



## 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 2017 (Tier-I) Previous Year Paper (23-Mar-2018) (Shift 2)

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. In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word. (+2, -0.5)

- a. valededction
- b. velediction
- c. velededction
- d. valediction

2. The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph. (+2, -0.5)

In those days

A- ambulances available on

B- call to ferry patients to hospitals

C- there were hardly any

- a. BCA
- b. BAC
- c. ACB
- d. CAB

3. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select 'no improvement'. (+2, -0.5)

You (have been) a very good girl.

- a. has been
- b. is been
- c. have being
- d. no improvement

- 
4. In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select 'no improvement'. (+2, -0.5)

There was hardly any traffic and my father told us the history of the place we (is trekking) to.

- a. was trekking
- b. were trekking
- c. were trek
- d. no improvement

- 
5. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence. (+2, -0.5)

Exposed to the possibility of being attacked or harmed, either physically or emotionally

- a. Robust
- b. Tenacious
- c. Vulnerable

d. Stout

---

6. In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence. (+2, -0.5)

A stately or impressive building housing a tomb or group of tombs

- a. Mausoleum
  - b. Shanty
  - c. Hovel
  - d. Teepee
- 

7. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. (+2, -0.5)

Bend over backwards

- a. Use unfair means to succeed.
  - b. Make every effort to achieve something, especially to be fair or helpful.
  - c. Lose self respect to please others.
  - d. To step back from an unpleasant situation.
- 

8. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. (+2, -0.5)

A cold fish

- a. Someone who seems unfriendly and who does not share his feelings.
- b. Something valuable preserved for a long time.
- c. A lost business opportunity.
- d. A fish which can survive in freezing water.

9. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

But there is \_\_\_\_\_ reason to worry that the next Shakespeare or Valmiki is being suppressed by social media. \_\_\_\_\_ is also crowd-sourced even though we just can't see the forest for the trees when so many postings, I mean trees, seem to take birth \_\_\_\_\_ die every minute. I am certain that some great creative personalities will emerge in art, \_\_\_\_\_ and literature from social media. Instant stars are born via viral postings but self-selection \_\_\_\_\_ be the best filter to extract the superstars of the ilk of history's greatest.

But there is \_\_\_\_\_ reason to worry

- a. none
- b. neither
- c. nor
- d. no

10. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

But there is \_\_\_\_\_ reason to worry that the next Shakespeare or Valmiki is being suppressed by social media. \_\_\_\_\_ is also crowd-sourced even though we just can't see the forest for the trees when so many postings, I mean trees, seem to take birth \_\_\_\_\_ die every minute. I am certain that some great creative personalities will emerge in art, \_\_\_\_\_ and literature from social media. Instant stars are born via viral postings but self-selection \_\_\_\_\_ be the best filter to extract the superstars of the ilk of history's greatest.

social media. \_\_\_\_\_ is also crowd-sourced

- a. Creativity
- b. Creative
- c. Creation
- d. Create

11. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

But there is \_\_\_\_\_ reason to worry that the next Shakespeare or Valmiki is being suppressed by social media. \_\_\_\_\_ is also crowd-sourced even though we just can't see the forest for the trees when so many postings, I mean trees, seem to take birth \_\_\_\_\_ die every minute. I am certain that some great creative personalities will emerge in art, \_\_\_\_\_ and literature from social media. Instant stars are born via viral postings but self-selection \_\_\_\_\_ be the best filter to extract the superstars of the ilk of history's greatest.

take birth \_\_\_\_\_ die every minute.

- a. nor

- b. and
- c. for
- d. neither

12. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

But there is \_\_\_\_\_ reason to worry that the next Shakespeare or Valmiki is being suppressed by social media. \_\_\_\_\_ is also crowd-sourced even though we just can't see the forest for the trees when so many postings, I mean trees, seem to take birth \_\_\_\_\_ die every minute. I am certain that some great creative personalities will emerge in art, \_\_\_\_\_ and literature from social media. Instant stars are born via viral postings but self-selection \_\_\_\_\_ be the best filter to extract the superstars of the ilk of history's greatest.

emerge in art, \_\_\_\_\_ and literature

- a. musically
- b. musician
- c. musical
- d. music

13. In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives. (+2, -0.5)

But there is \_\_\_\_\_ reason to worry that the next Shakespeare or Valmiki is being suppressed by social media. \_\_\_\_\_ is also crowd-sourced even though we just can't see the forest for the trees when

so many postings, I mean trees, seem to take birth \_\_\_\_\_ die every minute. I am certain that some great creative personalities will emerge in art, \_\_\_\_\_ and literature from social media. Instant stars are born via viral postings but self-selection \_\_\_\_\_ be the best filter to extract the superstars of the ilk of history's greatest.

self-selection \_\_\_\_\_ be the best

- a. since
- b. until
- c. may
- d. whether

---

14. In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word. (+2, -0.5)

- a. Accommodate
- b. Acommodate
- c. Accomodate
- d. Accomeodate

---

15. A sentence has been given in Direct/Indirect Speech. Out of the four given alternatives, select the one which best expresses the same sentence in Indirect/Direct Speech. (+2, -0.5)

"Is it snowing?" she asked.

- a. She asked whether the snow has started.
- b. She inquired about the snow.

c. She ask whether it was snowing.

d. She asked if it was snowing.

- 
16. A sentence has been given in Active/Passive Voice. Out of the four given alternatives, select the one which best expresses the same sentence in Passive/Active Voice. (+2, -0.5)

He ate pizza ravenously.

a. Pizza is eaten by him.

b. Pizza was eaten ravenously by him.

c. Pizza was ate ravenously by him.

d. Pizza ate ravenously by him.

- 
17. Rearrange the parts of the sentence in correct order. (+2, -0.5)

The majority of

P : during the general elections

Q : highly educated Indians

R : do not vote

a. RPQ

b. PRQ

c. PQR

d. QRP

18. In the following question, out of the given four alternatives, select the one which is opposite in the meaning of the given word. (+2, -0.5)

Scholarly

- a. Learned
  - b. Ignorant
  - c. Cultured
  - d. Trained
- 

19. In the following question, out of the given four alternatives, select the one which is opposite in meaning of the given word. (+2, -0.5)

Baffling

- a. Puzzling
  - b. Unclear
  - c. Mystifying
  - d. Comprehensible
- 

20. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+2, -0.5)

Monolithic

- a. Huge
- b. Written

- c. Minute
  - d. Cramped
- 

21. In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word. (+2, -0.5)

Devoid

- a. Empty
  - b. Complete
  - c. Sufficient
  - d. Happy
- 

22. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option. (+2, -0.5)

The mind gives man the ability to understand, think and feel and is the \_\_\_\_\_ of the soul.

- a. Innovation
  - b. Temptation
  - c. Invention
  - d. Manifestation
- 

23. In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and (+2, -0.5)

indicate it by selecting the appropriate option.

Everyone is mad \_\_\_\_\_ each other.

- a. to
- b. for
- c. towards
- d. at

- 
24. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'. (+2, -0.5)

The British Council has brought the Museum of the Moon to India (1)/ to mark the last phase of the UK-India Year of Culture (2)/ and 70 year of the British Council in India. (3)/ No error (4)

- a. 1
- b. 2
- c. 3
- d. 4

- 
25. In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'. (+2, -0.5)

The bell rung (1)/ while I (2)/ was brushing my teeth. (3)/ No error (4)

- a. 1

b. 2

c. 3

d. 4

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## General Intelligence

26. In the following question, two statements are given each followed by two conclusions I and II. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements. (+2, -0.5)

**Statement I:** Medicines today have become an integral part of everyone's life.

**Statement II:** People undergo medicinal treatment at any age.

**Conclusion I:** Lifestyle has made us easy going and less caring for health.

**Conclusion II:** Medicines have become a compulsory part of one's life

- a. Only conclusion 2 follows
- b. Conclusion 1 and 2 both follow
- c. Neither 1 nor 2 follows
- d. Only conclusion 1 follows

27. Select the related word from the given alternatives. (+2, -0.5)

Rickets : Bone :: Thalassemia : ?

- a. Brain
- b. Kidney
- c. Blood
- d. Liver

**28.** Select the related word/letters/number from the given alternatives. (+2, -0.5)

FG : 13 :: UV : ?

- a. 45
  - b. 55
  - c. 21
  - d. 43
- 

**29.** Select the odd word from the given alternatives. (+2, -0.5)

- a. Light pen
  - b. Monitor
  - c. Printer
  - d. Speaker
- 

**30.** Select the related word/letters/number from the given alternatives. (+2, -0.5)

543 : 12 :: 764 : ?

- a. 25
  - b. 17
  - c. 23
  - d. 16
-

31. Select the odd word/letters/number/number pair from the given alternatives. (+2, -0.5)

- a. PT
- b. DH
- c. VZ
- d. KN

32. Select the odd word/letters/number/number pair from the given alternatives. (+2, -0.5)

- a. 190
- b. 149
- c. 197
- d. 191

33. Select the odd word/letters/number/number pair from the given alternatives. (+2, -0.5)

- a. 363
- b. 297
- c. 253
- d. 487

34. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. (+2, -0.5)

Triangle, Square, Pentagon, ?

- a. Decagon
- b. Heptagon
- c. Octagon
- d. Hexagon

35. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. (+2, -0.5)

200, ?, 50, 25, 12.5

- a. 123
- b. 225
- c. 100
- d. 198

36. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. (+2, -0.5)

40, 70, 130, 220, ?

