Answer: c

Explanation:

The correct mirror image of the given combination when the mirror is placed at MN is as shown below :-



Detailed Explanation :-

- The line MN is the mirror.
- The word "

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rat164

" ends with "



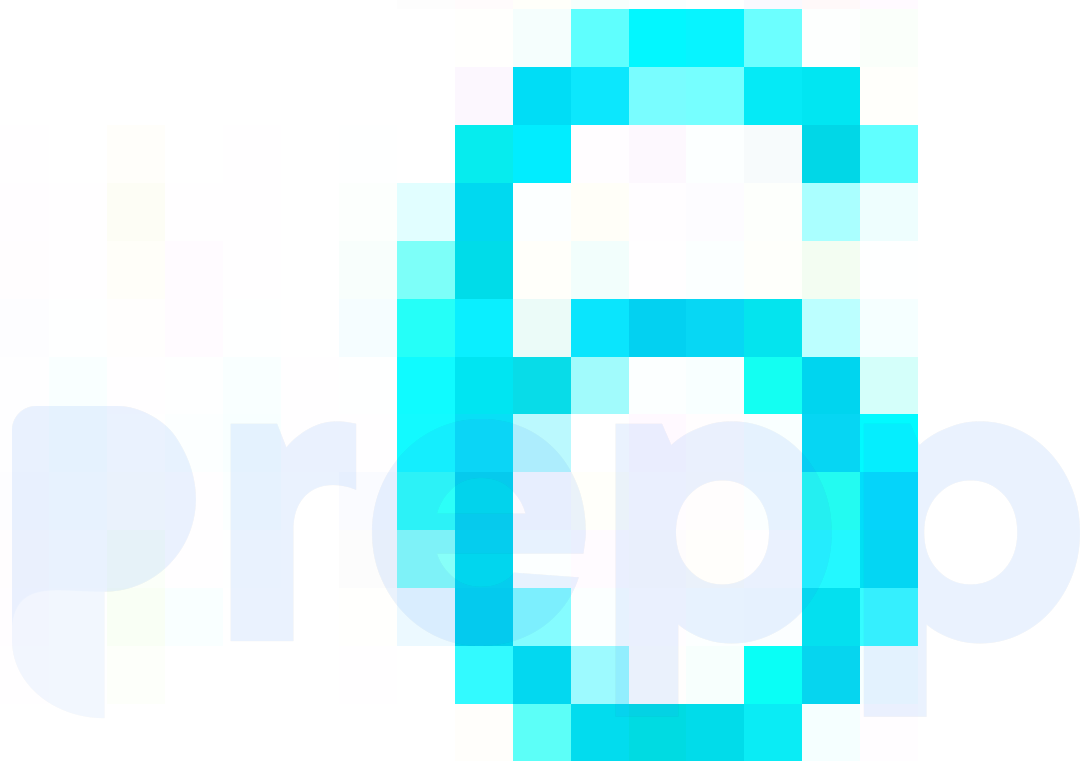
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". So, the mirror image will start with "



" → Options 2, 4 are eliminated.

- The second last letter of the word is "



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". So, the second letter in the mirror image will be "



"→ Options 1 is eliminated.

Hence, Option 3) is the correct answer.

★ Additional Information

- In a mirror image Left changes to right and the right changes to left where top and bottom remains the same .
- When placement of mirror not given, by default we will assume it in vertical direction .

- The starting letter word will be at last after the mirror image drawn with left changes to right and right changes to left.

32. Answer: d

Explanation:

BODMAS rule:

B	Brackets in order (), {}, []	ब्रैकेट (), {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

Here, we need to apply the combination of signs to get the correct equation.

Given: $65 \div 50 \times 5 \times 2 \div 4 \times 63$

First we will check options one by one as below:

1) $\div, -, \times, +, =$

$$\Rightarrow 65 \div 50 - 5 \times 2 + 4 = 63$$

Applying BODMAS rule, we will get,

$$\Rightarrow 1.3 - 5 \times 2 + 4 = 63$$

$$\Rightarrow 1.3 - 10 + 4 = 63$$

$$\Rightarrow 0.3 + 4 = 63$$

$$\Rightarrow -4.7 = 63, \text{ is not possible. This is not true.}$$

$$2) +, \times, \div, -, =$$

$$\Rightarrow 65 + 50 \times 5 \div 2 - 4 = 63$$

Applying BODMAS rule, we will get,

$$\Rightarrow 65 + 50 \times 2.5 - 4 = 63$$

$$\Rightarrow 65 + 125 - 4 = 63$$

$$\Rightarrow 186 = 63, \text{ is not possible. This is not true.}$$

$$3) +, \times, -, \div, =$$

$$\Rightarrow 65 + 50 \times 5 - 2 \div 4 = 63$$

Applying BODMAS rule, we will get,

$$\Rightarrow 65 + 50 \times 5 - 0.5 = 63$$

$$\Rightarrow 65 + 250 - 0.5 = 63$$

$$\Rightarrow 314.5 = 63, \text{ is not possible. This is not true.}$$

$$4) -, \div, +, \times, =$$

$$\Rightarrow 65 - 50 \div 5 + 2 \times 4 = 63$$

Applying BODMAS rule, we will get,

$$\Rightarrow 65 - 10 + 2 \times 4 = 63$$

$$\Rightarrow 65 - 10 + 8 = 63$$

$$\Rightarrow 63 = 63, \text{ is possible. This is true.}$$

Thus, the combination of signs ' $-, \div, +, \times, =$ ' is used to get correct balanced equation.

Hence, the correct answer is 'option 4'.

Confusion Point: Keep in mind to apply BODMAS rule, while solving these types of problems.

33. Answer: d

Explanation:

Here, we need to find out the pattern to fill the missing letters.

Given: C _ _ r E _ t C U r _ _ n t C _ r _ E n t

First we will check all the options:

- 1) ErnrEUR: C Er r E n t - C U r r E n t - C U r r E n t
- 2) UrUrEUR: C U r r E n t - C U r r E n t - C U r r E n t
- 3) UrnrUUr: C U r r E n t - C U r r U n t - C U r r E n t
- 4) UrnrEUR: C U r r E n t - C U r r E n t - C U r r E n t

Thus, we can see that in 'option 4' the letters 'UrnrEUR' are repeating itself.

Hence, the correct answer is 'option 4'.

34. Answer: a

Explanation:

The logic followed here is:

(First number $\times$ 3) + (Second number $\times$ 2) = Third number

First row: 7, 9, 39 $\rightarrow (7 \times 3) + (9 \times 2) = 21 + 18 = 39$

Second row: 4, 8, 28 $\rightarrow (4 \times 3) + (8 \times 2) = 12 + 16 = 28$

Third row: 6, 7, ? $\rightarrow (6 \times 3) + (7 \times 2) = 18 + 14 = 32$

Hence, **32** is the correct answer.

35. Answer: c

Explanation:

Here, we need to find the pattern to get the odd one out.

The logic here is: The last term is cube root of a number. That number is subtracted by 2 and this number is added to the last term to get the first term of each row.

So, 14 : 512 $\Rightarrow 512 = 8^3$, $8 + (8 - 2) = 14$

22 : 1728 $\Rightarrow 1728 = 12^3$, $12 + (12 - 2) = 22$

46 : 23 $\Rightarrow 12167 = 23^3$, $23 + (23 - 2) = 44$, But they have given 46 as the 1st term

38 : 8000 $\Rightarrow 8000 = 20^3$, $20 + (20 - 2) = 38$

Thus, all except option 3 does not follow the pattern.

Hence, the number pair '46 : 12167' is the odd one out.



Alternate Method 14 : 512 $\rightarrow (14 \div 2 + 1)^3 = 512$

22 : 1728 $\rightarrow (22 \div 2 + 1)^3 = 1728$

46 : 12167 $\rightarrow (46 \div 2 + 1)^3 = 13824 \neq 12167$

38 : 8000 $\rightarrow (38 \div 2 + 1)^3 = 8000$

Hence, the correct answer is "Option 3".

36. Answer: a

Explanation:

Here we need to find the pattern to get the odd number pair out.

First we will check the options one by one.

$$1) 64 : 6 = \sqrt{64} = 8; 8 - 2 = 6$$

$$2) 25 : 2 = \sqrt{25} = 5; 5 - 3 = 2$$

$$3) 225 : 12 = \sqrt{225} = 15; 15 - 3 = 12$$

$$4) 169 : 10 = \sqrt{169} = 13; 13 - 3 = 10$$

As, we can see all have the same pattern except option 1.

Hence, the number pair '64 : 6' is not related to the given pattern.

37. Answer: d

Explanation:

The logic followed here is:

Here, we need to apply the combination of signs to get the correct equation.

Given: $93 * 65 * 3 * 56 * 14 * 146$

First we will check options one by one as below:

$$1) \times, +, -, \div, =$$

$$\Rightarrow 93 \times 65 + 3 - 56 \div 14 = 146$$

$$\Rightarrow 93 \times 65 + 3 - 4 = 146$$

$$\Rightarrow 6045 + 3 - 4 = 146$$

$$\Rightarrow 6048 - 4 = 46$$

$$\Rightarrow 6044 = 146, \text{ is not possible. This is not true.}$$

$$2) +, -, \div, \times, =$$

$$\Rightarrow 93 + 65 - 3 \div 56 \times 14 = 146$$

$$\Rightarrow 93 + 65 - 0.053 \times 14 = 146$$

$$\Rightarrow 93 + 65 - 0.75 = 146$$

$$\Rightarrow 158 - 0.75 = 1436$$

$$\Rightarrow 157.25 = 146, \text{ is not possible. This is not true.}$$

$$3) -, +, \times, \div, =$$

$$\Rightarrow 93 - 65 + 3 \times 56 \div 14 = 146$$

$$\Rightarrow 93 - 65 + 3 \times 4 = 146$$

$$\Rightarrow 93 - 65 + 12 = 146$$

$$\Rightarrow 105 - 65 = 146$$

$$\Rightarrow 40 = 146, \text{ is not possible. This is not true.}$$

$$4) +, -, \times, \div, =$$

$$\Rightarrow 93 + 65 - 3 \times 56 \div 14 = 146$$

$$\Rightarrow 93 + 65 - 3 \times 4 = 146$$

$$\Rightarrow 93 + 65 - 12 = 146$$

$$\Rightarrow 158 - 12 = 146$$

$$\Rightarrow 146 = 146, \text{ is possible. This is true.}$$

Hence, the combination of signs ' $+, -, \times, \div, =$ ' is used to get correct balanced equation.

