



## 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 (28-Mar-2018) (Shift 1)

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. Frenatically
- b. Freneticalyy
- c. Frenetically
- d. Frenaticaly

- 
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)

So we did get

A - to read a whole lot

B - dying

C - on how we can save a wounded sparrow from

- a. ABC
- b. CBA
- 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)

LPG quickly (gain) popularity as it was easy to use and did not tarnish vessels.

- a. gaining
- b. will gain
- c. gained
- 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)

You might be (to incline) to put the blame on infrastructure and officials, which is understandable.

- a. inclined
- b. incline
- c. inclines
- 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)

Feeling or expressing pensive sadness

- a. Mirthful
- b. Exultant
- c. Apathetic

d. Melancholic

---

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)

The study and classification of speech sounds

- a. Twang
  - b. Resonance
  - c. Oratory
  - d. Phonetics
- 

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)

Your number is up

- a. When you win by betting on your lucky number
  - b. Be the chosen one from a large group.
  - c. Win a lottery or a lucky draw.
  - d. The time has come when someone is doomed to suffer a disaster.
- 

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 shot in the arm

- a. Get hit by something.

- b. Lose physical strength.
- c. Lose motivation to do a task.
- d. An encouraging stimulus.

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)

It is this fact which makes it \_\_\_\_\_(1) necessary that our interests shall be broad and pure if our thoughts are to be of this type. It is \_\_\_\_\_(2) enough that we have the strength to drive from our minds a wrong or impure thought which seeks \_\_\_\_\_(3). To stand guard as a policeman over our thoughts to see that no unworthy one enters, requires \_\_\_\_\_(4) much time and energy. Our interests must be of such a nature as to lead us away from the field of unworthy thoughts \_\_\_\_\_(5) we are to be free from their tyranny.

unworthy thoughts \_\_\_\_\_(5) we are to be

- a. if
- b. when
- c. why
- d. then

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)

It is this fact which makes it \_\_\_\_\_(1) necessary that our interests shall be broad and pure if our thoughts are to be of this type. It is

\_\_\_\_\_ (2) enough that we have the strength to drive from our minds a wrong or impure thought which seeks \_\_\_\_\_ (3). To stand guard as a policeman over our thoughts to see that no unworthy one enters, requires \_\_\_\_\_ (4) much time and energy. Our interests must be of such a nature as to lead us away from the field of unworthy thoughts \_\_\_\_\_ (5) we are to be free from their tyranny.

enters, requires \_\_\_\_\_ (4) much time and energy.

- a. to
- b. very
- c. of
- d. too

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)

It is this fact which makes it \_\_\_\_\_ (1) necessary that our interests shall be broad and pure if our thoughts are to be of this type. It is \_\_\_\_\_ (2) enough that we have the strength to drive from our minds a wrong or impure thought which seeks \_\_\_\_\_ (3). To stand guard as a policeman over our thoughts to see that no unworthy one enters, requires \_\_\_\_\_ (4) much time and energy. Our interests must be of such a nature as to lead us away from the field of unworthy thoughts \_\_\_\_\_ (5) we are to be free from their tyranny.

which seeks \_\_\_\_\_ (3). To stand guard

- a. entrance
- b. enter

c. entering

d. enters

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)

It is this fact which makes it \_\_\_\_\_(1) necessary that our interests shall be broad and pure if our thoughts are to be of this type. It is \_\_\_\_\_(2) enough that we have the strength to drive from our minds a wrong or impure thought which seeks \_\_\_\_\_(3). To stand guard as a policeman over our thoughts to see that no unworthy one enters, requires \_\_\_\_\_(4) much time and energy. Our interests must be of such a nature as to lead us away from the field of unworthy thoughts \_\_\_\_\_(5) we are to be free from their tyranny.

It is \_\_\_\_\_(2) enough that we have

a. not

b. no

c. nor

d. neither

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)

It is this fact which makes it \_\_\_\_\_(1) necessary that our interests shall be broad and pure if our thoughts are to be of this type. It is \_\_\_\_\_(2) enough that we have the strength to drive from our minds a wrong or impure thought which seeks \_\_\_\_\_(3). To stand guard as a policeman over our thoughts to see that no unworthy one

enters, requires \_\_\_\_\_(4) much time and energy. Our interests must be of such a nature as to lead us away from the field of unworthy thoughts \_\_\_\_\_(5) we are to be free from their tyranny.

which makes it \_\_\_\_\_(1) necessary that our interests

- a. vital
- b. vitality
- c. vitally
- d. vitalism

---

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. Handkurchief
- b. Handkerchief
- c. Handkerchef
- d. Handkurchef

---

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)

Sneha said, "I am buying a gaming console today."