- a. 425
- b. 430

c. 150

d. 340

- 
37. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. (+2, -0.5)

DFE, GIH, JKL, ?

a. LTS

b. IJK

c. MON

d. PRS

- 
38. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. (+2, -0.5)

IJ, MN, RS, ?

a. NM

b. BA

c. OP

d. XY

- 
39. If the tenth day of a month having 30 days is Tuesday, then what day of the week will the last day of the same month be? (+2, -0.5)

a. Monday

- b. Friday
  - c. Wednesday
  - d. Sunday
- 

40. Arrange the given words in the sequence in which they occur in the dictionary. (+2, -0.5)

- i. Derogate
  - ii. Dictum
  - iii. Dictate
  - iv. Dictionary
- a. iv, ii, i, iii
  - b. iii, iv, ii, i
  - c. iv, iii, i, ii
  - d. i, iii, iv, ii
- 

41. In a certain code language, "INTERVIEW" is written as "VIEWRINTE" How is "PROTECT" written in that code language? (+2, -0.5)

- a. ECTTPRO
  - b. ETCTPRO
  - c. ECTTPOR
  - d. CETTPRO
-

42. In the following question, select the missing number from the given series. (+2, -0.5)

|    |    |    |
|----|----|----|
| 54 | 9  | 45 |
| 61 | 12 | 49 |
| 45 | 10 | ?  |

- a. 45
- b. 10
- c. 35
- d. 50

43. If "A" denotes "added to", "C" denotes "divided by", "D" denotes "multiplied by" and "B" denotes "subtracted from", then  $192 \text{ C } 2 \text{ D } 5 \text{ B } 8 \text{ A } 6 = ?$  (+2, -0.5)

- a. 402
- b. 495
- c. 478
- d. 132

44. In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it? (+2, -0.5)

x\_za\_c\_yzab\_

- a. ybba
- b. ybxc
- c. bycx
- d. Cccx

---

45. A watch shows 4:30 AM. If the minute hand is pointing towards north, then which direction is the hour hand pointing to? (+2, -0.5)

- a. East
- b. South
- c. North-west
- d. South-west

---

46. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix – I are numbered from 0 to 4 and that of Matrix – II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example, 'N' can be represented by 21, 67 etc. and 'R' can be represented by 66, 57 etc. Similarly, you have to identify the set for the word 'HUMP'. (+2, -0.5)

| Matrix-I |   |   |   |   |   | Matrix-II |   |   |   |   |   |
|----------|---|---|---|---|---|-----------|---|---|---|---|---|
|          | 0 | 1 | 2 | 3 | 4 |           | 5 | 6 | 7 | 8 | 9 |
| 0        | H | R | A | N | B | 5         | H | M | U | I | Q |
| 1        | W | U | N | H | L | 6         | X | R | N | W | P |
| 2        | E | N | S | H | O | 7         | C | S | Y | E | U |
| 3        | N | Y | P | O | M | 8         | S | N | M | M | S |
| 4        | H | M | O | F | A | 9         | G | B | E | R | U |

a. 23, 57, 41, 88

b. 13, 11, 34, 69

c. 32, 02, 11, 86

d. 00, 99, 87, 33

47. Introducing a girl a boy says, "She is the only daughter of the wife of my brother-in-law". How is the girl related to the boy? (+2, -0.5)

a. Sister-in-law

b. Mother

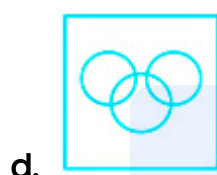
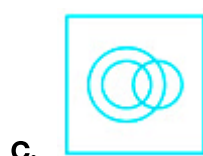
- c. Daughter
- d. Niece

48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure? (+2, -0.5)

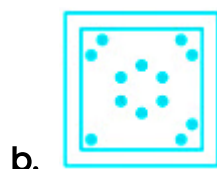
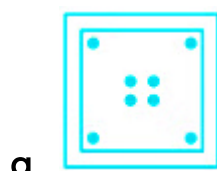
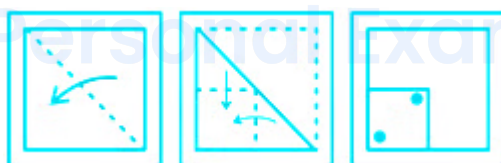


49. Identify the diagram that best represents the relationship among the given classes. (+2, -0.5)

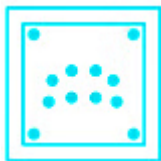
Ministers, Politicians, Actor



50. A piece of paper is folded and punched as shown below in the question figures. Form the given answer figures, indicate how it will appear when opened. (+2, -0.5)



c.



d.



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## Your Personal Exams Guide

## Quantitative Aptitude

51. If  $11a + 11b = 29282$  find the value of  $(a + b)/4$  (+2, -0.5)

- a. 661.5
- b. 663.5
- c. 665.5
- d. 667.5

52. If the sum of two numbers is 25 and their product is 156. Find the larger number. (+2, -0.5)

- a. 11
- b. 12
- c. 13
- d. 15

53. If  $16^{2x+6} = 64$ , then what is the value  $x^1$  (+2, -0.5)

- a.  $-9/4$
- b.  $9/4$
- c.  $-18/4$
- d.  $18/4$

54. Find the value of 'x', if  $8^x \times 32^x = 2^{10}$ .

(+2, -0.5)

- a.  $1/8$
- b.  $10/8$
- c.  $20/8$
- d.  $30/8$

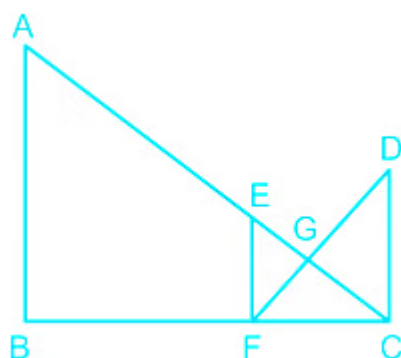
55. The radius of the two concentric circles is 5 cm and 13 cm. The tangent to the smaller circle is the chord to the greater circle. What is the length (in cm) of that chord?

(+2, -0.5)

- a. 12
- b. 20
- c. 22
- d. 24

56. AB, EF and CD are the parallel lines as shown in the adjoining figure below. The dimension of the sides  $GE = 6$  cm,  $GC = 12$  cm and  $DC = 16$  cm. Calculate the length of EF.

(+2, -0.5)



- a. 4
- b. 8
- c. 10
- d. 12

---

57. If P is 50% less than Q and Q is 70% more than 640, then what is the value of P? (+2, -0.5)

- a. 768
- b. 544
- c. 618
- d. 448

---

58. If  $x : y = y : z$ , then what is the value of  $x^3 : y^3$ ? (+2, -0.5)

- a.  $x^2 : yz$
- b.  $x^3 : y^2 z$
- c.  $x : z$
- d.  $z^2 : xy$

---

59. In an amalgam, mercury and silver are in the ratio of 3 : 7. In the second amalgam, the ratio of same elements is 1 : 9. If equal quantities of these two amalgam are mixed to form a new amalgam, then what will be the ratio of both of these elements in the new amalgam? (+2, -0.5)

- a. 1 : 4
  - b. 7 : 81
  - c. 4 : 15
  - d. 2 : 7
- 

60. Average of the weight of 138 students of a school is 45 kg. If the average weight of the boys is 49 kg and the average weight of the girls is 25 kg, then what will be the respective ratio of the total weight of boys and the total weight of girls? (+2, -0.5)

- a. 5 : 43
  - b. 49 : 5
  - c. 3 : 49
  - d. 7 : 1
- 

61. What is the difference (in Rs) between the compound interest (compounded annually) and simple interest for 3 years on a principal of Rs 2500 at the rate of 30% per annum? (+2, -0.5)

- a. 742.5
  - b. 624.5
  - c. 714.5
  - d. 825.25
-

62. A person sells a pen at 15% profit. If he had bought it at 7% less price and sold it for Rs. 250 more, then he would have gained 25%. What is the cost price (in Rs) of the pen? (+2, -0.5)

- a. 20000
- b. 18000
- c. 25000
- d. 23000

63. The marked price of a chair is 75% more than its cost price. What maximum discount percentage can be offered by the shopkeeper to sell his chair at no profit or no loss? (+2, -0.5)

- a. 42.85
- b. 36.58
- c. 60
- d. 52

64. What is the square root of the sum of first 36 odd natural numbers? (+2, -0.5)

- a. 6
- b. 36
- c. 64
- d. 72

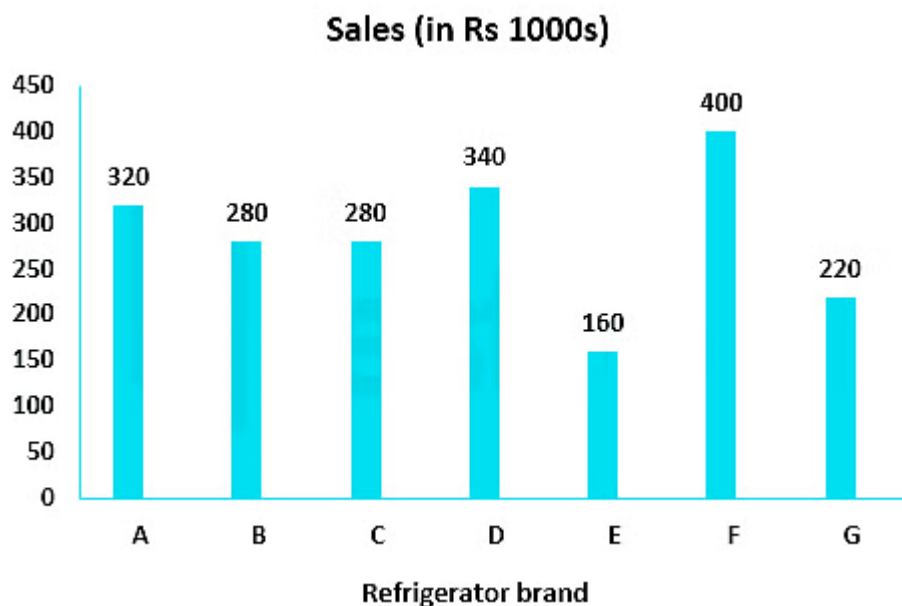
65. 21 workers can repair a road in 40 days. If they are joined by 7 more workers, then in how much time (in days) the road can be repaired? (+2, -0.5)

- a. 27
- b. 28
- c. 30
- d. 32

66. Two trains are moving towards each other with the speed of 25 km/hr and 83 km/hr respectively. What will be the distance (in metres) between the trains one second before collide? (+2, -0.5)

- a. 32
- b. 35
- c. 30
- d. 40

67. The bar graph shows 1 month's sales figures of different brands of refrigerator of a certain electronics store in Rs. 1000s. Study the diagram and answer the following questions. (+2, -0.5)



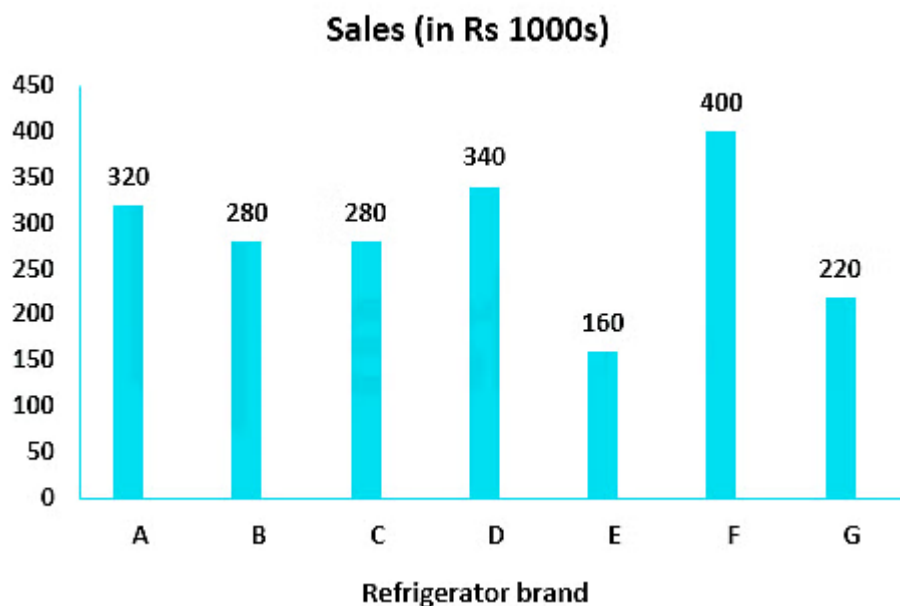
Sales of which refrigerator brand were the second highest?