★ **Confusion Points**

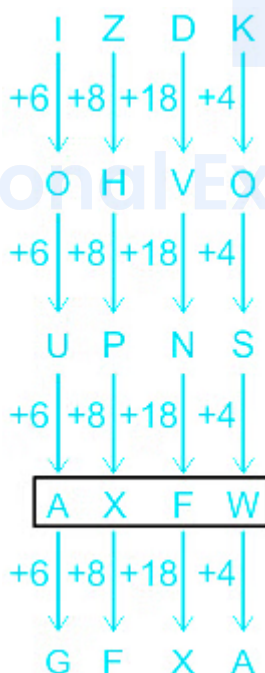
Keep in mind to apply BODMAS rule, while solving these types of problems.

38. Answer: b

Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is: (Here, +18 could be replaced by -8)



Hence, 'GFXA' is the correct answer.

39. Answer: b

Explanation:

Here, we need to arrange the words in alphabetic order.

So, the dictionary order arrangement would be:

5. **Sac** rifice

3. **Sal**utation

4. **San**ction

1. **Sar**castic

2. **Sat**isfaction

Hence, the order of arrangement in alphabetic order is '5,3,4,1,2'.

40. Answer: c

Explanation:

The logic followed here is:

Each term is added by 52 to get the next consecutive numbers.

So, $134 + 52 = 186$,

$186 + 52 = 238$,

$238 + 52 = 290$,

$290 + 52 = 342$,

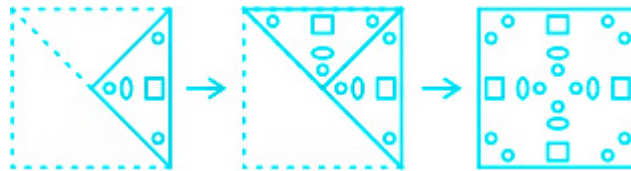
Thus, $342 + 52 = 394$

Hence, the missing number will be 394.

41. Answer: c

Explanation:

When the folder paper is opened, the cuts will appear as follows:

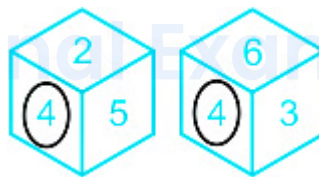


Hence, option 3) is the correct answer.

42. Answer: c

Explanation:

The logic followed here is:



Here, we have two dices and face number 4 is common in both of them.

Also, both the dice are arranged in such a way that the common faces are at the same place.

So, we can see that, all the numbers except number 1 is not seen here in the image.

Hence, the number 1 will be the face opposite to the face 4.

43. Answer: d

Explanation:

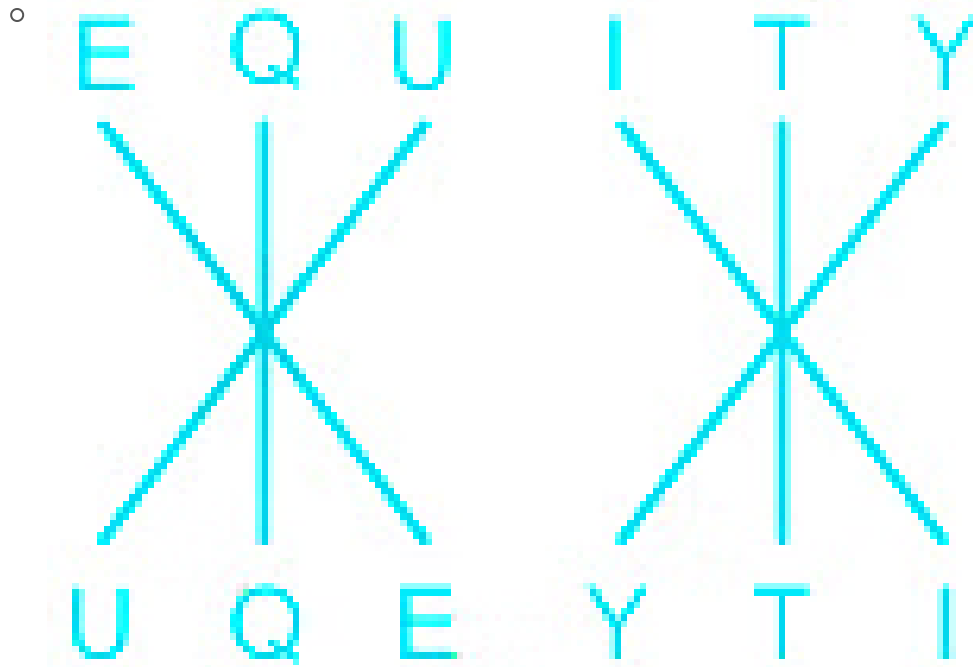
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

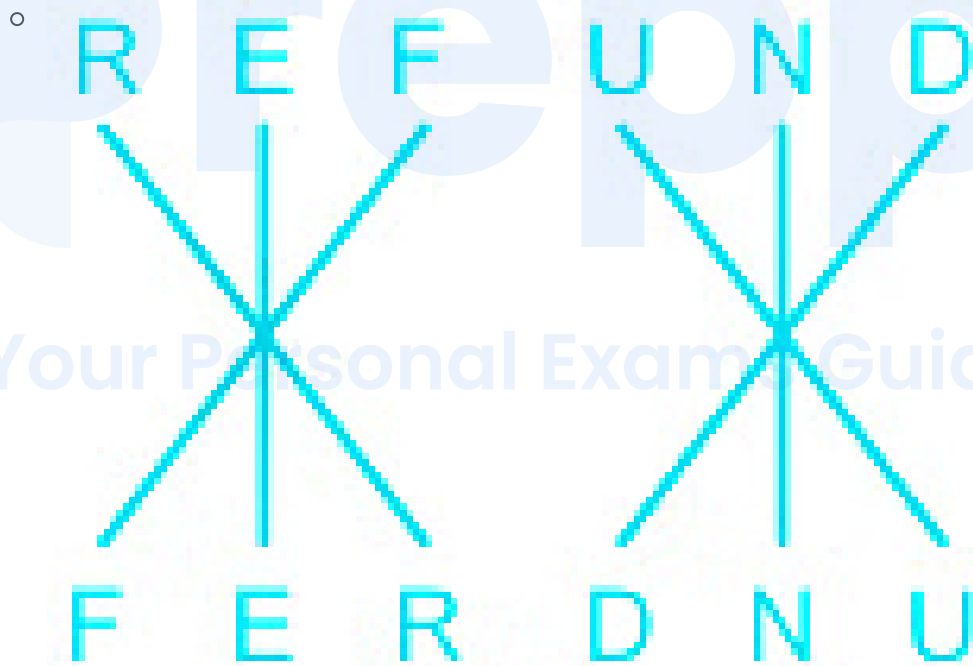
- In ANOXIC : ONACIX



- In EQUITY : UQEYTI



- Similarly, In REFUND : ?



We get " FERDNU".

Hence, " FERDNU" is the correct answer.

44. Answer: d

Explanation:

Logic : Cube of first number – Cube of (first number – 1) = Second number

• 3 : 19

$$\Rightarrow 3^3 - (3 - 1)^3$$

$$\Rightarrow 3^3 - 2^3 = 19$$

• 2 : 7

$$\Rightarrow 2^3 - (2 - 1)^3$$

$$\Rightarrow 2^3 - 1^3 = 7$$

Similarly, 5 : ?

$$\Rightarrow 5^3 - (5 - 1)^3$$

$$\Rightarrow 5^3 - 4^3 = 61$$

Hence, **61** is the correct answer.

45. Answer: a

Explanation:

Here, we have given a date along with the day and we need to find out the day of the next date given.

For, 28 Feb 2020 was Friday

Since, 2019, 2018, 2017 are ordinary years. All have only 1 odd day.

And, 2016 is a leap year. This will have 2 odd days.

Total days = $1 + 1 + 1 + 2 = 5$.

So, 28 Feb 2016 = Friday - 5 = Sunday

Next, we will count the days of the remaining months as:

$27 \text{ (Feb)} + 31 \text{ (Jan)} + 2 \text{ (Dec)} = 60 = 8 \text{ weeks and } 4 \text{ odd days.}$

Thus, 30 Dec 2015 was Sunday - 4 = Wednesday.

Hence, it was 'Wednesday' on 30 Dec 2015.



Confusion Points Keep in mind what are leap years and ordinary year and number of odd days they have. Also, check how to find the leap year too.

46. Answer: c

Explanation:

The logic followed her is:

According to the given statements,

1) W is taller than X but shorter than V.

$\Rightarrow X < W < V$

2) T is taller than U but shorter than S.

$\Rightarrow U < T < S$

3) Y is the shortest among all.

$\Rightarrow Y < \text{All six friends}$

4) Only three people are taller than V.

$\Rightarrow Y < X < W < V$

Next, combining all the statements, we will have

$$\Rightarrow Y < X < W < V < U < T < S$$

Thus, T and S are taller than U.

Hence, only 2 persons are taller than U.