- a. Sneha said that she is buying a gaming console today.
- b. Sneha says she was buying a gaming console that day.
- c. Sneha say that she is buying a gaming console on today.

d. Sneha said that she was buying a gaming console that day.

---

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)

The boss made the assistant work late.

- a. The assistant was made to work late by the boss.
  - b. The assistant is being urged to work late.
  - c. The assistant was make to work late by the boss.
  - d. The assistant is working late due to the boss.
- 

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

A serious critic

P : meaning of a work of art

Q : has to comprehend the particular

R : content, unique structure, and the special

- a. QRP
  - b. RQP
  - c. PQR
  - d. QPR
-

18. 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)

Dogmatic

- a. Flexible
  - b. Arrogant
  - c. Formal
  - d. Stubborn
- 

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)

Exquisite

- a. Elaborate
  - b. Consummate
  - c. Sensitive
  - d. Rough
- 

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)

Scrumptious

- a. Stale
- b. Crushable

c. Devotedness

d. Tasty

- 
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)

Dour

a. Cheery

b. Pleasant

c. Morose

d. Approachable

- 
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 mechanic ----- the car according to his own liking.

a. tweaking

b. is tweaked

c. will tweak

d. have tweaked

- 
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 indicate it by selecting the appropriate option. (+2, -0.5)

She was discharged \_\_\_\_\_ the hospital after treatment.

- a. From
- b. Of
- c. With
- d. As

- 
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 Creole language is a (1)/ stable natural language develop from (2)/ a mixture of different languages. (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 26th of January was chosen (1)/ to commemorate the Purna Swaraj (2)/ declaration for the complete independence, of 1930. (3)/ No error (4)

- a. 1
- b. 2

c. 3

d. 4

# Prepp

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## General Intelligence

26. In the following question, select the related word pair from the given alternatives. (+2, -0.5)

Wine : Grapes :: ? : ?

- a. Curd : Milk
- b. Thread : Cloth
- c. Wood : Table
- d. Chair : Sit

- 
27. In the following question, select the related number from the given alternatives. (+2, -0.5)

36 : 9 :: 49 : ?

- a. 24
- b. 13
- c. 32
- d. 15

- 
28. In the following question, select the related letter/letters from the given alternatives. (+2, -0.5)

GHJ : JKM :: NOQ : ?

- a. QRT

b. PQS

c. RST

d. OPR

---

29. In the following question, select the odd word pair from the given alternatives. (+2, -0.5)

a. Crop – Rice

b. Crop – Rubber

c. Crop – Wheat

d. Crop – Bajra

---

30. In the following question, four number pairs are given. The number on left side of (–) is related to the number on the right side of (–) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given options. (+2, -0.5)

a. 17 – 34

b. 19 – 38

c. 23 – 46

d. 27 – 56

---

31. In the following question, select the odd letter/letters from the given alternatives. (+2, -0.5)

a. DHM

b. GKO

c. IMQ

d. LPT

---

32. From the given alternatives, according to the dictionary, which word will come in the SECOND position? (+2, -0.5)

1. Charity

2. Cardigan

3. Caravan

4. Carton

5. Challenge

a. Charity

b. Challenge

c. Cardigan

d. Caravan

---

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

1, 2, 6, 42, ?

a. 1696

b. 1036

c. 1806

d. 984

---

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

L, O, Q, T, V, ?

a. X

b. W

c. Y

d. Z

---

35. 'R + S' means 'R is mother of S', 'R - S' means 'R is wife of S', 'R × S' means 'R is son of S' and 'R ÷ S' means 'R is father of S'. Which of the following represents K as the grandson of T? (+2, -0.5)

a.  $K + T \times J \times R$

b.  $J + K \times L \times T$

c.  $R + T - S \div K$

d.  $K + L \times R \div T$

---

36. From the given alternatives, select the word which CANNOT be formed using the letters of the given word. (+2, -0.5)

**Recalcitrant**

a. Can

- b. Rent
- c. Recall
- d. Calcite

---

37. In a certain code language, "FRANK" is written as "GQBML". How is "MARCO" written in that code language? (+2, -0.5)

- a. NYTPB
- b. MZSCQ
- c. NZSBP
- d. NQPBT

---

38. In a certain code language, 'x' represents '+', '÷' represents 'x', '-' represents '÷' and '+' represents '-'. Find out the answer to the following question. (+2, -0.5)