- a. G
- b. D
- c. A
- d. C

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68. The bar graph shows 1 month's sales figures of different brands of refrigerator of a certain electronics store in Rs. 1000s. Study the diagram and answer the following questions.

(+2, -0.5)



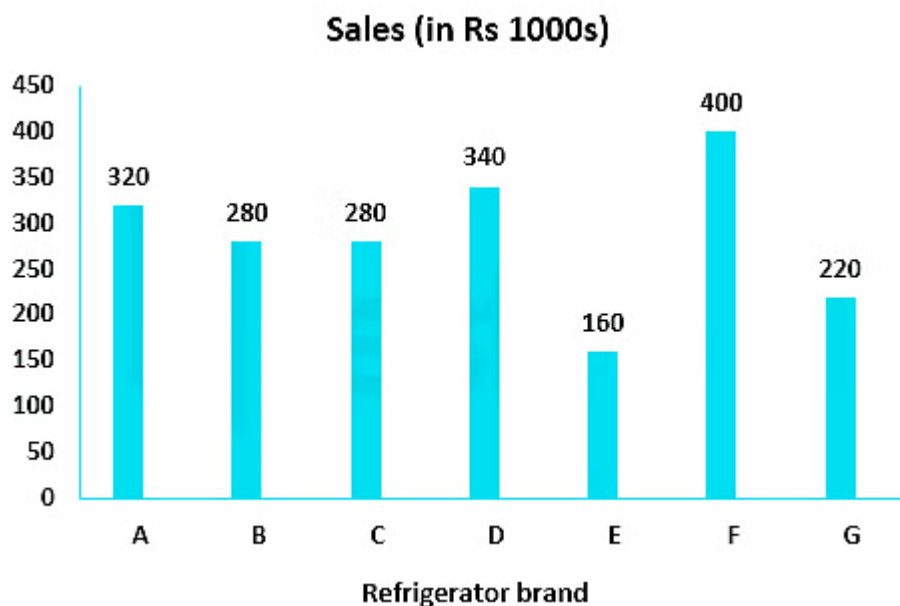
What is the ratio of sales of brand B to that of brand E?

- a. 7 : 4
- b. 4 : 7
- c. 4 : 1
- d. 1 : 4

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69. The bar graph shows 1 month's sales figures of different brands of refrigerator of a certain electronics store in Rs. 1000s. Study the diagram and answer the following questions.

(+2, -0.5)



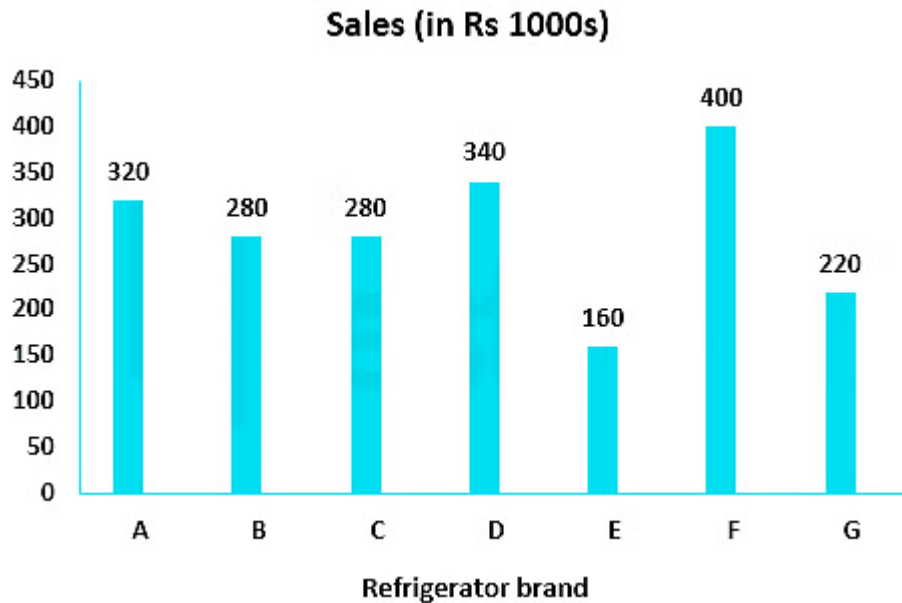
Sales of brand F was greater than that of brand E by -----.

- a. 1.5 times
- b. 0.5 times
- c. 2.4 times
- d. 0.6 times

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70. The bar graph shows 1 month's sales figures of different brands of refrigerator of a certain electronics store in Rs. 1000s. Study the diagram and answer the following questions.

(+2, -0.5)



If the sales figures are exclusive of tax then at the rate of 5% tax how much is the tax to be paid (in Rs) on the sales of all the 7 brands of refrigerators?

- a. 10000
- b. 1000000
- c. 100000
- d. 1000

71. The length of the diagonal and the breadth of a rectangle is 29 cm and 20 cm respectively. Calculate its area (in  $\text{cm}^2$ ). (+2, -0.5)

- a. 840
- b. 160
- c. 320
- d. 420

---

72. If the area of a semi-circle is  $308 \text{ cm}^2$ , then find its radius (in cm). (+2, -0.5)

- a. 28
- b. 10
- c. 20
- d. 14

---

73. The volume of a hemisphere is  $718.67 \text{ cm}^3$ . Find its diameter (in cm). (+2, -0.5)

- a. 7
- b. 28
- c. 14
- d. 21

---

74. What is the value of  $(\sec 45^\circ + 1/\sqrt{3})$ ? (+2, -0.5)

- a.  $(2 + \sqrt{3})/2\sqrt{3}$
- b.  $(2 + 2\sqrt{3})/\sqrt{3}$
- c.  $(2 + 2\sqrt{3})/3$
- d.  $(\sqrt{6} + 1)/\sqrt{3}$

---

75. In  $\triangle ABC$  measure of angle B is  $90^\circ$ . If  $\cos A = 8/17$ , and  $AB = 4 \text{ cm}$ , then what is the length (in cm) of side BC? (+2, -0.5)

- a. 8.5
- b. 7.5
- c. 5
- d. 6

Prepp

Your Personal Exams Guide

## General Awareness

76. Most of the sculptures in 'Rani ki Vav' are in devotion to \_\_\_\_\_. (+2, -0.5)

- a. Shiva
- b. Ganesha
- c. Mahavira
- d. Vishnu

77. For the movie "Jab We Met", Kareena Kapoor won the Filmfare Award for \_\_\_\_\_ (+2, -0.5)

- a. Best Supporting Actress
- b. Best Female Debut
- c. Lifetime Achievement
- d. Best Actress

78. Which vitamin is essential for the absorption of calcium? (+2, -0.5)

- a. Vitamin E
- b. Vitamin A
- c. Vitamin D
- d. Vitamin C

79. Cockroaches belongs to the phylum \_\_\_\_\_. (+2, -0.5)

- a. Echinodermata
  - b. Arthropoda
  - c. Platyhelminthes
  - d. Mollusca
- 

80. Chemical formula of Ozone is \_\_\_\_\_. (+2, -0.5)

- a.  $\text{H}_2\text{O}_2$
  - b.  $\text{O}_2$
  - c.  $\text{O}_3$
  - d.  $\text{NH}_3$
- 

81. Atomic number of which of the following elements is greater than that of Barium. (+2, -0.5)

- a. Iodine
  - b. Silver
  - c. Bromine
  - d. Gold
- 

82. Commonly used abbreviation OS in computer science stands for? (+2, -0.5)

- a. Operating System
- b. Operating Search

- c. Optimization System
  - d. Optimization Search
- 

83. Who traveled throughout South Asia to teach Jain philosophy? (+2, -0.5)

- a. Siddhartha Gautama
  - b. Mahavira
  - c. MakkhaliGosala
  - d. Chanakya
- 

84. Mr. Shah is willing to spend up to Rs. 50 lakh for a German luxury car. Luckily he finds a dealer who says the price of the car is Rs. 42 lakh. Mr. Shah convinces the dealer to give him a 5% discount on the said price. Mr. Shah's consumer surplus is (+2, -0.5)

- a. Rs. 8 lakh
  - b. Rs. 10.1 lakh
  - c. Rs. 2.1 lakh
  - d. Rs. 39.9 lakh
- 

85. Customs duty is an instrument of \_\_\_\_\_. (+2, -0.5)

- a. Fiscal policy
- b. Monetary policy
- c. Trade policy

d. Revenue policy

---

86. Radon is formed in the alpha decay of \_\_\_\_\_. (+2, -0.5)

- a. radium
  - b. uranium
  - c. actinium
  - d. thorium
- 

87. The circular depression containing a volcanic vent is called? (+2, -0.5)

- a. Crater
  - b. Smog
  - c. Crust
  - d. Delta
- 

88. Beijing is the capital city of \_\_\_\_\_. (+2, -0.5)

- a. Iraq
  - b. Thailand
  - c. China
  - d. Russia
- 

89. Taj Mahal was built in \_\_\_\_\_. (+2, -0.5)

- a. 14th Century
  - b. 15th Century
  - c. 16th Century
  - d. 17th Century
- 

90. Sikh Khalsa Army was formed under the rule of \_\_\_\_\_. (+2, -0.5)

- a. Sher Shah
  - b. Rana Pratap
  - c. Hemu Vikramaditya
  - d. Ranjit Singh
- 

91. Telephone was invented in which decade? (+2, -0.5)

- a. 1670s
  - b. 1770s
  - c. 1870s
  - d. 1970s
- 

92. Which device is used to limit electric current in a circuit? (+2, -0.5)

- a. Fuse
- b. Resistor

- c. Capacitor
  - d. Both 1 and 2
- 

93. If a physical quantity has the units - ampere per meter squared, then what are it's dimensions? (+2, -0.5)

- a.  $[AL^{-2}]$
  - b.  $[IM^{-2}]$
  - c.  $[IL^{-2}]$
  - d.  $[AM^{-2}]$
- 

94. Who conducts oath of office to the President of India? (+2, -0.5)

- a. The Prime Minister
  - b. The Chief Justice
  - c. Lok Sabha Speaker
  - d. Rajya Sabha Chairman
- 

95. The number of parliamentary seats (Rajya Sabha) of Himachal Pradesh is ----- (+2, -0.5)

- a. 3
- b. 5
- c. 11

d. 16

---

96. Which sport is called the Gentleman's Game? (+2, -0.5)

- a. Golf
  - b. Baseball
  - c. Cricket
  - d. Snooker
- 

97. Who is the author of "Rise of Kali: Duryodhana's Mahabharata"? (+2, -0.5)

- a. Anand Neelakantan
  - b. R. K. Narayan
  - c. Bharath Veeraraghavan
  - d. Sakshama Puri Dhariwal
- 

98. Pyrrhotite is an ore/mineral of (+2, -0.5)

- a. Lead
  - b. Nickel
  - c. Gold
  - d. Tin
- 

99. Which is the longest canal in the world? (+2, -0.5)

- a. Panama
  - b. Welland
  - c. Grand Canal
  - d. Corinth
- 

100. In fertilisation of a flower, the fertilised central cell will develop into (+2, -0.5)

-----.