47. Answer: c

Explanation:

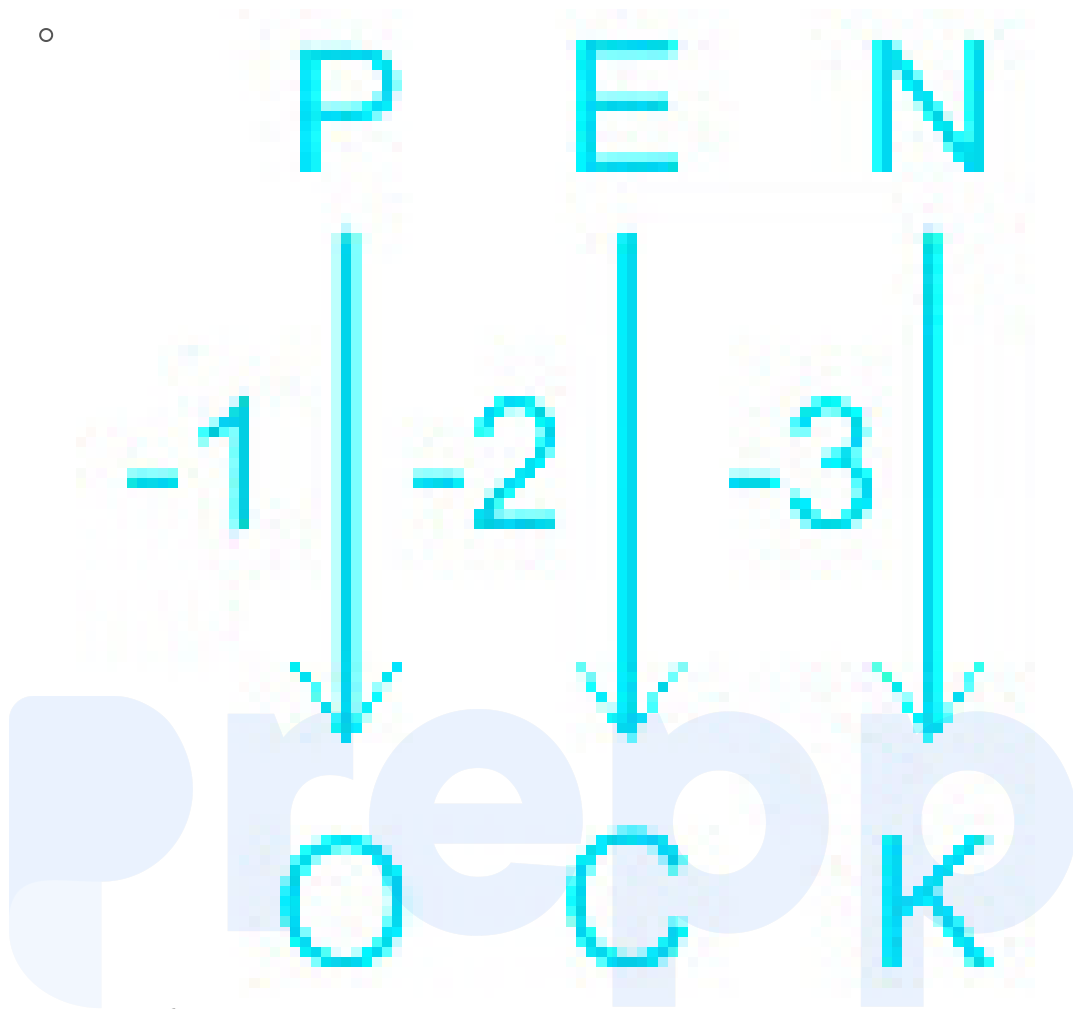
Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The logic followed here is:-

- PEN

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○

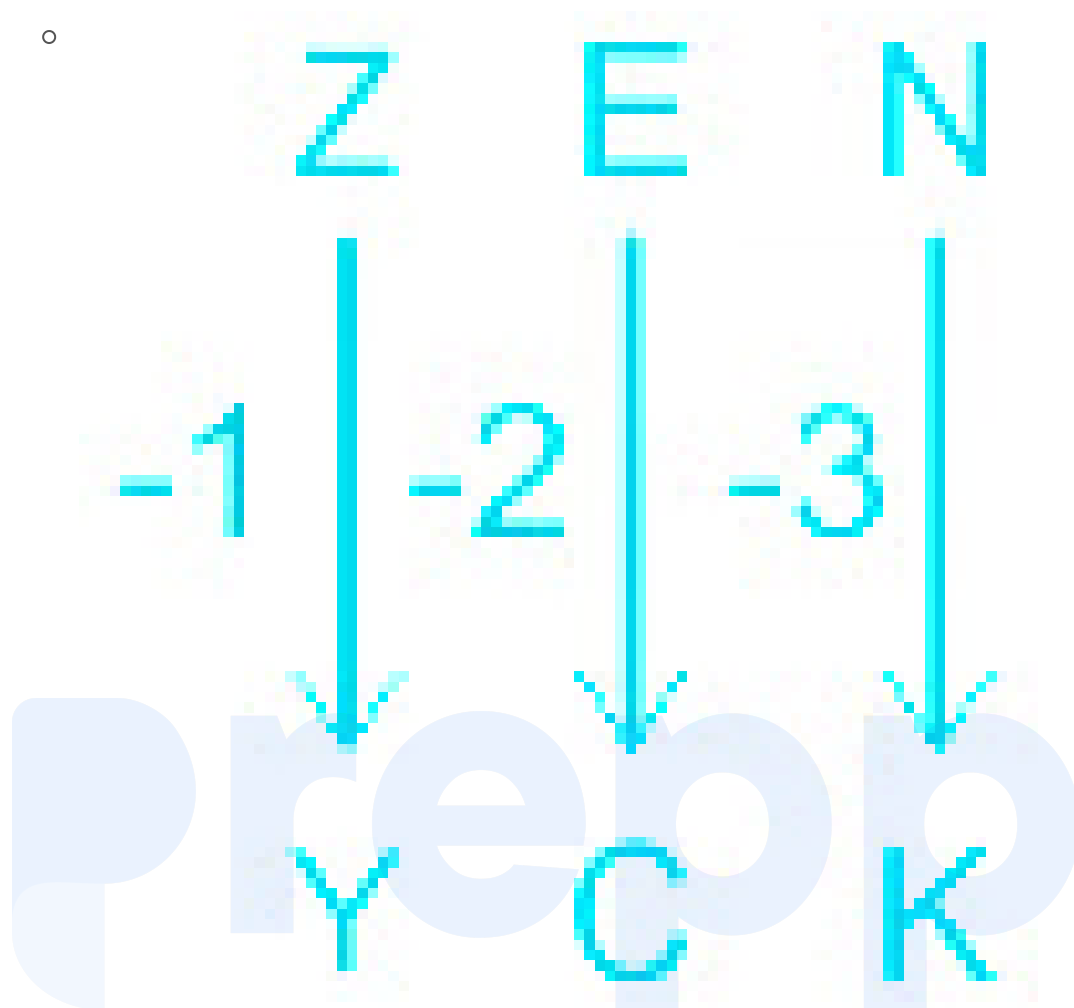


○ Therefore, code = OCK

• ZEN

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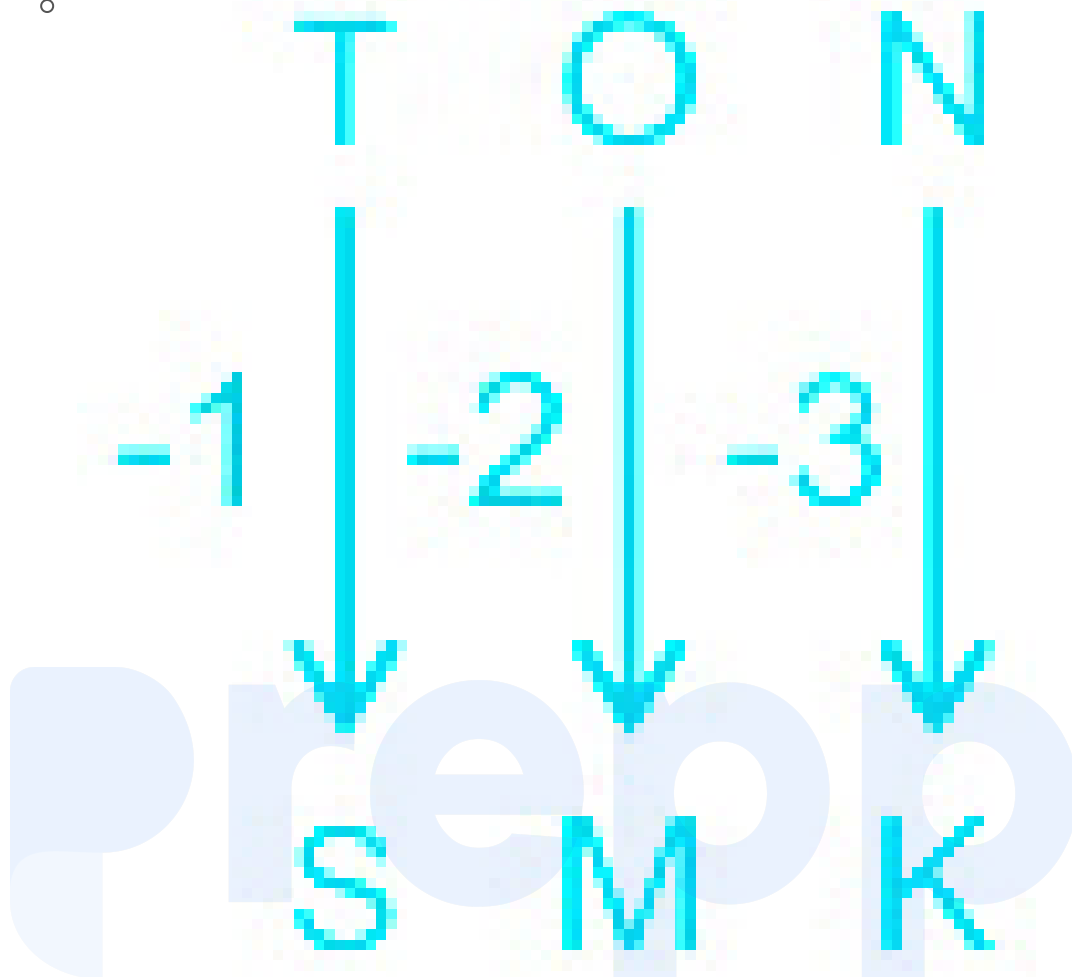
○



- Therefore, code = YCK
- Similarly, **TON**

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○



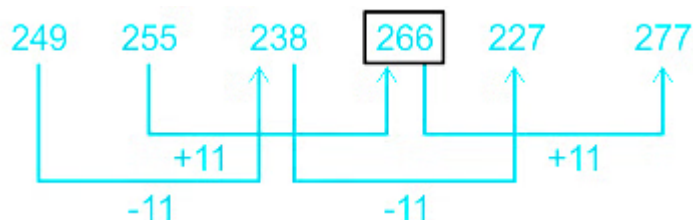
○ Therefore, code = SMK

Hence, "SMK" is the correct answer.