$20 + 16 \times 6 \div 10 - 4 = ?$

- a. 13
- b. 12
- c. 30
- d. 19

---

39. The following equation is incorrect. Which two signs should be interchanged to correct the equation? (+2, -0.5)

$$13 \times 8 + 25 - 6 \div 10 = 20$$

- a.  $\div$  and  $-$
- b.  $\times$  and  $-$
- c.  $+$  and  $\div$
- d.  $\text{and } +$

---

40. If  $30 \% 3 = 100$ ,  $70 \% 14 = 50$  and  $20 \% 8 = 25$ , then find the value of  $50 \% 5 =$  **(+2, -0.5)**  
?

- a. 110
- b. 30
- c. 100
- d. 20

---

41. Which of the following terms follows the trend of the given list? **(+2, -0.5)**  
CBABABAB, BACBABAB, BABACBAB, BABABACB, BCABABAB, \_\_\_\_\_.

- a. BABABCAB
- b. CBABABAB
- c. BACBABAB
- d. BABCABAB

42. Two football players A and B from opposing teams start from the same corner. A runs 35 m East, then 15 m South, turns to his right and runs 60 m. Meanwhile, B runs 20 m North, then 25 m West, turns left and runs 20 m. What is the distance between B and A and what is the final position of B with respect to A? (+2, -0.5)

- a. 15 m North
- b. 5 m North
- c. 15 m South
- d. 5 m South

43. In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems 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: All sticks are canes

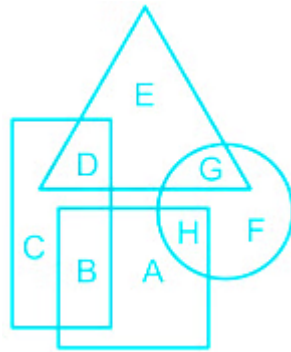
Statement II: Some wands are sticks

Conclusion I: Some canes are wands

Conclusion II: No wands are canes

- a. Only conclusion I follows
- b. Only conclusion II follows
- c. Both conclusions I and II follow
- d. Neither conclusion I nor conclusion II follows

44. In the following figure, rectangle represents Authors, circle represents Art critics, triangle represents Tattooists and square represents Joggers. Which set of letters represents Joggers who are either Art critics or Authors? (+2, -0.5)



- a. BAH
- b. CBA
- c. AHF
- d. BH

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

FNG, KSL, PXQ, UCV, ?

- a. YIB
- b. ZHA
- c. AIB
- d. BJC

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

9, 11, 14, 18, 23, ?

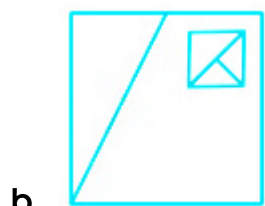
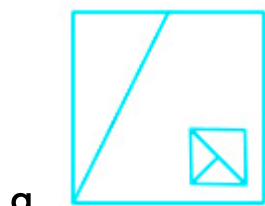
- a. 31
- b. 27
- c. 29
- d. 33

47. In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives. (+2, -0.5)

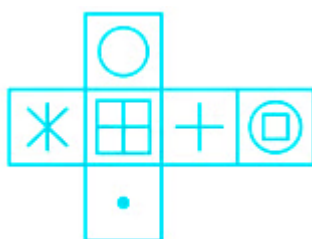
- a. (8, 17, 33)
- b. (3, 7, 12)
- c. (9, 19, 37)
- d. (15, 31, 61)

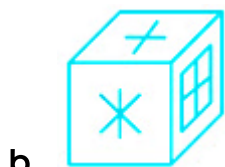
48. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure? (+2, -0.5)





49. Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure? (+2, -0.5)





50. 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 resented 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 a **Matrix-II** are numbered from 5 to 9. A letter from these matrices can be represented first by its row and row and next by its column, for example, 'F' can be represented by 13, 21 etc., and 'Y' can be represented by 97, 98 etc. Similarly, you have to identify the set for the word "TONE". (+2, -0.5)

| Matrix-I |   |   |   |   |   |
|----------|---|---|---|---|---|
|          | 0 | 1 | 2 | 3 | 4 |
| 0        | K | C | E | B | H |
| 1        | B | G | C | F | C |
| 2        | D | F | G | D | F |
| 3        | M | L | D | H | E |
| 4        | G | J | A | L | M |