- a. zygote
- b. embryo
- c. endosperm
- d. sperm

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## Answers

### 1. Answer: d

#### Explanation:

The correct answer is- '**valediction**'

#### ★ Key Points

- '**Valediction**' is a '**noun**' and it means '**the action of saying farewell.**'
  - *Example: He lifted his hand and spread his palm in **valediction**.*

*Here, the correct spelling is- valediction.*

---

### 2. Answer: d

#### Explanation:

The correct sentence is- '**CAB**'

#### ★ Key Points

- Clearly, In the started sentence does not end with a **preposition** or **determiner** .  
so we easily eliminate **options 1 & 2.**
- And **option 3** does **not** make a **meaningful** sentence according to the **context** of the question.

*Hence, **option 4** is the **most appropriate** answer here.*

---

### 3. Answer: d

#### Explanation:

The correct option is- 'No improvement'

★ Key Points

- In the given question there is **no improvement**.
- Because we know that 'you' is a **plural** subject and it will take '**plural helping verb**' with it so that '**have been**' is correct here.

*Hence the correct sentence is- You have been a very good girl.*

★ Additional Information

- The given sentence is in the **present perfect**.
- **Structure:** Sub + has/have + V<sub>3</sub> + object
  - *Example: Ram has gone to the market.*

---

4. Answer: b

Explanation:

The correct option is- '**were trekking**'

★ Key Points

- Using '**were trekking**' in the place of '**is trekking**'.
- We know that the given sentence is in the **past form** so we can **not use** it in the **present continuous**.
- '**We**' is a **plural subject** here so '**were**' will be used with it.

*Hence the correct sentence is- There was hardly any traffic and my father told us the history of the place we **were trekking** to.*

★ Additional Information

- **Past continuous:** The **past continuous** describes **actions or events** in a time before now, which **began** in the **past** and were **still going** on when another event occurred.

- **Structure:** Sub + was/were + V<sub>1</sub> + ing + object
  - *Example: Harish was going to the market.*

## 5. Answer: c

### Explanation:

The correct option is- 'Vulnerable'

#### ★ Key Points

- 'Vulnerable' is an **adjective** and it means 'susceptible to physical or emotional attack or harm.'
  - *Example: we were in a vulnerable position.*

*Hence the correct word is-Vulnerable*

Let's find out the **meaning** of other **options**:

| WORDS                                 | MEANING                                                                        |
|---------------------------------------|--------------------------------------------------------------------------------|
| <b>Robust</b> ( <i>adjective</i> )    | <i>strong and healthy; vigorous.</i>                                           |
| <b>Tenacious</b> ( <i>adjective</i> ) | <i>tending to keep a firm hold of something; clinging or adhering closely.</i> |
| <b>Stout</b> ( <i>adjective</i> )     | <i>a person rather fat or of heavy build.</i>                                  |

## 6. Answer: a

### Explanation:

The correct answer is- 'Mausoleum'

#### ★ Key Points

- 'Mausoleum' is a **noun** and it means 'a stately or impressive building housing a tomb or group of tombs.'
  - *Example: The cathedral was built in 1517 as a royal **mausoleum**.*

Hence the correct word is- *Mausoleum*

Let's find out the **meaning** of the other **options** :

| WORDS                | MEANING                                                                                                                                                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shanty</b> (noun) | <i>a small, crudely built shack.</i>                                                                                                                      |
| <b>Hovel</b> (noun)  | <i>a small squalid or simply constructed dwelling.</i>                                                                                                    |
| <b>Tepee</b> (noun)  | <i>a portable conical tent made of skins, cloth, or canvas on a frame of poles, used by North American Indians of the Plains and Great Lakes regions.</i> |

## 7. Answer: b

### Explanation:

The correct answer is- 'Make every effort to achieve something, especially to be fair or helpful.'

### ★ Key Points

- 'Bend over backwards' is an **idiom** and it means 'make every effort to achieve something, especially to be fair or helpful.'
  - *Example: We have **bent over backwards** to ensure a fair trial for the defendants.*

Hence the **option 2** is giving the **correct meaning** of the given idiom **Bend over backwards**

## 8. Answer: a

### Explanation:

The correct answer is- 'Someone who seems unfriendly and who does not share his feelings.'

#### ★ Key Points

- 'A cold fish' is an **idiom** and it means 'someone who seems unfriendly and who does not share their feelings'
  - **Example:** The manager decided not to hire Bill as the store greeter because he came across like a **cold fish** during the interview.

Hence the **option 1** gives the **correct meaning** of the idiom **cold fish**.

---

### 9. Answer: d

### Explanation:

The correct answer is- 'no'

#### ★ Key Points

- On looking at the above passage, we observe that it is based upon how art and literature are being suppressed by social media now a days. But, the author does not deny the positive effects of social media but also contradicts by saying that such great people had emerged only by selecting them in personal.
- Here, determine 'no' should be used. Because, the conjunction '**neither....nor**' is used together.
- So that **options 2 & 3** are **eliminated** and the pronoun '**none**' is not directly used with a noun, it is used either as '**none of**' or with an **article**.

Hence, **option 4** is the **most appropriate** answer here.

---

### 10. Answer: a

### Explanation:

The correct answer is- '**Creativity**'

#### ★ Key Points

- Since the sentence starts with a **subject** . So, it should probably be a **noun** or **pronoun** .
- So that **creativity** goes well with the **blank** since the passage is based on the impact of social media on the **creativity** of a person.

Hence *option 1* is the *most appropriate* answer here

---

### 11. Answer: b

### Explanation:

The correct answer is- '**and**'

#### ★ Key Points

- Using '**and**' in the **blank** space to make the sentence **meaningful** .
- If we use the preposition '**for**' , then it should be followed by a **noun/pronoun** . But, '**die**' is a **verb** so we can say **option 3** is incorrect. Here, conjunction should be placed in a blank.
- Since '**neither.....nor**' is used in **pair** , but no such pair is indicated in the **context** , hence, **options 1 & 4** are **eliminated** .

Thus, *option 2* is the *most appropriate* answer here.

---

### 12. Answer: d

### Explanation:

The correct answer is- 'music'

★ Key Points

- Here 'art' and 'literature' are nouns. So, to go along with them, 'music' should be used.

Hence **option 4** is the **most appropriate** answer here.

---

13. Answer: c

**Explanation:**

The correct answer is- 'may'

★ Key Points

- Conjunctions are used to connect **nouns**, **pronouns**, **verbs**, etc. But, here no such connection is shown in the sentence. Thus, use **modal verb** 'may'.

Hence **option 3** is the **most appropriate** answer here.

---

14. Answer: a

**Explanation:**

The correct answer is- 'Accommodate'

★ Key Points

- 'Accommodate' is a 'verb' and it means '(of a building or other area) provide lodging or sufficient space for.'
  - *Example: the cottages accommodate up to six people.*

Hence the correct spelling is- Accommodate.

---

### ★ Additional Information

- Always remember '**Accommodate**' consists two 'c' and two 'm'.

## 15. Answer: d

### Explanation:

The correct answer is- '**She asked if it was snowing.**'

### ★ Key Points

- The sentence is in **Direct speech** and it is an **interrogative statement**.
- When **converting** in Indirect speech, it becomes an **assertive statement**.
- **When we convert from direct to indirect speech, we make the following changes:**
  - **Quotation marks** are **omitted** and the sentence **ends with a full stop**.
  - The **tense** of the **verb**, in the reported speech involving an **order, request, and instruction** does **not undergo** any **change** during the conversion from direct to indirect mode. This is also true if the statement is a **universal truth**.
  - If the **reporting verb** is in the **present tense**, it does **not undergo** any **change**.
  - When the reporting or **principal verb** is in the **present tense**, all present tenses of the direct are **changed** into the corresponding **past tenses**.
  - Words expressing **nearness in time or place** are generally converted into words expressing **distance**. For eg. **now** becomes **then**, **today** becomes **that day**, **yesterday** becomes **the previous day**, **this** becomes **that**, etc.
  - In reporting **commands and requests**, the **verb expressing command or request** is **added** and the **imperative** is changed into the **infinitive**.
  - In reporting **questions** the **verbs like asked inquired** are **added**
  - If the question in inverted commas starts with a **helping verb**, then conjunction **if/whether** is used.

- In reporting **exclamations and wishes** , the **verbs expressing exclamation or wish** are **added** .
- When we convert a sentence from the direct to the indirect mode (especially for a sentence **ending** with a **mark of interrogation** ), we **reverse** the **subject-verb placement**. In **direct** sentences, we have the **verb before the subject** ; while in **indirect**, the **verb follows the subject**.

*Following the rules, the correct sentence that we get is- She asked if it was snowing.*

## 16. Answer: b

### Explanation:

The correct answer is- 'Pizza was eaten ravenously by him.'

#### ★ Key Points

- In the given question the sentence 'He ate pizza ravenously.' is in '**Active voice**' which is in the **past indefinite** and we know that after converted this sentence into '**Passive voice**' the tense will **same** which also should in **past indefinite** .
- **Past indefinite:**
  - *Sub + V2 + object (Active)*
  - *Object + was/were + V3 + by + subject (Passive)*
- **Example:**
  - *Reema **cleaned** the floor (Active)*
  - *The floor **was cleaned** by Reema (Passive)*

*Hence the correct answer is- Pizza was eaten ravenously by him.*

## 17. Answer: d

### Explanation:

The correct answer is- 'QRP'

★ Key Points

- In the started sentence which is ended with the preposition '**of**' so it will take the **objective case** after it so that the **noun** will come and which is mentioned in the 'Q'.
- According to the sense of the paragraph after '**Q**' , '**R**' will come, and then '**P**'.

Hence **option 4** is the **most appropriate** answer here.

18. Answer: b

Explanation:

The correct answer is- '**Ignorant**'

★ Key Points

- '**Scholarly**' is an **adjective** and it means '**involving or relating to serious academic study**' and the **opposite** word of '**Scholarly**' is '**Ignorant**'.
- **Example:** He was told constantly that he was **ignorant** and stupid.

Hence the **correct opposite** word is **Ignorant**.

| WORDS                                | MEANING                                                                                                           |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Learned</b> ( <i>adjective</i> )  | (of a person) having acquired much knowledge through study.                                                       |
| <b>Cultured</b> ( <i>adjective</i> ) | characterized by refined taste and manners and good education.                                                    |
| <b>Trained</b> ( <i>adjective</i> )  | having been taught a particular skill or type of behavior through practice and instruction over a period of time. |

19. Answer: d

## Explanation:

The correct answer is- '**Comprehensible**'

### ★ Key Points

- '**Baffling**' is an **adjective** and it means '**impossible to understand; perplexing**' so the opposite word of '**Baffling**' is '**Comprehensible**'.
- **Example:** *The crime is a **baffling** mystery for the police.*

Hence the **correct opposite** word is **Comprehensible**.

| WORDS                                  | MEANING                                       |
|----------------------------------------|-----------------------------------------------|
| <b>Puzzling</b> ( <i>adjective</i> )   | <i>causing one to be puzzled; perplexing.</i> |
| <b>Unclear</b> ( <i>adjective</i> )    | <i>not easy to see, hear, or understand.</i>  |
| <b>Mystifying</b> ( <i>adjective</i> ) | <i>utterly bewildering or perplexing.</i>     |

20. Answer: a

## Explanation:

The correct answer is- '**Huge**'

### ★ Key Points

- '**Monolithic**' is an **adjective** and it means '**formed of a single large block of stone**' so the **similar** word of '**Monolithic**' is '**Huge**' .
  - **Example:** later Byzantine columns were **monolithic** and usually made of marble.