48. Answer: c

Explanation:

The logic followed here is:



Hence, **266** is the correct answer.

49. Answer: a

Explanation:

The logic followed here :

Here, we are given the word and we need to find the mirror image of it.

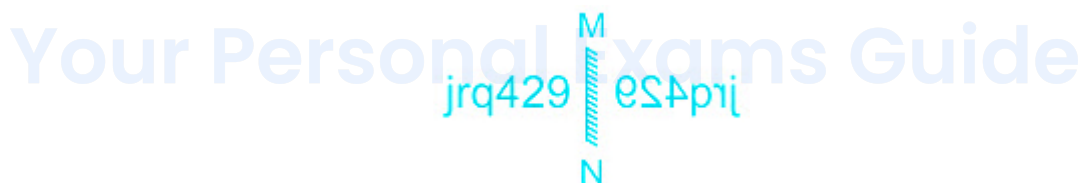
First keep in mind that, in mirror image the first letter will be the last letter of the given word. Also, the size of the letters will not change i.e. capital letters will appear capital only.

Next, as we can see the given word ends with 9, so the mirror image will have 9 as the first number.

Again, number 9 is water image in option 3, so option 3 is eliminated.

Again, letter q is water image in option 2, 3, 4. So, all these options are eliminated.

Thus, we have only one option left i.e. option 1.



Hence, the mirror image of the given word is 'option 1'.

★ **Confusion Points**

Keep in mind what is the difference between mirror image and water image.

50. Answer: d

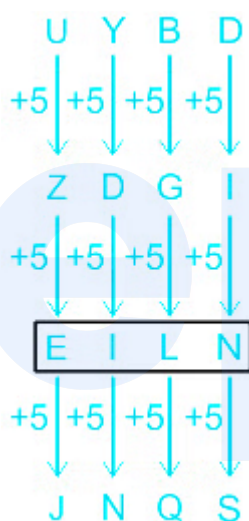
Explanation:

Alphabets	A	B	C	D	E	F	G	H	I	J	K	L	M
Positional value	1	2	3	4	5	6	7	8	9	10	11	12	13
Positional value	26	25	24	23	22	21	20	19	18	17	16	15	14
Alphabets	Z	Y	X	W	V	U	T	S	R	Q	P	O	N

The pattern followed here is:

Letters are increasing in the order +5.

On continuing the same pattern, we get,



Hence, 'EILN' is the correct answer.

51. Answer: b

Explanation:

Given:

Marks scored by Gopal = 15% more than Asha

Marks scored by Asha = 10% more than Sachin

Concept Used:

Percentage Marks Scored = Required Percentage $\times$ Total Marks

Calculation:

$\Rightarrow$ Let the marks scored by Sachin be x .

$\Rightarrow$ Marks scored by Asha = $x + 10\%$ of x

$\Rightarrow$ Marks scored by Asha = $x + \frac{x}{10} = \frac{11x}{10}$

$\Rightarrow$ Marks scored by Gopal = $\frac{11x}{10} + \frac{15}{100} \times \frac{11x}{10}$

$\Rightarrow$ Marks scored by Gopal = $\frac{11x}{10} + \frac{33x}{200} = \frac{220x+33x}{200} = \frac{253x}{200}$

$\Rightarrow$ Difference between Gopal and Sachin marks = $\frac{253x}{200} - x = \frac{53x}{200}$

$\Rightarrow$ Percentage marks Gopal scored more than Sachin = $\frac{\frac{53x}{200}}{\frac{x}{1}} \times 100$

$\Rightarrow$ Percentage marks Gopal scored more than Sachin = $\frac{53}{200} \times 100 = 26.5\%$

Hence, Gopal scored 26.5 % more marks than Sachin.

★ Shortcut Trick

Let marks scored by Sachin = 100

Then marks scored by Asha = $100 + 10 = 110$

Marks scored by Gopal = $110 + 15\% \times 110 =$

$\Rightarrow 110 + 16.5 = 126.5$

So, Gopal scored 26.5% more than Sachin.

52. Answer: a

Explanation:

Given:

Time taken by Pranjal = Twice as much as Vikram

Time taken by Pranjal = Thrice as much as Ashwin

Time taken to finish work together = 6 days

Calculation:

⇒ Let Pranjal take x days to complete the work.

⇒ So, Vikram takes $\frac{x}{2}$ and Ashwin takes $\frac{x}{3}$ days to complete the work.

⇒ According to the question, all working together

⇒ Then, $\left(\frac{1}{x} + \frac{2}{x} + \frac{3}{x}\right) = \frac{1}{6}$

⇒ $\frac{6}{x} = \frac{1}{6}$

⇒ $x = 36$ days

⇒ Time taken by Vikram to complete the work = $\frac{x}{2} = \frac{36}{2} = 18$ days

Hence, Vikram can complete the work alone in 18 days.

Short trick:

Formula used:

Efficiency = Total unit/No. of days

Time is inversely proportional to efficiency

Calculation:

As , we know that time is inversely proportional to efficiency

So, let the efficiency of pranjal be x

Then efficiency of vikram = $2x$

Efficiency of Ashwin = $3x$

Total efficiencies = $x + 2x + 3x = 6x$

Total days taken to work together = 6

Total unit = $6x \times 6 = 36x$

Now, vikram can do the work in = $36x/2x = 18$

Hence, vikram can do the work in 18 days .

53. Answer: d

Explanation:

Given:

60% of a number = Three-fourth of another number

Calculation:

⇒ Let the first number be x and another number be y .

⇒ So, 60% of $x = \frac{3}{4} \times y$

⇒ $\frac{60}{100} \times x = \frac{3}{4}y$

⇒ $\frac{x}{y} = \frac{\frac{3}{4}}{\frac{60}{100}} = \frac{3 \times 5}{4 \times 3}$

⇒ $\frac{x}{y} = \frac{5}{4} = 5 : 4$

Hence, the ratio of the first number to the second number is 5 : 4

54. Answer: d

Explanation:

Given:

Average of 19 numbers = 8.5

Correct Number = 63

Incorrect Number = 25

Concept Used:

Average = Sum of all values $\div$ Number of values

Calculation:

Total sum of 19 numbers = $19 \times 8.5 = 161.5$

Removal of Incorrect Number = $161.5 - 25 = 136.5$

Now, After adding the correct number

Total sum of 19 numbers = $136.5 + 63 = 199.5$

$\Rightarrow$ Corrected Average of 19 numbers = $\frac{199.5}{19} = 10.5$

Hence, the corrected average of the 19 numbers is 10.5

55. Answer: b

Explanation:

Given:

Volume of sphere = 38808 cm^3

Concept Used:

Volume of sphere = $\frac{4}{3}\pi r^3$

Surface Area of sphere = $4\pi r^2$

Calculation:

$\Rightarrow \frac{4}{3}\pi r^3 = 38808$

$$\Rightarrow \frac{4}{3} \times \frac{22}{7} \times r^3 = 38808$$

$$\Rightarrow r^3 = \frac{38808 \times 21}{88}$$

$$\Rightarrow r^3 = 9261$$

$$\Rightarrow r = 21 \text{ cm}$$

$$\text{Now, the Surface Area of the sphere} = 4 \times \frac{22}{7} \times 21 \times 21$$

$$\Rightarrow 4 \times 66 \times 21 = 5544 \text{ cm}^2$$

Hence, the surface area of a sphere is 5544 cm^2 .