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| Matrix-II |   |   |   |   |   |
|-----------|---|---|---|---|---|
|           | 5 | 6 | 7 | 8 | 9 |
| 5         | Q | S | U | X | Q |
| 6         | R | X | R | T | W |
| 7         | V | P | V | O | P |
| 8         | R | W | T | P | T |
| 9         | N | R | Y | Y | T |

- a. 34, 75, 23, 75
- b. 30, 59, 43, 98
- c. 14, 75, 23, 69
- d. 68, 78, 95, 34

## Quantitative Aptitude

51. If the value of  $\sqrt{3} = 1.732$ , then calculate the value of  $\sqrt{243} - \frac{1}{2}\sqrt{108} - \sqrt{147}$  (+2, -0.5)

- a. 1.732
- b. -1.464
- c. 3.464
- d. -1.732

52. Find the difference between place value and face value of 7 in 589573212. (+2, -0.5)

- a. 693
- b. 6993
- c. 69993
- d. 699993

53. If  $\sqrt{1 + \frac{y}{16}} = \frac{7}{4}$ , then find the value of  $5y - 15$ . (+2, -0.5)

- a. 110
- b. 130
- c. 150
- d. 160

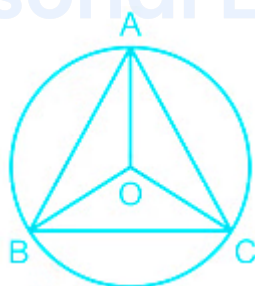
54. If  $x^2 + \frac{1}{x^2} = 6$ , then find the value of  $\frac{2x(x-1)}{x^3 - x^2 - x + 1}$  (+2, -0.5)

- a. 0
- b. 1
- c. 2
- d. 3

55. Calculate the distance (in cm) of the chord from the centre of the circle, if the chord of length 48 cm is drawn in the circle of radius 25 cm. (+2, -0.5)

- a. 7
- b. 14
- c. 49
- d. 56

56. If the angle subtended by the radius of a circle (OC) and the side BC of the triangle ABC at vertex B is  $40^\circ$  then calculate the value of  $\angle BAC$ . (+2, -0.5)



- a.  $35^\circ$
- b.  $45^\circ$
- c.  $50^\circ$

d.  $65^\circ$

---

57. Weights of two friends A and B are in the ratio of 7 : 8. A's weight increases by 10% and the total weight of A and B increase by 20%. What is the percentage increase in the B's weight? (+2, -0.5)

a. 28.75

b. 11.55

c. 32.85

d. 24.25

---

58. The income of X, Y and Z are in the ratio of 3 : 4 : 2 and their expenses in the ratio of 5 : 5 : 2. If X saves Rs. 3000 out of an income of Rs. 18000, then what will be the saving (in Rs.) of Y? (+2, -0.5)

a. 4500

b. 9000

c. 6000

d. 7500

---

59. P and Q are two alloys which are prepared by mixing tin and lead in the ratio of 12 : 5 and 4 : 3 respectively. If equal quantities of alloys are melted to form a third alloy R, then what is the ratio of tin and lead in alloy R? (+2, -0.5)

a. 84 : 65

b. 57 : 35

---

c.  $76 : 43$

d.  $78 : 47$

---

60. What will be the average of the first 5 positive even numbers divisible by 9? (+2, -0.5)

a. 50

b. 54

c. 48

d. 62

---

61. The simple interest on a sum for 20 years is  $\frac{5}{4}$  of the principal. What is the per annum rate (in percentage) of interest? (+2, -0.5)

a. 6.25

b. 12.5

c. 2.5

d. 5

---

62. If Mohan purchase 13 articles for Rs. 12 and sells all the articles at the rate of 12 articles for Rs. 13, then what will be the profit percentage? (+2, -0.5)

a. 19.47

b. 17.36

c. 11.11

d. 12.5

---

63. A tyre is sold at three successive discounts of 20%, 30% and 20%. What is the net discount (in percentage)? (+2, -0.5)

a. 62.8

b. 59.6

c. 55.2

d. 51.4

---

64. What is the value of  $\frac{\sqrt{36} + \sqrt[3]{729}}{\sqrt{81} \times \sqrt[3]{64}}$ ? (+2, -0.5)

a. 5/12

b. 5/9

c. 4/9

d. 4/15

---

65. Robin can do a work alone in 9 days. Amit can do the same work alone in 6 days. Both of them finish the work together and they get a total Rs. 2500. What is the share (in Rs.) of Robin? (+2, -0.5)