Hence the **correct similar** word is **Huge**.

| WORDS   | MEANING                                                                                                          |
|---------|------------------------------------------------------------------------------------------------------------------|
| Written | mark (letters, words, or other symbols) on a surface, typically paper, with a pen, pencil, or similar implement. |
| Minute  | a summarized record of the proceedings at a meeting.                                                             |
| Cramped | restrict or inhibit the development of.                                                                          |

## 21. Answer: a

### Explanation:

The correct answer is- 'Empty'

#### ★ Key Points

- 'Devoid' is an **adjective** and it means 'entirely lacking or free from.' so that the similar word of 'Devoid' is 'Empty'.
  - Example: Lisa kept her voice **devoid** of emotion.*

Hence the **correct similar** word is **Empty**.

| WORDS      | MEANING                                        |
|------------|------------------------------------------------|
| Complete   | having all the necessary or appropriate parts. |
| Sufficient | enough; adequate.                              |
| Happy      | feeling or showing pleasure or contentment.    |

## 22. Answer: d

### Explanation:

The correct answer is- 'manifestation'

★ Key Points

- Using 'Manifestation' in the **blank space** of the given question.
- 'Manifestation' is a **noun** and it means 'an event, action, or object that clearly shows or embodies something, especially a theory or an abstract idea'.
  - **Example** : the first obvious *manifestations* of global warming
- The words given in the other options **do not fulfill** the meaning of the sentence according to the context of the question.

Hence **option 4** is the **most suitable option** here.

| WORDS      | MEANING                                                           |
|------------|-------------------------------------------------------------------|
| Innovation | the action or process of innovating.                              |
| Temptation | the desire to do something, especially something wrong or unwise. |
| Invention  | the action of inventing something, typically a process or device. |

23. Answer: d

**Explanation:**

The correct answer is- 'at'

★ Key Points

- Using 'at' is used in the place of the blank space of the given question.
- 'At' is a **preposition** that means **to refer to a position or location which we see as a point**.
  - **Example**: I was sitting **at** my desk.



Hence **option 4** is the **most appropriate** answer here.

Additional Information

- 'To' and 'Towards' are **prepositions** to describe **movement**.

- Let's see some example:
  - Jane is walking **to** the library.
  - Sarah is walking **towards** the library.

---

## 24. Answer: c

### Explanation:

The correct answer is- 'error lies in the part-3'

#### ★ Key Points

- Using '**years**' in place of '**year**' to make the sentence correct.
- **70** is a plural number here and after it, we need a plural noun so change '**year**' into '**years**'.

*Hence the correct sentence is- The British Council has brought the Museum of the Moon to India to mark the last phase of the UK-India Year of Culture and 70 **years** of the British Council in India.*

---

## 25. Answer: a

### Explanation:

The correct answer is- 'error lies in the part-1'

#### ★ Key Points

- Using '**rang**' in place of '**rung**' makes the sentence correct.
- Structure: '**simple past + while + past continuous**' or '**- While + past continuous + simple past**' - to indicate that a longer action in the past was interrupted by shorter action.
  - *Example: Someone **stole** his car While Punit was sleeping last night*
- Ring(1st form), Rang(2nd form), and Rung(3rd form) (*These are the three forms of 'Ring'*)

*Hence the correct sentence is- The bell rang while I was brushing my teeth.*

---

26. Answer: c

**Explanation:**

**Statement I:** Medicines today have become an integral part of everyone's life.

**Statement II .** People undergo medicinal treatment at any age.

**Conclusion I:**

Lifestyle has made us easy going and less caring for health → It does not follow from any of the given statements.

**Conclusion II:**

Medicines have become a compulsory part of one's life → 'Integral' does not mean 'compulsory', hence conclusion 2 does not follow.

Hence neither of the conclusions follow.

---

27. Answer: c

**Explanation:**

People with 'Rickets' have weak and soft 'bones'. Similarly, 'Thalassemia' is a 'blood' disorder.

Hence, the answer is 'blood'.

---

28. 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 logic followed here is:

The positional values of the alphabets are added together to get the numeric value.

Positional value of F is 6 and that of G is 7.

Therefore,  $6 + 7 = 13$

Similarly,

Positional value of U is 21 and that of V is 22.

Therefore,  $21 + 22 = 43$

Hence, answer is '43'.

29. Answer: a

Explanation:

Except 'Light Pen' all other are output devices.

Hence, the correct answer is 'Light Pen'.

30. Answer: b

Explanation:

The logic followed here is:

$$543 : 12 \rightarrow 5 + 4 + 3 = 12$$

Similarly,

$$764 \rightarrow 7 + 6 + 4 = 17$$

Hence, answer is '17'.

### 31. 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  |

Here the pattern of relation followed is:

1)  $PT \rightarrow P + 4 = T$

2)  $DH \rightarrow D + 4 = H$

3)  $VZ \rightarrow V + 4 = Z$

4)  $KN \rightarrow K + 3 = N$

Clearly, 'KN' is the odd one out.

### 32. Answer: a

**Explanation:**

The pattern/logic/rule followed here is:

Except '190' all other numbers are prime number.

Hence, '190' is the answer.

---

**33. Answer: d**

**Explanation:**

The pattern/logic/rule followed here is:

2<sup>nd</sup> number is the resultant of sum of 1<sup>st</sup> and 3<sup>rd</sup> number.

But, in 487  $\rightarrow 7 + 4 = 11 \neq 8$

Hence, '487' is the odd one out.

---

**34. Answer: d**

**Explanation:**

Triangle, Square, Pentagon belongs to polygon series.

Triangle is three-sided figure, Square is a four-sided figure, Pentagon is a five-sided figure.

Hence, next figure must be six sided.

Hexagon is six-sided figure.

Therefore, answer is 'Hexagon'.

---

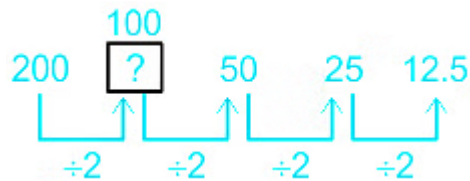
**35. Answer: c**

**Explanation:**

The pattern/logic/rule followed here is:

Each term is divided by 2 to get the next term.

Thus,



Thus the missing term is 100.

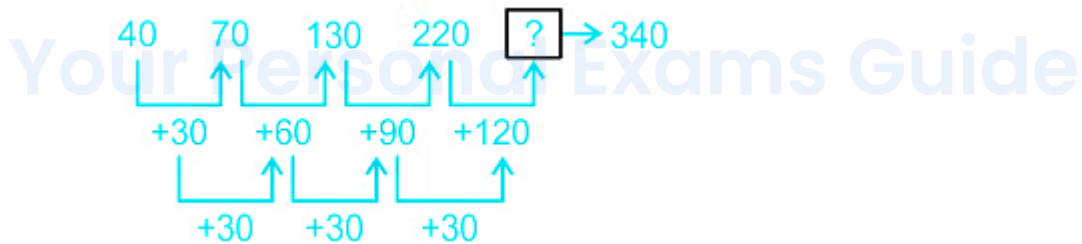
Hence, the correct answer is, "100".

36. Answer: d

Explanation:

The pattern/logic/rule followed here is:

Consecutive multiples of 30 are added to get the next term.



Hence, the correct answer is "340".

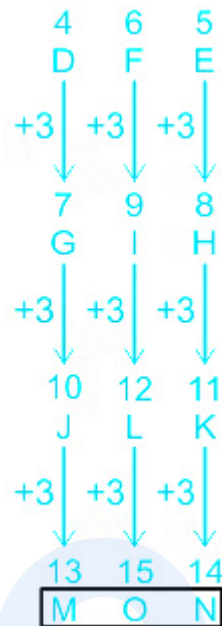
37. Answer: c

Explanation:

The positional value of the alphabet are shown in the table below,

The pattern/logic/rule followed here is:

Each letter of the term is shifted forward by 3 places to get the next term.



Hence, the correct answer is 'MON'.

38. Answer: d

Explanation:

The pattern/logic/rule followed here is:

$$I + 4 = M; M + 5 = R; R + 6 = X$$

$$J + 4 = N; N + 5 = S; S + 6 = Y$$

Hence, answer is 'XY'.

39. Answer: a

Explanation:

Given:

Tenth day of a month having 30 days is Tuesday  $\rightarrow 10^{\text{th}}$  is Tuesday

$10^{\text{th}} + 7^{\text{th}} \rightarrow 17^{\text{th}}$  is Tuesday

$17^{\text{th}} + 7^{\text{th}} \rightarrow 24^{\text{th}}$  is Tuesday

$25^{\text{th}} \rightarrow$  Wednesday

$26^{\text{th}} \rightarrow$  Thursday

$27^{\text{th}} \rightarrow$  Friday

$28^{\text{th}} \rightarrow$  Saturday

$29^{\text{th}} \rightarrow$  Sunday

$30^{\text{th}} \rightarrow$  Monday

Hence, the correct answer is "**Monday**".

---

40. Answer: d

Explanation:

i. Derogate

iii. Dictate

iv. Dictionary

ii. Dictum

Hence, the answer is 'i, iii, iv, ii'.

---

41. Answer: a

**Explanation:**

INTERVIEW  
VIEWRINTE

Similarly,

PROTECT  
ECTTPRO

Hence, answer is 'ECTTPRO'.

**42. Answer: c**

**Explanation:**

The logic followed here is:

Logic = (First number in the row - Second number in the row = Third number)

1<sup>st</sup> row:  $54 - 9 = 45$

2<sup>nd</sup> row:  $61 - 12 = 49$

Similarly,

3<sup>rd</sup> row:  $45 - 10 = 35$

Hence, the correct answer is "35".

**43. Answer: c**

**Explanation:**

|          |   |   |   |   |
|----------|---|---|---|---|
| Alphabet | A | C | D | B |
| Meaning  | + | ÷ | × | - |

Given equation:  $192\ C\ 2\ D\ 5\ B\ 8\ A\ 6 = ?$

On replacing the alphabets:

$$192 \div 2 \times 5 - 8 + 6 = ?$$

$$\rightarrow 96 \times 5 - 2$$

$$\rightarrow 480 - 2$$

$$\rightarrow 478$$

Hence, answer is '478'.

#### 44. Answer: b

#### Explanation:

Given:  $x\_za\_c\_yzab\_$

Let's divide the above pattern in 4 groups each consisting of 3 alphabets.