56. Answer: c

Explanation:

Concept Used:

$$a^x \times a^y = a^{x+y}$$

Calculation:

$$\Rightarrow (625)^{0.07} \times (625)^{0.18}$$

$$\Rightarrow (625)^{0.07 + 0.18}$$

$$\Rightarrow (625)^{0.25}$$

$$\Rightarrow (625)^{1/4} = (5^4)^{1/4}$$

Hence, the value of the given expression is 5

57. Answer: a

Explanation:

Given:

Divisor = 360

Concept Used:

Divisible by 9 = Sum of all digits of numbers divisible by 9

Calculation:

360 can be expressed in the form of factors $5 \times 8 \times 9$

For numbers to be divisible by 360, it should be divisible by 9 also.

$$\Rightarrow 171720 = 1 + 7 + 1 + 7 + 2 + 0 = 18$$

So, it is divisible by 9

$$\Rightarrow 176600 = 1 + 7 + 6 + 6 + 0 + 0 = 20$$

So, it is not divisible by 9

$$\Rightarrow 166200 = 1 + 6 + 6 + 2 + 0 + 0 = 15$$

So, it is not divisible by 9

$$\Rightarrow 171080 = 1 + 7 + 1 + 0 + 8 + 0 = 17$$

So, it is not divisible by 9

Hence, the number which is divisible by 360 is 171720

58. Answer: d

Explanation:

Given:

Discount % = 20% on the part of the Marked price that was paid in cash

Charged 0.5% on the part marked price paid through a credit card

Suresh paid 40% of the marked price in cash and the rest through a credit card

Formula Used:

Discount % = Marked Price $\times$ Discount Rate

$$\text{Percentage \%} = \frac{\text{Paid}}{\text{Marked Price}} \times 100$$

Calculation:

Let the marked price = Rs. 100

40% of MP is paid in cash

$\Rightarrow$ Rs. 40 is paid in cash and Rs. 60 is paid by credit card

According to the question,

20% offered on the part of the marked price that was paid in cash

$\Rightarrow$ 20% of 40 = Rs 8

The discount price of the product paid by cash

$\Rightarrow$ MP - 20% of MP = 40 - 8 = Rs. 32

0.5% charged on the part of the Marked Price that was paid by card

$\Rightarrow$ 0.5% of 60 = 0.3

The increased price the of product paid by credit card

$\Rightarrow$ MP + 0.5% of 60 = 60 + 0.3 = Rs. 60.3

Total payment Suresh has pay = paid by cash + paid by credit card

$\Rightarrow$ Rs. 32 + Rs. 60.3 = Rs. 92.3

$$\text{Percentage \%} = \frac{\text{Paid}}{\text{Marked Price}} \times 100 = \frac{92.3}{100} \times 100$$

=92.3%

The **percentage** of the Marked Price was his total final payment is 92.3%

59. Answer: d

Explanation:

Given:

Time taken to row 36 km downstream = 4 hours

Time taken to row 49 km upstream = 7 hours

Concept Used:

Time = Distance $\div$ Speed

Calculation:

Let the speed in still water be x km/h and speed of current be y km/h.

Downstream speed = $x + y$ km/h

Upstream speed = $x - y$ km/h

Putting the values in the formula,

$$\Rightarrow 4 = \frac{36}{x+y} \text{ and } 7 = \frac{49}{x-y}$$

$$\Rightarrow x + y = 9 \text{ and } x - y = 7$$

Solving, we get

$$\Rightarrow x = 8 \text{ km/h and } y = 1 \text{ km/h}$$

Hence, the speed of the current is 1 km/h.

60. Answer: a

Explanation:

Given:

Marked Price of cell phone = Rs 23,000

Successive discounts = 14% and 16%

Concept Used:

Discount = Marked Price – Discount % of Marked Price

Calculation:

On the first discount of 14%

New Marked Price after discount

$$\Rightarrow 23000 - 14\% \text{ of } 23000$$

$$\Rightarrow 23000 - \frac{14}{100} \times 23000$$

$$\Rightarrow \text{Rs.} = 19780$$

Now, after a discount of 16%

$$\text{New MP after discount} = 19780 - \frac{16}{100} \times 19780$$

$$\Rightarrow 19780 - 3165$$

$$\Rightarrow 16615$$

Hence, the customer have to pay the amount of Rs 16,615

61. Answer: c

Explanation:

Given:

Ratio of expenses on rice, vegetables, and cooking oil = 9 : 11 : 5

Increase in prices of item = 10%, 20% and 30%

Concept Used:

New Item Price = Original Price + Percentage Increase of Original Price

Calculation:

Let the prices of rice, vegetables, and cooking oil be Rs 9, Rs 11 and Rs 5 respectively.

⇒ Total Expenditure = Rs 9 + 11 + 5 = Rs 25

Price after increase of 10% in the price of rice

⇒ New Price = 9 + 10% of 9 = $9 + \frac{10}{100} \times 9 = 9 + 0.9 = 9.9$

Price after increase of 20% in the price of vegetables

⇒ New Price = 11 + 20% of 11 = $11 + \frac{20}{100} \times 11 = 11 + 2.2 = 13.2$ Rs

Price after increase of 30% in the price of cooking oil

⇒ New Price = 5 + 30% of 5 = $5 + \frac{30}{100} \times 5 = 5 + 1.5 = 6.5$ Rs

⇒ New Total Expenditure = Rs 9.9 + 13.2 + 6.5 = Rs 29.6

⇒ Increase in expenditure = Rs 29.6 – 25 = Rs 4.6

⇒ Percentage increase by new expenditure = $\frac{4.6}{25} \times 100 = 4.6 \times 4 = 18.4$ %

Hence, the total expense of the family will increase by 18.4 %

62. Answer: b

Explanation:

Given:

Average visitors on Sundays = 330

Average visitors on the other days = 240

Total days in the month = 30

Concept Used:

Average = Total Sum of Values $\div$ Number of values

Calculation:

Starting with Saturday as the first day

Number of Sundays in the month = 5

So, Number of visitors on Sundays in the month

$$\Rightarrow 330 \times 5 = 1650$$

$$\text{Number of visitors on the other days} = 25 \times 240 = 6000$$

Total visitors in the month

$$\Rightarrow 6000 + 1650 = 7650$$

$$\text{Then, Average visitors per day} = \frac{7650}{30} = 255$$

Hence, the number of visitors per day in a month is 255

63. Answer: a

Explanation:

Concept Used:

B	Brackets in order {}, {}, []	ब्रेकेट {}, {}, [] क्रम में
O	of	का
D	Division (÷)	विभाजन (÷)
M	Multiplication (×)	गुणा (×)
A	Addition (+)	जोड़ (+)
S	Subtraction (-)	घटाव (-)

Calculation:

$$\Rightarrow \frac{3294}{(226+506) \text{ of } \frac{3}{4}} + 500$$

$$\Rightarrow \frac{3294}{732 \times \frac{3}{4}} + 500$$

$$\Rightarrow \frac{3294}{549} + 500 = 6 + 500 = 506$$

Hence, the simplified value of the expression is 506

64. Answer: a

Explanation:

Concept used:

$$x^2 + y^2 + z^2 = (x + y + z)^2 - 2(xy + yz + zx)$$

Calculations:

According to the question, $x + y + z = 0$

$$x = -(y + z)$$

$$y = -(x + z)$$

$$z = -(x + y)$$

Now,

$$\begin{aligned}
 & \frac{x^2}{x^2-yz} + \frac{y^2}{y^2-zx} + \frac{z^2}{z^2-xy} \\
 \Rightarrow & \frac{x^2}{-x(y+z)-yz} + \frac{y^2}{-y(x+z)-xz} + \frac{z^2}{-z(x+y)-xy} \\
 \Rightarrow & -\frac{x^2}{xy+yz+zx} - \frac{y^2}{xy+yz+zx} - \frac{z^2}{xy+yz+zx} \\
 \Rightarrow & -\frac{x^2+y^2+z^2}{xy+yz+zx} \\
 \Rightarrow & -\left\{ \frac{(x+y+z)^2-2(xy+yz+zx)}{xy+yz+zx} \right\}
 \end{aligned}$$

Substitute $x + y + z = 0$ in the above equation

$$\begin{aligned}
 \Rightarrow & \frac{2(xy+yz+zx)}{xy+yz+zx} \\
 \Rightarrow & 2
 \end{aligned}$$

Hence, the required value is 2.

65. Answer: c

Explanation:

Concept Used:

Percentage Composition = Percentage Given $\times$ Total Time

Calculation:

From the pie chart, we found that the maximum percentage composition is for Sleep.

$\Rightarrow$ Time given for sleeping = 35% of 24 hours

$\Rightarrow$ Time given for sleeping = $\frac{35}{100} \times 24 = 8.4$ hours

Hence, the maximum number of hours in a day is spent on Sleeping.

66. Answer: d

Explanation:

Formula used:

$$\sin^2 \theta + \cos^2 \theta = 1$$

$$\sin (90 - \theta) = \cos \theta$$

$$\cos(90 - \theta) = \sin \theta$$

Calculation:

$$\sin 35^\circ \cos 55^\circ + \cos 35^\circ \sin 55^\circ$$

In the given expression we can write 35 as $(90 - 55)$

$$\Rightarrow \sin (90 - 55)^\circ \cos 55^\circ + \cos (90 - 55)^\circ \sin 55^\circ$$

By using the formula, $\sin (90 - \theta) = \cos \theta$ and $\cos (90 - \theta) = \sin \theta$

$$\Rightarrow \cos 55^\circ \cos 55^\circ + \sin 55^\circ \sin 55^\circ$$

$$\Rightarrow \cos^2 55^\circ + \sin^2 55^\circ$$

$$\Rightarrow \cos^2 55^\circ + \sin^2 55^\circ = 1 \text{ (by formula } \sin^2 \theta + \cos^2 \theta = 1 \text{)}$$

The value of the expression is 1

67. Answer: a

Explanation:

Formula used:

$$(a + b)^2 = a^2 + b^2 + 2ab$$

Calculation:

It is given that, $r + \frac{1}{r} = 11$

On squaring both sides,

$$\Rightarrow \left(r + \frac{1}{r}\right)^2 = 11^2$$

$$\Rightarrow r^2 + \frac{1}{r^2} + 2 = 121$$

$$\Rightarrow r^2 + \frac{1}{r^2} = 119$$

We have to find the value of $\frac{r^3 + \frac{1}{r}}{r^2 - r + 1}$,

Dividing numerator and denominator by 'r',

$$\Rightarrow \frac{r^3 + \frac{1}{r}}{r^2 - r + 1} = \frac{r \cdot \left(r^2 + \frac{1}{r^2}\right)}{r \cdot \left(r - 1 + \frac{1}{r}\right)}$$

$$\Rightarrow \frac{\left(r^2 + \frac{1}{r^2}\right)}{\left(r - 1 + \frac{1}{r}\right)}$$

On substituting the values of $r + \frac{1}{r}$ and $r^2 + \frac{1}{r^2}$ as 11 and 119 respectively,

$$\Rightarrow \frac{119}{(11-1)} = \frac{119}{10}$$

The value of the expression is $\frac{119}{10}$

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68. Answer: c

Explanation:

Formula used:

Volume of cube = (side)³

Surface area of cube = 6(side)²

Calculation:

Volume of larger cube = Volume of smaller cube I + Volume of smaller cube II +
Volume of smaller cube III

$$\text{Volume of larger cube} = (3)^3 + (4)^3 + (5)^3$$

$$\Rightarrow 216 \text{ cm}^3$$

Let the side of larger cube be 'x' cm

$$\Rightarrow x^3 = 216 \text{ cm}^3$$

$$\Rightarrow x = 6 \text{ cm}$$

Sum of surface areas of cube - I, II and III

$$\Rightarrow 6(3)^2 + 6(4)^2 + 6(5)^2$$

$$\Rightarrow 6(50)$$

$$\text{Surface area of larger cube} = 6(x)^2$$

$$\Rightarrow 6(6)^2$$

$$\text{Ratio} = \frac{6(50)}{6(6)^2} = 50 : 36$$

$$\Rightarrow 25 : 18$$

The ratio of the smaller cubes' total surface area to the larger cube's total surface area is 25 : 18

69. Answer: c

Explanation:

Given:

CP of machine = Rs. 5,000

Transportation cost = Rs. 250

SP = Rs. 5,075

Formula used:

$$\% \text{ profit} = \frac{SP - CP}{CP} \times 100$$

$$\% \text{ loss} = \frac{CP - SP}{CP} \times 100$$

Calculation:

Total amount paid by Rajesh = CP of machine + Transportation of machine

$$\Rightarrow \text{Rs. } 5,000 + \text{Rs. } 250 = \text{Rs. } 5250$$

Selling Price = Rs. 5,075

As it can be noticed that $CP > SP$

$\Rightarrow$ Hence **it is a loss**

$$\% \text{ loss} = \frac{5250 - 5075}{5250} \times 100$$

$$\% \text{ loss} = 3.33 \%$$

Rajesh is bearing a loss of 3.33 %

★ Shortcut Trick

Ratio to C.P. to S.P.

$$\Rightarrow 5250 : 5075$$

$$\Rightarrow 30 : 29$$

1 unit of loss out of 30

$$\text{Loss} = 1/30 = 3.33\%$$

70. Answer: b

Explanation:

Formula used:

$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$

Calculation:

Let the principal amount of Rs. 100

It is given that amount is compounded half-yearly

$\Rightarrow n = 2$ and $t = 1$ year

So after 1 year the Amount he will be receiving,

$$\Rightarrow A = 100 \left(1 + \frac{\frac{6}{100}}{2}\right)^2$$

$$\Rightarrow A = 106.09$$

$$\text{Effective rate} = \frac{\text{final amount} - \text{initial amount}}{100}$$

$$\Rightarrow \frac{106.09 - 100}{100}$$

$$\Rightarrow 0.0609$$

The effective rate of annual interest is 0.0609

71. Answer: c

Explanation:

Formula Used:

$$\text{Average} = \frac{\text{Sum of observation}}{\text{Total observation}}$$

Calculation:

According to the question

The average number of students who passed institute P in 2015 and 2016 is

$$\text{Average1} = \frac{200+250}{2} = \frac{450}{2} = 225$$

Average number of students who passed institute Q in 2017 and 2018 is

$$\text{Average2} = \frac{150+50}{2} = \frac{200}{2} = 100$$

The difference between the average will be

$$\Rightarrow \text{Average1} - \text{Average2}$$

$$\Rightarrow 225 - 100 = 125$$

The difference between the average number of students who passed institute P in 2015 and 2016 and that in institute Q in 2017 and 2018 is 125.

72. Answer: c

Explanation:

Formula Used:

$$\text{Angle} = \frac{\text{Arc}}{\text{Radius}}$$

Circumference of the circle = $2\pi r$

Calculations:

According to the first formula

Arc = 28.8° and Arc length = 18cm

The unit of arc is degree therefore, we have to convert it into radian

$$\text{For radian, angle} = 28.8 \times \frac{\pi}{180} = \frac{16\pi}{100}$$

From the above formula,

$$\text{Radius} = \frac{\text{arc}}{\text{angle}} = \frac{18}{\frac{16\pi}{100}} = \frac{1800}{16\pi}$$

Circumference of the circle

$$\Rightarrow 2 \times \pi \times r = 2 \times \pi \times \frac{18 \times 100}{16\pi} = \frac{3600}{16} = 225$$

The circumference of the circle is 225 cm

73. Answer: b

Explanation:

Formula Used:

$$\text{Average} = \frac{\text{Sum of all observations}}{\text{Total No of observations}}$$

Calculations:

For Karnataka

$$\Rightarrow \text{Average 1} = \frac{2444.4}{4} = 61.1$$

For Gujarat

$$\text{Average 2} = \frac{79.3+69.1+61.3+44.9}{4} = \frac{254.6}{4} = 63.65$$

For Andhra Pradesh

$$\text{Average 3} = \frac{67.7+60.5+44.1+35.7}{4} = \frac{208}{4} = 52$$

For Kerala

$$\Rightarrow \text{Average 4} = \frac{93.9+90.9+89.8+78.9}{4} = \frac{353.5}{4} = 88.375$$

Comparing Average1, Average2, Average3, Average4

$\Rightarrow$ Average 3 is the lowest of all the Average (Average1, Average2, Average4)

Andhra Pradesh has the lowest literacy rates as per all four censuses.

74. Answer: a

Explanation:

Given:

Diameter of a sphere = 14 cm.

Formula used:

Volume of cylinder = $\pi r^2 h$

Calculation:

Cylinder circumscribing sphere means the sphere is inside the cylinder, so the diameter of the sphere becomes the height of the cylinder

Height = Diameter = 14cm

$\Rightarrow$ Volume of cylinder = $\pi \times r^2 \times h = \frac{22}{7} \times 7 \times 7 \times 14 = 22 \times 7 \times 14 = 2156 \text{cm}^3$

The volume of the cylinder is 2156cm^3

75. Answer: d

Explanation:

Given:

The sum invested at 10%

The sum invested compounded half yearly for 18 months

The amount payable on maturity was Rs. 83349

Formula used:

$$\text{C.I.} = P \left(1 + \frac{R}{100} \right)^T$$

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where C.I.= Amount payable on maturity

P= Amount invested or Principle

R= Rate of interest

T= Time Period

Calculation:

When the amount is invested for compounded half yearly, then the time period got doubled and rate of interest got halved

Time period= 18 mon x 2 = 36mon or 3 years

New rate of interest= $10\% / 2 = 5\%$

According to the formula,

$$\Rightarrow C.I = P\left(1 + \frac{R}{100}\right)^T$$

$$\Rightarrow 83349 = P\left(1 + \frac{5}{100}\right)^3$$

$$\Rightarrow 83349 = P\left(1 + \frac{1}{20}\right)^3$$

$$\Rightarrow 83349 = P \times \frac{21}{20} \times \frac{21}{20} \times \frac{21}{20}$$

$$\Rightarrow 83349 \times \frac{20}{21} \times \frac{20}{21} \times \frac{20}{21} = P$$

$$\Rightarrow 9 \times 8000 = 72000$$

The amount invested for 18 months is Rs. 72,000

76. Answer: d

Explanation:

The correct option is Bharatanatyam.

★ Key Points

- **Bharatanatyam** is a major form of indian classic dance that originated in Tamil Nadu .
- The theoretical foundations of Bharatanatyam are found in **Natya Shashtra** , the ancient Hindu text of performance arts.
- **Alarmel Valli** is a leading Indian classic dancer and choreographer and the foremost exponent of the Pandanallur style , in the Indian classical dance form, Bharatanatyam .
- She founded **The Dipasikha Dance Foundation in Chennai in 1984** , where she teaches Bharatanatyam .
- In 1991, Alarmel Valli was the second youngest dancer to be conferred the **Padma Shri** from the Government of India, after **Vijayanthimala**.
- She was awarded the **Sangeet Natak Akademi Award in 2001** by India's **National Academy for Music, Dance and Drama**, **Padma Bhushan in 2004** and **Chevalier of Arts and Letters** award from the **Government of France** the same year.

★ Additional Information

Some Indian classic dances and their states of origin:

Indian Classis Dances	State of origin
Kathak	Uttar Pradesh
Kuchipudi	Andhra pradesh
Odissi	Odisha
Kathakali	Kerla
Sattriya	Assam
Manipuri	Manipur
Mohiniyattam	Kerla

77. Answer: c

Explanation:

The correct option is Chlorella.

★ Key Points

- Chlorella is a genus of about thirteen species of **single-celled algae** belonging to the **division Chlorophyta**.
- During the late 1940s and the early 1950s, **Chlorella** was seen as a new and **promising primary food source**.
- It contains 50% proteins, almost 30% fats and about 20% nutrients and vitamins.
- **Chlorella is a fresh water algae**.
- A 2002 study showed that **Chlorella may cause inflammation**. But due to its **nutrient richness** it is highly consumed.

★ Additional Information

- **Algae** are **photosynthetic eukaryotic organisms**.
- Types of algae:
 - Chlorophyceae
 - Phaeophyceae
 - Rhodophyceae
- Chlorophyceae is also known as Green algae. It is generally found in freshwater, brackish water and saltwater.
- **Phaeophyceae** also commonly known as brown algae and only found in freshwater.
- **Rhodophyceae**, known as red algae. These algae are mostly found in saltwater and brackish water but some of its species can be found in freshwater also.

78. Answer: a

Explanation:

The correct option is Slash and Burn.

★ Key Points

- **Primitive Subsistence Farming** is a type of farming which is practiced on small patches of land with the help of primitive tools.
- Its also known as **Slash and Burn farming** .
- The **main crops are Banana, Beans, Millets, Corn, Yams etc** .
- Tools like digging sticks, hoe and dao are used in this type of farming.