a. 1700

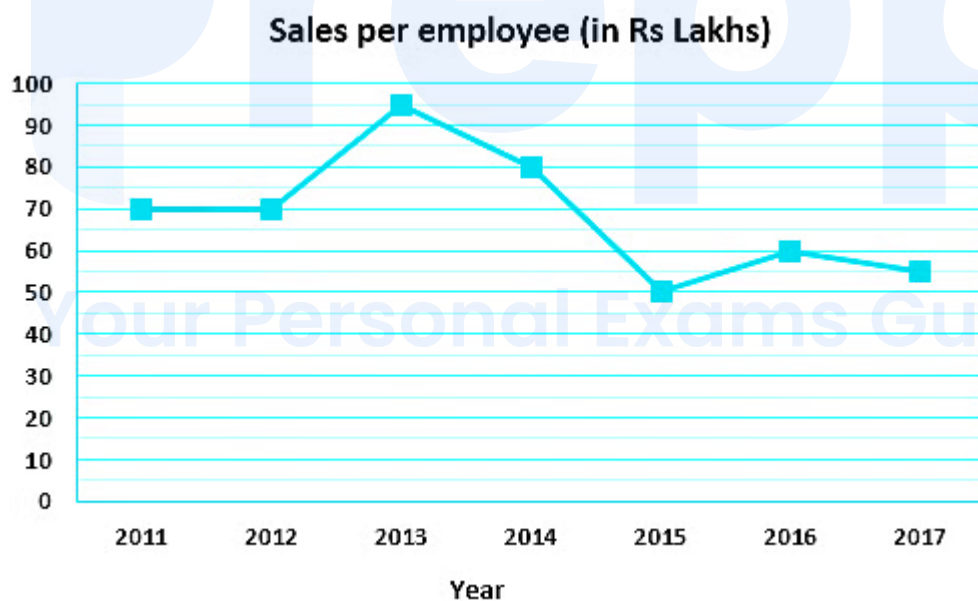
b. 1200

c. 1500

d. 1000

66. A boat covers 63 km upstream in 9 hours and covers the same distance downstream in 7 hours. What is the speed (in km/hr) of the boat in still water? (+2, -0.5)
- 8.7
  - 8.5
  - 7
  - 8

67. **Direction:** The line graph shows the Sales per employee of a certain company. Study the diagram and answer the following equations. (+2, -0.5)



In which year were the Sales per employee greater than that of the previous year?

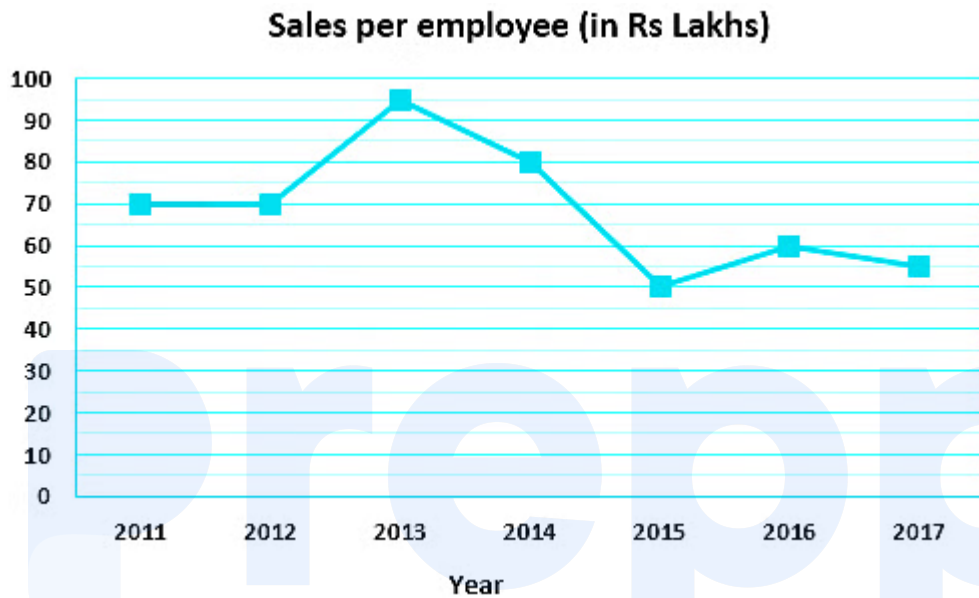
- 2014
- 2015

c. 2017

d. 2016

68. **Direction:** The line graph shows the Sales per employee of a certain company. Study the diagram and answer the following equations.