$x\_z / a\_c / \_yz / ab\_$

Clearly,

$x\_z \rightarrow y$  will complete the series to form 'xyz'

$a\_c \rightarrow b$  will complete the series to form 'abc'

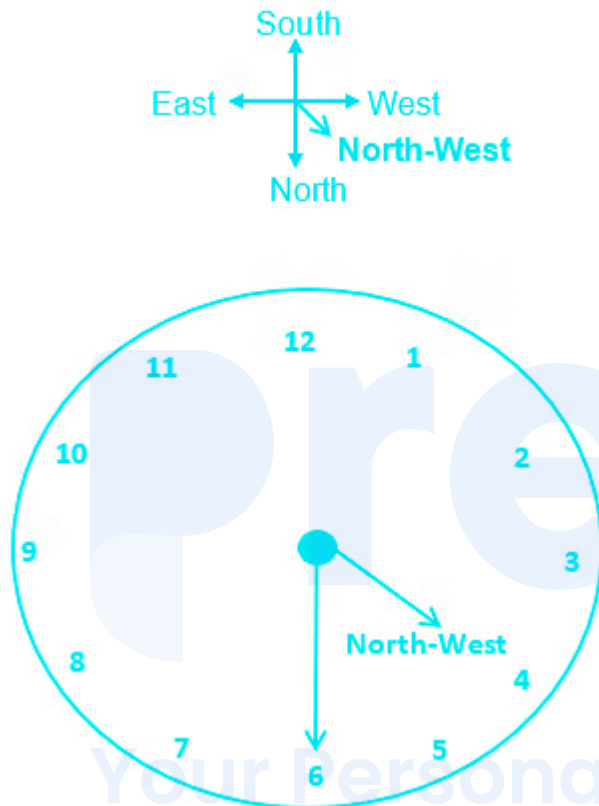
$\_yz \rightarrow x$  will complete the series to form 'xyz'

$ab\_ \rightarrow c$  will complete the series to form 'abc'

Hence, answer is 'ybx'.

45. Answer: c

Explanation:



Hence, answer is 'North-West'.

46. Answer: b

Explanation:

1) 23, 57, 41, 88 → H, U, M, M

2) 13, 11, 34, 69 → H, U, M, P

3) 32, 02, 11, 86 → P, A, U, N

4) 00, 99, 87, 33 → H, U, M, O

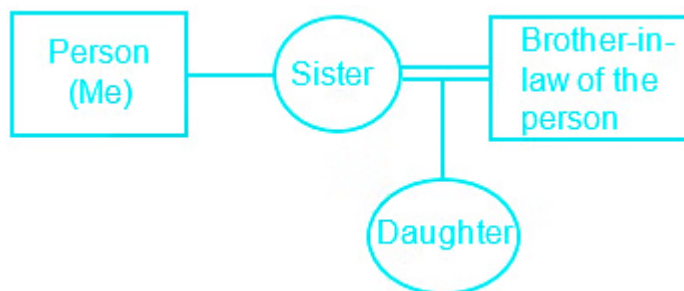
Hence, answer is '13, 11, 34, 69'.

47. Answer: d

Explanation:

| Symbol in Diagram | Meaning                    |
|-------------------|----------------------------|
| ○                 | Female                     |
| □                 | Male                       |
| =                 | Married Couple             |
| —                 | Siblings                   |
|                   | Difference of A Generation |

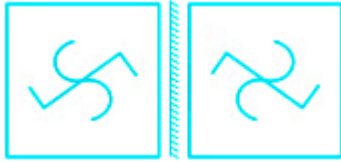
She is the only daughter of the wife of my brother-in-law → Wife of the person's brother-in-law is the sister of the person itself. Daughter of the person's sister is 'niece' of the person.



Hence, answer is 'niece'.

48. Answer: b

**Explanation:**



Hence, answer is option '2'.

**49. Answer: c**

**Explanation:**

Ministers, Politicians, Actor → A minister is a politician and an actor can be a politician too.

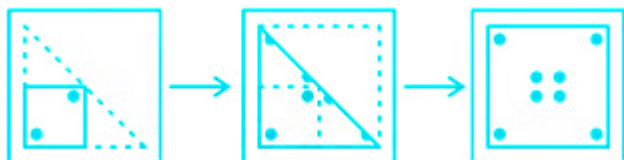
Hence, the diagram given below represents the relation between 'Ministers, Politicians, Actor'.



**50. Answer: a**

**Explanation:**

The figure is as follows:



Hence, the correct answer is "Option 1".

51. Answer: c

**Explanation:**

Given:

$$\Rightarrow 11a + 11b = 29282$$

Calculation:

$$\Rightarrow 11(a + b) = 29282$$

$$\Rightarrow a + b = 29282/11$$

$$\Rightarrow a + b = 2662$$

$$(a + b)/4 = 2662/4$$

$$= 665.5$$

$$\therefore (a + b)/4 = 665.5$$

52. Answer: c

**Explanation:**

Let the larger number be 'x'

Smaller number =  $25 - x$

Product =  $x(25 - x) = 156$

$$\Rightarrow 25x - x^2 = 156$$

$$\Rightarrow x^2 - 25x + 156 = 0$$

$$\Rightarrow x^2 - 12x - 13x + 156 = 0$$

$$\Rightarrow x(x - 12) - 13(x - 12) = 0$$

$$\Rightarrow (x - 12)(x - 13) = 0$$

$$\Rightarrow x = 12, 13$$

$$\text{Smaller number} = 25 - x = 13, 12$$

$\therefore x$  is the larger number

$\therefore$  The larger number = 13

### 53. Answer: a

#### Explanation:

Laws of Indices:

$$1. a^m \times a^n = a^{\{m+n\}}$$

$$2. a^m \div a^n = a^{\{m-n\}}$$

$$3. (a^m)^n = a^{mn}$$

$$4. (a)^{-m} = 1/a^m$$

$$5. (a)^{m/n} = \sqrt[n]{a^m}$$

$$6. (a)^0 = 1$$

Given,

$$\Rightarrow 16^{2x+6} = 64$$

$$\Rightarrow (4^2)^{2x+6} = (4)^3$$

$$\Rightarrow (4)^{4x+12} = (4)^3$$

$$\Rightarrow 4x + 12 = 3$$

$$\Rightarrow 4x = -9$$

$$\Rightarrow x = -9/4$$

$$\therefore x^1 = -9/4$$

#### 54. Answer: b

#### Explanation:

Laws of Indices:

$$1. a^m \times a^n = a^{\{m+n\}}$$

$$2. a^m \div a^n = a^{\{m-n\}}$$

$$3. (a^m)^n = a^{mn}$$

$$4. (a)^{-m} = 1/a^m$$

$$5. (a)^{m/n} = \sqrt[n]{a^m}$$

$$6. (a)^0 = 1$$

Given,

$$\Rightarrow 8^x \times 32^x = 2^{10}$$

$$\Rightarrow (2^3)^x \times (2^5)^x = 2^{10}$$

$$\Rightarrow 2^{3x+5x} = 2^{10}$$

$$\Rightarrow 2^{8x} = 2^{10}$$

$$\Rightarrow 8x = 10$$

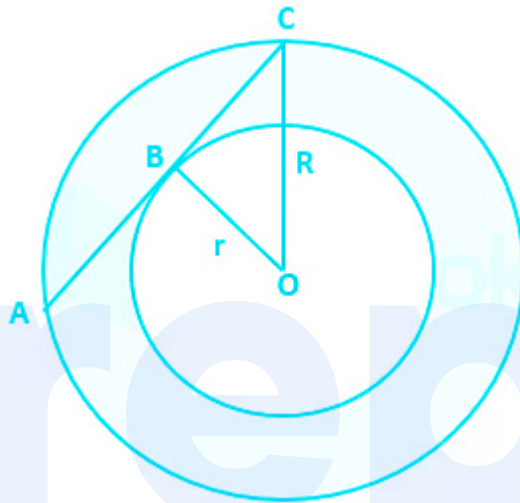
$$\therefore x = 10/8$$

55. Answer: d

**Explanation:**

Let the radius of the outer and inner circle be 'R' cm and 'r' cm respectively

The given circles can be drawn as,



Where ABC is the tangent to the inner circle

Applying Pythagoras theorem to  $\triangle OBC$ ,

$$\Rightarrow R^2 - r^2 = BC^2$$

$$\Rightarrow BC = \sqrt{(13^2 - 5^2)} = 12 \text{ cm}$$

$$\therefore \text{Length of chord} = 2 \times 12 = 24 \text{ cm}$$

56. Answer: b

**Explanation:**

As we know, the ratio of the corresponding sides of similar triangles are equal

Considering similar triangles  $\triangle EGF$  and  $\triangle CGD$ , we can write,

$$\Rightarrow GE/GC = EF/DC$$

Substituting values,

$$\Rightarrow 6/12 = EF/16$$

$$\Rightarrow EF = 16/2 = 8 \text{ cm}$$

---

**57. Answer: b**

**Explanation:**

$\therefore Q$  is 70% more than 640

$$\Rightarrow Q = (100 + 70)\% \text{ of } 640 = 170\% \text{ of } 640$$

$$\Rightarrow Q = 1.7 \times 640 = 1088$$

$\therefore P$  is 50% less than  $Q$

$$\Rightarrow P = (100 - 50)\% \text{ of } Q$$

$$\Rightarrow P = 50\% \text{ of } 1088$$

$$\Rightarrow P = 0.5 \times 1088$$

$$\therefore P = 544$$

---

**58. Answer: a**

**Explanation:**

Given,

$$\Rightarrow x : y = y : z$$

$$\Rightarrow y^2 = xz$$

$$\Rightarrow y^3 = xyz$$

$$\therefore x^3 : y^3 = x^3 : xyz = x^2 : yz$$

---

**59. Answer: a**

**Explanation:**

Let the quantity of amalgams mixed be 'x' units

Quantity of mercury in first amalgam =  $(\frac{3}{10})x$

Quantity of mercury in second amalgam =  $(\frac{1}{10})x$

Quantity of mercury in new amalgam =  $\frac{3x}{10} + \frac{x}{10} = \frac{4x}{10} = \frac{2x}{5}$

Similarly,

Quantity of silver in first amalgam =  $(\frac{7}{10})x$

Quantity of silver in second amalgam =  $(\frac{9}{10})x$

Quantity of silver in new amalgam =  $\frac{7x}{10} + \frac{9x}{10} = \frac{16x}{10} = \frac{8x}{5}$

$\therefore$  Ratio of new amalgam =  $(\frac{2x}{5}) : (\frac{8x}{5}) = 1 : 4$

---

**60. Answer: b**

**Explanation:**

Given:

Average weight of 138 students = 45 kg

Average weight of boys = 49 kg

Average weight of girls = 25 kg

**Formula used:**

Average weight = Total weight/Total number of people

**Calculation:**

Let the number of boys in the school be 'x'

Number of girls = (138 - x)