★ Additional Information

- **Types of agriculture in India:**
 - Commercial farming
 - Plantation agriculture
 - Subsistence agriculture
 - Shifting agriculture
 - Extensive farming
 - Terrace agriculture
 - Intensive farming
 - Wetland farming
 - Dry Land farming

79. Answer: c

Explanation:

The correct answer is i - b, ii - c, iii - d, iv - a.

★ Key Points

- The **peptidoglycan** (murein) sacculus is a unique and essential structural element in the **cell wall of most bacteria** .
- Made of glycan strands cross-linked by short peptides, the **sacculus** forms a **closed, bag-shaped structure surrounding the cytoplasmic membrane** .
- **Pectin** is a **fiber found in fruits** .
- Pectin is often used as a **thickener in cooking and baking** . It is also sometimes used to make **medicine** .

- **Chitin**, which occurs in nature as **ordered macrofibrils**, is the major structural component in the **exoskeletons** of the crustaceans, crabs and shrimps, as well as the **cell walls of fungi**.
- **Cellulose** is the main substance found in plant cell walls and helps the plant to remain stiff and strong.

★ Additional Information

- **Peptidoglycan** serves a structural role in the bacterial cell wall, giving structural strength, as well as counteracting the osmotic pressure of the cytoplasm.
- **Pectin** is also used as a soluble fiber supplement, which is often sold in capsule form.
- In insects, **chitin** functions as scaffold material, supporting the cuticles of the epidermis and trachea as well as the peritrophic matrices lining the gut epithelium.
- Cellulose is the 30% of a tree that can be made into paper.

80. Answer: a

Explanation:

The correct answer is Rabindra Nath Tagore.

★ Key Points

- **Rabindranath Tagore** was born on 7 May 1861 in **Kolkata, West Bengal**.
- He was a poet, writer, playwright, composer, philosopher, social reformer and painter.
- His penname was **Bhanusingha**.
 - He became in 1913 the first non-European and the first lyricist to win the **Nobel Prize in Literature**.
 - He won Noble Prize for his book **Gitanjali**.
- In 1901 Tagore moved to **Santiniketan**.
- **Gitanjali, The Post Office, Gora, Stray Birds, Kabuliwala** are some of his very famous art works.

- He died on 7 August, 1941 in Jorasanko Thakurbari, Kolkata.

★ Additional Information

- **Dwijendra Lal Ray**
 - He was born on 19 July 1863, in Krishnanagar and died in 17 May, 1913, in Kolkata.
 - He was known for his plays and songs known as Dwijendrageeti or Songs of Dwijendralal.
 - He was civil servant, play writer, and musician.
- **Bankim Chandra Chatterjee**
 - He was born on 26 June 1838, in Kolkata, and died on 8 April 1894, in Kolkata.
 - He was an Indian poet, journalist and novelist.
 - Anandmath (1882) is one of its most famous book.
- **Purandar Das**
 - Born in 1484, Araga and died on 2 January 1564, Vijaynagar. His full name was Shrinivasa Nayaka.
 - He was a Haridasa philosopher.
 - He was a composer, singer and one of the chief founding proponents of Carnatic music.

81. Answer: c

Explanation:

The correct answer is Chitra Banerjee Divakaruni.

★ Key Points

- 'The Palace of Illusions' is written by Chitra Banerjee Divakaruni.
- Chitra Banerjee Divakaruni is who which is known by her name to most of the Indian youth all around she is an Indian-American author, poet.

★ Additional Information

- Anita Desai, original name Anita Mazumdar, (born June 24, 1937, Mussoorie, India), English-language Indian novelist and author of children's books who excelled in evoking character and mood through visual images ranging from the meteorologic to the botanical.
- **Kamala Markandaya**, pseudonym of Kamala Purnaiya, married name Kamala Taylor, (born 1924, Chimakurti, India—died May 16, 2004. She is the most loved writer all around the world.
- **Arundhati Roy** also known by her, full name Suzanna Arundhati Roy, (born November 24, 1961, Shillong, Meghalaya, India), is the perfect example of the best Indian author, actress, and political activist who was best known for the award-winning novel *The God of Small Things* (1997) and for her involvement in environmental and human rights causes. She is known by her name to all the children all around the world

82. Answer: c

Explanation:

The correct answer is Radhakrishnan Nair P.

★ Key Points

- Radhakrishnan Nair P won the 'Dronacharya Award' (Regular Category) 2021 in the Athletics discipline.
- Nair, who is also a certified Technical Official and World Athletics Level-5 coach, has been instrumental in enhancing the coach's education system in India.
- He is the first Indian to have an **International Coaching Enrichment Programme Certificate from the International Olympic**

★ Additional Information

- Dronacharya Award 2021 recipients

Sr. No	Recipients	Discipline
1	Pritam Rani Siwach	Hockey
2	Radhakrishnan Nair P	Athletics
3	Sandhya Gurung	Boxing
4	Prakash Nautiyal	Shooting

83. Answer: c

Explanation:

The correct answer is SP Balasubrahmanyam.

★ Key Points

- **Sripathi Panditaradhyula Balasubrahmanyam** (4 June 1946 – 25 September 2020), was awarded the Padma Vibhushan posthumously in 2021.
- He was also known as SPB or Balu, was an Indian playback singer, and television presenter.

★ Additional Information

- Sudarshan Sahoo (born 11 March 1939) is an Indian sculpture artist from Puri in Odisha. [He was awarded India's second highest civilian award Padma Vibhushan in 2021 and India's fourth highest civilian award Padma Shri in 1988. Sahoo established Sudarshan Crafts Museum, Puri in 1977, and Sudarshan Art & Crafts Village, Bhubaneswar in 1991 with the help of the Government of Odisha .
- SVARAM brings together the rich tradition of Indian Music and Craft and international academic musicology, sound studies and research, and contemporary design.
- Jagdish Chaudhary was born in the early nineties and is also a famous singer of his time. His songs are repeated by the youths today as well all around the globe

84. Answer: a

Explanation:

The correct answer is Continental Shelf.

★ Key Points

- The term "continental shelf" is used by geologists generally to mean that part of the continental margin which is between the shoreline and the shelf break or, where there is no noticeable slope, between the shoreline and the point where the depth of the superjacent water is approximately between 100 and 200 meters.

★ Additional Information

- Continental slope is " the deepening sea floor out from the shelf edge to the upper limit of the continental rise, or the point where there is a general decrease in steepness
- The deep-sea plains or abyssal plains are undulating underwater plains found on the deep ocean floor . These plains extend from continental rise to the mid-oceanic ridges covering about two-thirds of the ocean floor. The slope gradient is very gentle, and it appears as a uniform flat, and featureless plain
- A trench is a long narrow channel that is cut into the ground , for example in order to lay pipes or get rid of water. 2. countable noun [NOUN noun] A trench is a long narrow channel in the ground used by soldiers in order to protect themselves.

85. Answer: b

Explanation:

The correct answer is 24.

★ Key Points

- **Tokyo Paralympics 2020:** India finishes 24th with record 19 medals.
- India finished their campaign at the Tokyo Paralympics 2020 with an all-time high of 19 medals which includes five gold, eight silver, and six bronze.

★ Additional Information

- This is the best medal tally for India a single edition of the Paralympic Games.
- The **Paralympic Games or Paralympics, also known as the Games of the Paralympiad**, is a periodic series of international multi-sport events involving athletes with a range of physical disabilities

86. Answer: b

Explanation:

The correct answer is Bharatanatyam and Odissi.

★ Important Points

- **Bharatanatyam and Odissi is performed by Sonal Mansingh.**
- Bharatanatyam is a south Indian dance form, more specifically speaking, it originated in the state of Tamil Nadu.
 - And so the dance is often accompanied by classical Tamil songs and music.
 - Kathak is a north Indian dance form and it was developed by the nomads who were known as the Kathaks.
- Odissi is one of the Indian classical dance forms which came from the inspiration of Hindu temples in the state of Odisha .
 - This dance form mainly illustrates mythological, religious, and devotional stories, and the dancers present the same.

87. Answer: a

Explanation:

The correct answer is Vempati Chinna Satyam.

★ Key Points

- **Vempati Chinna Satyam** (15 October 1929 – 29 July 2012) was an Indian dancer and a guru of the Kuchipudi dance form.
- He was born in a brahmin family

★ Additional Information

- **Sharmila Biswas** is a noted Indian classical dancer and choreographer in the Odissi and a disciple of guru Kelucharan Mohapatra.
- **Sanchita Bhattacharya** is an Indian playback singer, composer, and music producer.
 - At the age of 14, this makes her the oldest winner in the Sa Re Ga Ma Pa L'il Champs history as well as the first female winner with public voting.
- **Lakshmana Swamy** realized the Self in Ramana Maharshi's presence in 1949.
 - He is the perfect dancer of his time known all around

88. Answer: a

Explanation:

The correct answer is Ustad Imrat Khan.

★ Key Points

- **Ustad Imrat Khan** is an outstanding player to have mastered the surbahar instrument.
- He was the younger brother of s itar maestro Ustad Vilayat Khan .

★ Additional Information

- Allauddin Khan , also known as Baba Allauddin Khan was a Bengali sarod player and multi-instrumentalist, composer, and one of the most notable music teachers of the 20th century in Indian classical music
- Ustad Abdul Karim Khan was an Indian classical singer and, along with his cousin Abdul Wahid Khan, the founder of the Kirana gharana of classical music.
- Ali Akbar Khan was an Indian Hindustani classical musician of the Maihar gharana, known for his virtuosity in playing the sarod. Trained as a classical musician and instrumentalist by his father, Allauddin Khan, he also composed numerous classical ragas and film scores

89. Answer: b

Explanation:

The correct answer is Fundamental Rights.

★ Key Points

- **Part III of the Constitution of India deals with Fundamental rights.**
- They are a group of rights that have been recognized with a high degree of protection from encroachment.
 - Right to Equality (Article 14-18)
 - Right to Freedom (Article 19-22)
 - Right against Exploitation (Article 23-24)
 - Right to Freedom of Religion (Article 25-28)
 - Cultural and Educational Rights (Article 29-30)
 - Right to Constitutional Remedies (Article 32)

★ Additional Information

- The Fundamental Duties are defined as the moral obligations of all citizens to help promote a spirit of patriotism and to uphold the unity of India. These duties set out in Part IV-A of the Constitution, concern individuals and the nation.