Now, Total weight of students = Total weight of boys + Total weight of girls

$$\Rightarrow 138 \times 45 = 49x + 25(138 - x)$$

$$\Rightarrow 6210 = 49x + 3450 - 25x$$

$$\Rightarrow 2760 = 24x$$

$$\Rightarrow x = 115$$

Hence,

Total weight of boys =  $49x = 49 \times 115 = 5635$  kg

Total weight of girls =  $25(138 - x) = 25 \times 23 = 575$  kg

$\therefore$  Ratio of total weight of boys and girls =  $5635 : 575 = 49 : 5$

---

**61. Answer: a**

**Explanation:**

Given, Principal = Rs. 2500, Rate = 30%, Time = 3 years

When the interest is compounded annually,

Compound interest = Principal  $\times [(1 + \text{Rate}/100)^{\text{Time}} - 1]$

$$\Rightarrow \text{Compound interest} = 2500 \times [(1 + 30/100)^3 - 1] = 2500 \times 1.197 = \text{Rs. } 2992.5$$

$$\text{Simple interest} = (\text{Principal} \times \text{Rate} \times \text{Time})/100$$

$$\Rightarrow \text{Simple interest} = (2500 \times 30 \times 3)/100 = \text{Rs. } 2250$$

$$\therefore \text{Required difference} = 2992.5 - 2250 = \text{Rs. } 742.5$$

**62. Answer: a**

**Explanation:**

Let the cost price of the pen be Rs. 'x'

$$\text{Selling price} = \text{Cost price} + \text{Profit} = x + 15\% \text{ of } x = 1.15x$$

If the pen is bought at 7% less price and sold at Rs. 250 more, profit = 25%

$$\Rightarrow \text{New cost price} = x - 7\% \text{ of } x = 0.93x$$

$$\Rightarrow \text{New selling price} = 1.15x + 250$$

$$\Rightarrow \text{Profit earned} = 25\% \text{ of } 0.93x = 0.2325x$$

$$\therefore \text{Selling price} = \text{Cost price} + \text{Profit}$$

$$\Rightarrow 1.15x + 250 = 0.93x + 0.2325x$$

$$\Rightarrow 0.93x + 0.2325x - 1.15x = 250$$

$$\Rightarrow 0.0125x = 250$$

$$\Rightarrow x = 250/0.0125 = \text{Rs. } 20000$$

$\therefore$  The cost price of the pen is Rs. 20000

**63. Answer: a**

**Explanation:**

Let the cost price of the chair be Rs. 'x' and the maximum discount that can be offered be 'd%'

Marked price =  $(100 + 75)\%$  of  $x = 175\%$  of  $x = 1.75x$

Selling price = Marked price - discount =  $(100 - d)\%$  of  $1.75x$

To sell the chair at no profit no loss,

Selling price = Cost price =  $x$

$$\Rightarrow (100 - d)/100 \times 1.75x = x$$

$$\Rightarrow 100 - d = 100/1.75$$

$$\Rightarrow 100 - d = 57.15$$

$$\Rightarrow d = 100 - 57.15 = 42.85\%$$

$\therefore$  A maximum discount of 42.85% can be offered

**64. Answer: b****Explanation:**

The given series is an A.P. with  $n = 36$  terms

First term =  $a = 1$

Difference =  $d = 2$

Last term = 36<sup>th</sup> term =  $a + 35d = 1 + 35(2) = 71$

$\therefore$  Sum of  $n$  terms of A.P. =  $n/2 \times (\text{first term} + \text{last term})$

$\Rightarrow$  Sum of given series =  $(36/2) \times (1 + 71) = 18 \times 72 = 1296$

$\therefore$  Required square root =  $\sqrt{1296} = 36$

---

**65. Answer: c**

**Explanation:**

21 workers 40 days work = 1

21 workers 1 day work =  $1/40$

1 worker 1 day work =  $(1/40) \times (1/21)$

When 7 more workers joined, no. of workers =  $21 + 7 = 28$

Hence,

28 workers 1 day work =  $(1/40) \times (1/21) \times 28 = 1/30$

$\therefore$  The work will be done in 30 days

---

**66. Answer: c**

**Explanation:**

When two trains are moving towards each other,

Their relative speed =  $25 + 83 = 108 \text{ km/hr} = 108 \times 5/18 = 30 \text{ m/sec}$ .

This means that the trains cover a distance of 30 m in 1 second

$\therefore$  The distance between the trains 1 second before collision is 30 m

---

**67. Answer: b**

**Explanation:**

It can be seen from the given graph that the refrigerator brand D has the second highest sale of Rs. 340 thousands

---

**68. Answer: a****Explanation:**

Sale of brand B = Rs. 280 thousands

Sale of brand E = Rs. 160 thousands

$\therefore$  Required ratio =  $280 : 160 = 7 : 4$

---

**69. Answer: a****Explanation:**

Sale of brand F = Rs. 400 thousand

Sale of brand E = Rs. 160 thousand

Difference in sales =  $400 - 160 = \text{Rs. } 240 \text{ thousand}$

$\therefore$  Sales of brand F was greater than that of brand E by  $240/160 = 1.5$  times

---

**70. Answer: c****Explanation:**

Sales of all 7 brands of refrigerators =  $320 + 280 + 280 + 340 + 160 + 400 + 220$

= Rs. 2000 thousands

$\therefore$  Tax to be paid = 5% of  $2000 \times 1000$  = Rs. 100000

---

**71. Answer: d**

**Explanation:**

Calculation:

Applying Pythagoras to a rectangle, we get,

$$\Rightarrow (\text{Diagonal})^2 = (\text{Length})^2 + (\text{Breadth})^2$$

Substituting values,

$$\Rightarrow (29)^2 = (\text{Length})^2 + (20)^2$$

$$\Rightarrow (\text{Length})^2 = 841 - 400 = 441$$

$$\Rightarrow \text{Length} = \sqrt{441} = 21 \text{ cm}$$

Area of rectangle = length  $\times$  breadth =  $21 \times 20$

$$= 420 \text{ cm}^2$$

$\therefore$  Area of rectangle is  $420 \text{ cm}^2$ .

---

**72. Answer: d**

**Explanation:**

Area of a semi-circle with radius 'r' =  $\pi r^2/2$

Given, area =  $308 \text{ cm}^2$

$$\Rightarrow \pi r^2/2 = 308$$

$$\Rightarrow r^2 = 308 \times 2 \times (7/22)$$

$$\Rightarrow r^2 = 196$$

$$\Rightarrow r = \sqrt{196} = 14 \text{ cm}$$

$\therefore$  Radius of semi-circle = 14 cm

**73. Answer: c**

**Explanation:**

Volume of a hemisphere with radius 'r' =  $(2/3)\pi r^3$

Given, volume of hemisphere =  $718.67 \text{ cm}^3$

$$\Rightarrow (2/3)\pi r^3 = 718.67$$

$$\Rightarrow r^3 = 718.67 \times (3/2) \times (7/22)$$

$$\Rightarrow r^3 = 343 \text{ (approx)}$$

$$\Rightarrow r = \sqrt[3]{343} = 7 \text{ cm}$$

$\therefore$  Diameter of hemisphere =  $2 \times 7 = 14 \text{ cm}$

**74. Answer: d**

**Explanation:**

$$\Rightarrow \sec 45^\circ + 1/\sqrt{3}$$

$$= 1/\cos 45^\circ + 1/\sqrt{3} \quad [\because \cos 45^\circ = 1/\sqrt{2}]$$

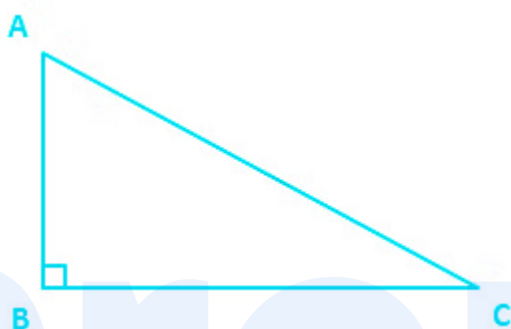
$$= \sqrt{2} + 1/\sqrt{3}$$

$$= (\sqrt{6} + 1)\sqrt{3}$$

**75. Answer: b**

**Explanation:**

In the given  $\triangle ABC$ ,



$$\cos A = \text{adjacent/hypotenuse} = AB/AC = 8/17$$

Given,  $AB = 4 \text{ cm}$

$$\Rightarrow 4/AC = 8/17$$

$$\Rightarrow AC = 17/2 = 8.5 \text{ cm}$$

$$\text{Now, } \sin A = \sqrt{1 - \cos^2 A} = \sqrt{1 - 64/289} = \sqrt{(225/289)} = 15/17$$

$$\text{But, } \sin A = \text{opposite/hypotenuse} = BC/AC$$

$$\Rightarrow BC/8.5 = 15/17$$

$$\therefore BC = 15/2 = 7.5 \text{ cm}$$

**76. Answer: d**

**Explanation:**

- Rani ki Vav is an intricately constructed stepwell situated in the town of Patan in Gujarat, India.
  - It is located on the banks of Saraswati River.
  - Rani ki vav was built as a memorial to an 11th-century king Bhima.
  - Most of the sculptures are in devotion to Vishnu, in the forms of Dus-Avatars Kalki, Rama, Krishna, Narsinh, Vaman, Varahi and others representing their return to the world.
- 

77. Answer: d

**Explanation:**

- In 2007, Kareena Kapoor received several awards for her performance in the romantic comedy Jab We Met (including her first Best Actress Filmfare Award).
- 

78. Answer: c

**Explanation:**

Vitamin D is essential in helping the body absorb and use calcium. Vitamin D comes from two sources. It is made in the skin through direct exposure to sunlight, and it comes from the diet. Exercise also helps the body absorb calcium.

---

79. Answer: b

**Explanation:**

The cockroach belongs to the Phylum Arthropoda, along with animals such as spiders and crustaceans. It is also a member of the class Insecta, the most diverse group of animals on earth.

---

80. Answer: c

Explanation:

Ozone is an inorganic molecule with the chemical formula  $O_3$ . It is a pale blue gas with a distinctively pungent smell. Ozone is a powerful oxidant.

81. Answer: d

Explanation:

| Element | Symbol | Atomic Number |
|---------|--------|---------------|
| Bromine | Br     | 35            |
| Silver  | Ag     | 47            |
| Iodine  | I      | 53            |
| Barium  | Ba     | 56            |
| Gold    | Au     | 79            |

82. Answer: a

## Explanation:

The correct answer is operating system

### ★ Key Points

- Operating System (OS):-
  - An **operating system (OS)** is **system software** that manages computer hardware and software resources and provides common services for computer programs.
  - For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and computer hardware.
  - There are different types of OS
    - Batch OS
    - Multiprogramming
    - Multitasking
    - Multiprocessing
    - Real-time

### ★ Additional Information

- Optimization System:-
  - The activity of enhancing system capabilities and integration of subsystem elements to the extent that all components operate at or above user expectations

---

83. Answer: b

## Explanation:

Mahavira travelled throughout South Asia to teach Jain Philosophy

- He was born in 540 BC in a village **Kundgrama** near **Vaishali** in **Bihar**.
- He was the **24 th Tirthanka** and also known as **Vardhaman**

- At the age of 42, under a **Sal tree Jambhikagrama** on the bank of river **Rijupalika** attained **Kaivalya** (supreme knowledge)
- He had the **Titles** like **Kevalin, Jina or Jitendriya, Nrigantha, Arhant and Mahavira.**
- He delivered his **1st sermon at Pava** to his 11 disciples ( **11 Gandharas/Gandharvas**) ,Later he founded **Jain sangha** at Pava.