- Citizenship is a relationship between an individual and a state to which the individual owes allegiance and in turn, is entitled to its protection. Each state determines the conditions under which it will recognize persons as its citizens, and the conditions under which that status will be withdrawn
- DPSP are ideals that are meant to be kept in mind by the state when it formulates policies and enacts laws

90. Answer: c

Explanation:

The correct answer is JB Kripalani- My Times

★ Key Points

- Acharya Kripalani was born in Hyderabad in Sind in 1888.
- He studied in Bombay and Pune and briefly taught at Muzaffarpur College in Bihar and Banaras Hindu University.
- Kripalani became the general secretary of the Congress in 1934, a post he held until 1945

★ Additional Information

- At the time of independence, in 1947, he was the acting Congress President.
- My Times is a brilliant literary work that will arouse the enthusiasm of scholars of the Indian national struggle, as well as all those who want to glimpse into the world of the freedom-fighters and leaders of the pre-independence.
- Kripalani sheds light on the relationship he shared with legendary figures such as Jawaharlal Nehru, Subhas Chandra Bose, Maulana Azad, Sardar Patel, and of course, Mahatma Gandhi.

91. Answer: c

Explanation:

The correct answer is Puducherry.

★ Key Points

- In November 2021 at Zonal Council Meet, Chief Minister N Rangaswamy made the statement regarding Puducherry upgrading the status of the Union Territory is critical to its survival.
- Union Minister of Home Affairs and Minister of Cooperation, Shri Amit Shah will chair the 29 th meeting of the Southern Zonal Council comprising the States of Andhra Pradesh, Tamil Nadu, Karnataka, Kerala, Telangana, and Union Territories of Puducherry, Lakshadweep, Andaman & Nicobar Islands.

★ Additional Information

- Zonal Councils are the statutory (and not constitutional) bodies.
- They are established by an Act of the Parliament, that is, the States Reorganisation Act of 1956
- The act divided the country into five zones- Northern, Central, Eastern, Western and Southern and provided a zonal council for each zone.

92. Answer: c

Explanation: **Your Personal Exams Guide**

The correct answer is Elaioplasts.

★ Key Points

- The main function of elaioplasts is the synthesis and storage of fatty acids, terpenes, and other lipids, and they can be found in the embryonic leaves of oilseeds, citrus fruits, as well as the anthers of many flowering plants

★ Additional Information

- **Elaioplasts** hold the main function of synthesis and storage of fatty acids, terpenes, and other lipids, and they can be found in the embryonic leaves of oilseeds, citrus fruits, as well as the anthers of many flowering plants

- Amyloplasts are a type of plastid, double-enveloped organelles in plant cells that are involved in various biological pathways. Amyloplasts are specifically a type of leucoplast, a subcategory for colorless, non-pigment-containing plastids
- Plastids are pivotal subcellular organelles that have evolved to perform specialized functions in plant cells, including photosynthesis and the production and storage of metabolites.

93. Answer: a

Explanation:

The correct answer is **M1 and M3**

★ **Key Points**

- In macroeconomics, the money supply refers to the total volume of currency held by the public at a particular point in time.
- **M1 and M3** are called as narrow and broad money, respectively, in the context of money supply in an economy.
- There are several ways to define "money", but standard measures usually include currency in circulation and demand deposits

★ **Additional Information**

- M1, M2, and M3 are measurements of the United States money supply, known as the money aggregates .
- M1 includes money in circulation plus checkable deposits in banks.
- M2 includes M1 plus savings deposits (less than \$100,000) and money market mutual funds.
- M3 includes M2 plus large-time deposits in banks.

94. Answer: c

Explanation:

The correct answer is S Somanath.

★ Key Points

- Sreedhara Panicker Somanath is an Indian aerospace engineer serving as the chairman of the Indian Space Research Organisation. Somanath also served as the Director of Vikram Sarabhai Space Centre, Thiruvananthapuram.
- Shri S. Somanath assumed the charge of Secretary, Department of Space and Chairman, Space Commission on 14 January 2022.
- In his previous assignment, he was Director, Vikram Sarabhai Space Centre (VSSC), the lead Centre.

★ Additional Information

- K. Radhakrishnan is an Indian politician, who is currently serving as Minister for Welfare of Scheduled Castes, Scheduled Tribes and Backward Classes, Devaswoms, Parliamentary Affairs of Government of Kerala in second Pinarayi Vijayan ministry
- Kailasavadivoo Sivan is an Indian space scientist who served as the Secretary of the Department of Space and chairman of Indian Space Research Organisation and Space Commission. He has previously served as the Director of the Vikram Sarabhai Space Center and the Liquid Propulsion Systems Centre
- Former CBI joint director K Madhavan, who became a national hero with his investigation of the Bofors and securities scam cases, continues his interview with Shobha Warrier.

95. Answer: d

Explanation:

The correct answer is Ganymede.

★ Key Points

- **Ganymede**, a satellite of Jupiter, is the largest and most massive of the Solar System's moons.
- The ninth-largest object in the Solar System, it is the largest without a substantial atmosphere.

★ Additional Information

- **Phobos** is the innermost and larger of the two natural satellites of Mars, the other being Deimos.
 - Both moons were discovered in 1877 by American astronomer Asaph Hall. Phobos is named after the Greek deity Phobos, a son of Ares and twin brother of Deimos.
- **Titan** is the largest moon of Saturn and the second-largest natural satellite in the Solar System.
 - It is the only moon known to have a dense atmosphere and is the only known object in space other than Earth on which clear evidence of stable bodies of surface liquid has been found.
- **Namaka** is the smaller, inner moon of the trans-Neptunian dwarf planet Haumea.
 - It is named after Nāmaka, the goddess of the sea in Hawaiian mythology and one of the daughters of Haumea.

96. Answer: d

Explanation:

The correct answer is Khandwa.

★ Key Points

- Famous playback singer Kishore Kumar was born in 1929 in Khandwa.
- Kishore Kumar was an Indian playback singer and actor.
- He is widely regarded as one of the greatest and most dynamic singers in the history of Indian music as well as one of the best singers of the Indian

subcontinent of all time

★ Additional Information

- Kishore Kumar, original name Abhas Kumar Ganguly, (born August 4, 1929 , Khandwa, British India—died October 13, 1987, Bombay.
- Indian actor, playback singer, composer, and director known for his comic roles in Indian films of the 1950s and for his expressive and versatile singing voice,

97. Answer: d

Explanation:

The correct answer is South America

★ Key Points

- The Amazon is well known for a number of reasons. It is the greatest river of South America.
- The largest drainage system **in the world in terms of the volume of its flow and the area of its basin**

★ Additional Information

- The Amazon River is located in the northern portion of South America , flowing from west to east.
- The river system originates in the Andes Mountains of Peru and travels through Ecuador, Colombia, Venezuela, Bolivia, and Brazil before emptying into the Atlantic Ocean.



98. Answer: a

Explanation:

The correct answer is India.

★ Key Points

- Australia won the 2020 ICC Women's T20 World Cup Cricket by defeating India .
- The Australian women's national cricket team represents Australia in international women's cricket.
- Currently captained by Meg Lanning and coached by Shelley Nitschke, they are the top team in all world rankings assigned by the International Cricket Council for the women's game.

★ Additional Information

- The 2020 ICC Women's T20 World Cup was the seventh ICC Women's T20 World Cup tournament.
- It was held in Australia between 21 February and 8 March 2020. The final took place at the Melbourne Cricket Ground on International Women's Day .
- Hosts Australia won the tournament, beating India by 85 runs, to win their fifth title.

99. Answer: a

Explanation:

The correct answer is Venkat Raman Singh Shyam.

★ Key Points

- 'Finding My Way' is a famous autobiography written by *Venkat Raman Singh Shyam*.
- He is a contemporary Indian artist who works with murals, etchings, mixed media, and animation. Venkat has traveled extensively and exhibited his work in India and the world over.
- He was awarded the Rajya Hasta Shilpa Puraskar by the Government of Madhya Pradesh

★ Additional Information

- Dhavat Singh Uikey is a Gond artist from Madhya Pradesh. Even though he studied engineering, Uikey's passion for Gond art inspired him to pursue a career
- Bhajju Shyam is an Indian artist, belonging to the Gond-Pardhaan community of Madhya Pradesh. He was awarded India's fourth highest civilian award the Padma Shri in 2018. He was a contemporary of the celebrated Pardhaan artist Jangarh Singh Shyam and began his artistic career in Bharat Bhavan, Bhopal .
- Jangarh Singh Shyam was a pioneering contemporary Indian artist credited with being the creator of a new school of Indian art called Jangarh Kalam.

100. Answer: a

Explanation:

The correct answer is Gotipura .

★ Key Points

- Maguni Charan Das was an Indian traditional dancer of Gotipua, a traditional dance form of Odisha.
- **Gotipua** is a traditional dance form in the state of Odisha, India, and the precursor of Odissi classical dance.
- It has been performed in Orissa for centuries by young boys, who dress as women to praise Jagannath and Krishna.

★ Additional Information

- Chhau dance, also spelled Chhou dance, is a semi classical Indian dance with martial and folk traditions. It is found in three styles named after the location where they are performed, i.e. the Purulia Chhau of West Bengal, the Seraikella Chhau of Jharkhand and the Mayurbhanj Chhau of Odisha.
- **Jhumar** is a popular folk **dance** form popular in the Chota Nagpur . J humar dance which is performed only by women and is popular in Central areas
- The Khoris dance is a variant of the Jhumar dance and is exclusively performed by women. This dance is very popular in certain parts of central Haryana .