**Pancha Mahavaratas** (five vows of Jainism)

- 1. **Ahimsa**, 2. **Satya**, 3. **Asteya** (Non- stealing), 4. **Aparigraha** ( Non- possession) laid by **parshwanath** and 5. **Brahmacharya** was laid down by **Mahavira.**
- At the age of 72 in 468 BC , he passed away at **Pavapuri** near **Biharsharif** in Bihar.

---

**84. Answer: b**

**Explanation:**

Consumer surplus is an economic measure of consumer benefit, which is calculated by analyzing the difference between what consumers are willing and able to pay for a good or service relative to its market price, or what they actually do spend on the good or service.

Hence according to the question,

- Consumer surplus = Consumer Willing – Able to Pay + Discount on Able to Pay
- = 50 lakhs – 42 lakhs
- = 8 lakhs
- Discount on Able to Pay = 5%
- = 42 lakhs  $\times$  (5  $\div$  100)
- = 2.1 lakhs
- Consumer Surplus = 8 lakhs + 2.1 lakhs
- = 10.1 lakhs

**85. Answer: a**

**Explanation:**

The government fiscal policy is used to stabilize the level of output and employment through changes in its expenditure and taxes. The government attempts to increase output and income and seeks to stabilize the ups and downs in the economy. Custom or import duties are levied by the Central Government of India on the goods imported into India by using fiscal policy to stabilize the level of input.

---

**86. Answer: a**

**Explanation:**

- Radon-222 is formed naturally during a chain of radioactive decay.
  - The decay series begins with uranium-238, and among the substances formed is radium-226, which decays directly to radon-222.
  - The uranium is widely distributed in rocks and soils throughout the earth's crust.
- 

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**87. Answer: a**

**Explanation:**

An impact crater is an approximately circular depression in the surface of a planet, moon, or another solid body in the Solar System or elsewhere, formed by the hyper velocity impact of a smaller body.

---

**88. Answer: c**

## Explanation:

The correct answer is China.

### ★ Key Points

- **China:-**
  - Stretching 3,100 miles (5,000 kilometers) from east to west and 3,400 miles (5,500 kilometers) from north to south, China is a large country with widely varying landscapes. Its territory includes mountains, high plateaus, sandy deserts, and dense forests.
  - One-third of China's land area is made up of mountains. The tallest mountain on Earth, Mount Everest, sits on the border between China and Nepal.
  - China has thousands of rivers. The Yangtze and the Yellow Rivers are the most important. At 3,915 miles (6,300 kilometers) long, the Yangtze is the world's third-largest river.

### ★ Additional Information

- **Russia:-**
  - It covers nearly twice the territory of Canada, the second largest.
  - It extends across the whole of northern Asia and the eastern third of Europe, spanning 11 time zones and incorporating a great range of environments and landforms, from deserts to semiarid steppes to deep forests and Arctic tundra.
  - Russia contains Europe's longest river, the Volga, and its largest lake, Ladoga. Russia also is home to the world's deepest lake, Baikal, and the country recorded the world's lowest temperature outside the North and South poles.
- **Iraq:-**
  - Iraq is one of the easternmost countries of the Arab world, located at about the same latitude as the southern United States.
  - Its Capital is Baghdad.
- **Thailand:-**
  - It is located in the center of mainland Southeast Asia.

- The capital is Bangkok.
- The population is predominantly Thai, with significant Chinese, Khmer, and Malay minorities. Language: Thai (official).

| Country  | Capital |
|----------|---------|
| China    | Beijing |
| Iraq     | Baghdad |
| Thailand | Bangkok |
| Russia   | Moscow  |

89. Answer: d

### Explanation:

The correct answer is 17th Century.

- The stunning 17th Century white marble Taj Mahal was built by Mughal emperor Shah Jahan as a mausoleum for his beloved wife Mumtaz Mahal, who died in childbirth.

### ★ Key Points

- **Taj Mahal:**
  - An immense mausoleum of white marble, built in Agra between 1631 and 1648 by order of the Mughal emperor Shah Jahan in memory of his favourite wife.

- Taj Mahal is the jewel of Muslim art in India and one of the universally admired masterpieces of the world's heritage.

★ Additional Information

Some of the recent Unesco world heritage sites in India are:

| Name                                                        | Region                  | Year |
|-------------------------------------------------------------|-------------------------|------|
| Rani ki vav (The Queen's Stepwell)                          | Patan, Gujarat, India   | 2014 |
| Great Himalayan National Park                               | Himachal Pradesh, India | 2014 |
| Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar | Bihar                   | 2016 |
| Khangchendzonga(Kangchenjunga) National Park                | Sikkim                  | 2016 |
| The Architectural Work of Le Corbusier                      | Chandigarh, India       | 2016 |
| Historic City of Ahmedabad                                  | Ahmedabad, Gujarat      | 2017 |
| The Victorian and Art Deco Ensemble of Mumbai               | Maharashtra             | 2018 |
| Jaipur                                                      | Jaipur, Rajasthan       | 2019 |

90. Answer: d

**Explanation:**

The correct answer is Ranjit Singh.

★ Key Points

- Ranjit singh
  - Ranjit Singh's parents were Mahan Singh Sukerchakia and Raj Kaur ..
  - He expanded his empire by annexing states around him. The Sikh Empire existed from 1799 till 1849 .

- The major towns in Ranjit Singh's empire were **Lahore, Amritsar, Multan, Peshawar, Jammu, Srinagar, Rawalpindi, and Sialkot** .
- Ranjit Singh was declared the 'Maharaja of Punjab' on 12 April 1801 .
- Ranjit Singh's army was known as the Khalsa army .
- Ranjit Singh, renowned as Sher-e-Punjab (Lion of Punjab) , is remembered for the possession of the Koh-i-Noor diamond.

### ★ Additional Information

#### • Sher Shah

- Sher Shah Suri was the founder of the Suri dynasty.
- The silver coin introduced by Sher Shah Suri was called Rupiya.
- Sher Shah Suri issued the Rupiya coin and fixed standard weights and measures all over the empire.
- This coin introduced by Sher Shah Suri weighed 178 grains and was the precursor of the modern rupee.
- Sher Shah Suri defeated Humayun in the battle of Chausa and assumed the title of Farid al-Din Sher Shah as emperor in **1539** .
- He again defeated the Humayun in the battle of Kannauj and annexed Kannauj in **1540** .
- The grand trunk road that turns from Calcutta to Peshawar was built by Sher Shah Suri.

#### • Rana Pratap

- He belongs to the Sisodias of the Mewar dynasty .
- He was titled "Mewari Rana" .
- The struggle between the Rajput confederacy led by Pratap Singh, and the Mughal Empire under Akbar , has often been characterized as a struggle between Hindus and the invading Muslims .
- He fought many battles including the historic battle of 'Haldighati' against Raja Mansingh on June 21, 1576 .
- The Battle of Dewair was a battle fought in 1582 between Mewar forces led by the Maharana Pratap against the Mughal Empire forces of Akbar led by Shabaz Khan in present-day Rajasthan.
  - This battle was won by Maharana Pratap .

#### • Hemu vikramaditya

- He was a Hindu king and had earlier served as a general and chief minister of Adil Shah Suri (Suri dynasty).
- He had won 22 battles for Adil Shah Suri defeating the Afghan rebels and Mughal forces of Humayun and Akbar.
- He assumed the title of 'Vikramaditya' after taking the control of Delhi.
- He was defeated by the Akbar's army in the second battle of Panipat on 5 November 1556.

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**91. Answer: c**

**Explanation:**

The first successful bi-directional transmission of clear speech by Bell and Watson was made on March 10, 1876, when Bell spoke into the device, "Mr. Watson, come here, I want to see you." and Watson answered.

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**92. Answer: d**

**Explanation:**

- A Resistor is a device which opposes the flow of charge in the circuit. Hence it is used to limit electric current flow in the circuit.
- Whereas Fuse is used to protecting the electric Circuit from sudden surges of charge flowing into circuit.
- So, both are in a way, limiting the flow of electric current in a circuit and hence both are the right answer.

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**93. Answer: c**

**Explanation:**

The ampere per meter squared, symbolized  $\text{A/m}^2$ , is the International Unit of electric current density.

A current density of  $1 \text{ A/m}^2$  represents one ampere of electric current flowing through a material with a cross-sectional area of one square meter.

ampere per squared meter ( $\text{A/m}^2$ ) has a dimension of  $\text{IL}^{-2}$  where L is length, and I is electric current.

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**94. Answer: b**

**Explanation:**

The correct answer is The chief Justice of India.

★ Key Points

- **The chief justice of India** makes the oath or affirmation to the President of India.
- In the absence of the chief justice, **the senior-most judge of the Supreme Court is available for the oath.**
- **Article 60** talks oath or affirmation by the President.
- The tenure of President is **5 years.**
- He is appointed by **the electoral college.**
- He can resign by writing to **the Vice-President.**

★ Additional Information

- President of India – Droupadi Murmu
- He belongs to BJP political party.
- Prime Minister of India – **Narendra Modi**

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**95. Answer: a**

### Explanation:

The correct answer is 3

- The Rajya Sabha or Council of States is the upper house of the Parliament of India.
  - Membership is limited to 250 members, and the present Rajya Sabha has 245 members.
  - Himachal Pradesh elects 3 members for the term of 6 years and indirectly elected by the state legislators, since the year 1956.
- 

### 96. Answer: c

#### Explanation:

- In the early 17<sup>th</sup> century, it was decided by English aristocrats that cricket would be played in a 'gentlemanly manner'.
  - Often, the phrase, 'gentleman's game' is used to describe cricket which means **no sledging, cheating, bodyline bowling, temper tantrums or excessive appealing**.
  - If the batsman knew he was out, he should walk back to the pavilion even if the umpire had decided otherwise.
- 

### 97. Answer: a

#### Explanation:

The rise of Kali – Duryodhana's Mahabharata' By Anand Neelakantan.

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### 98. Answer: b

**Explanation:**

The most common ores of nickel include Pentlandite, Pyrrhotite, and Garnierite.

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**99. Answer: c****Explanation:**

The Grand Canal, known to the Chinese as the Beijing–Hangzhou Grand Canal, a UNESCO World Heritage Site, is the longest as well as one of the oldest canal or artificial river in the world and a famous tourist destination.

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**100. Answer: c****Explanation:**

In fertilization of a flower, one sperm nucleus fertilizes the egg cell, forming a zygote, while the other sperm nucleus usually fuses with the binucleate central cell, forming a primary endosperm cell (its nucleus is often called the triple fusion nucleus). That cell created in the process of double fertilization develops into the endosperm.