(+2, -0.5)



What was the difference in the Sales per employee (in Rs. lakhs) between the years 2011 and 2015?

a. 15

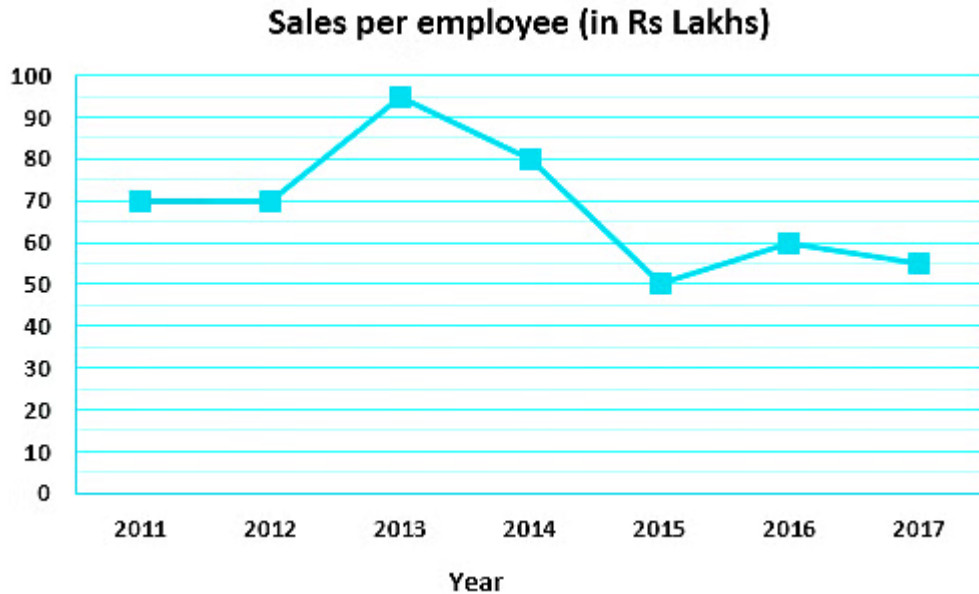
b. 10

c. 20

d. 5

69. **Direction:** The line graph shows the Sales per employee of a certain company. Study the diagram and answer the following equations.

(+2, -0.5)



The Sales per employee in 2012 were greater than that in 2015 by

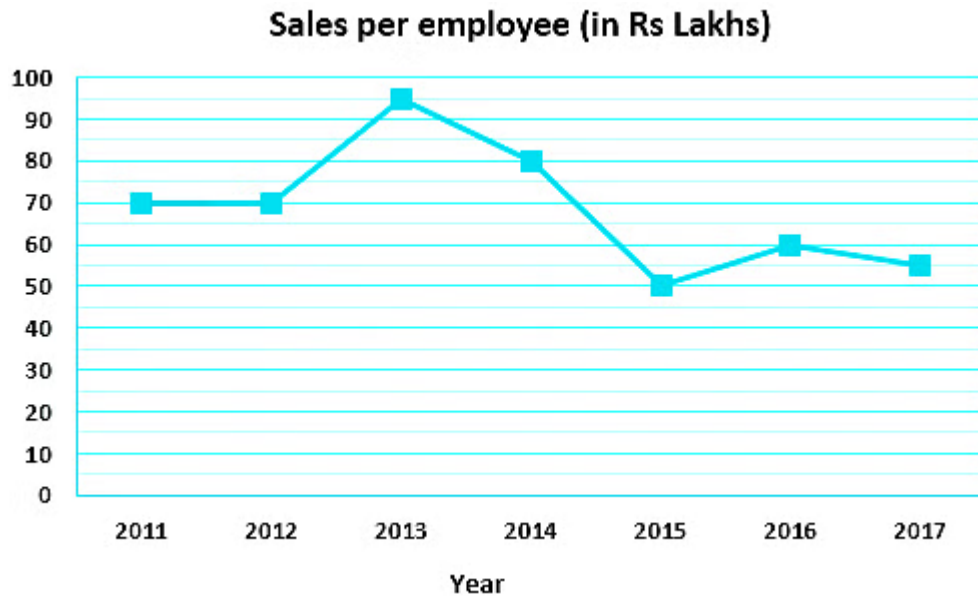
-----.

- a. 16.7%
- b. 20%
- c. 40%
- d. 28.5%

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70. **Direction:** The line graph shows the Sales per employee of a certain company. Study the diagram and answer the following equations.

(+2, -0.5)



If the number of employees of the company was 80 in the year 2015 then what was the sales (in Rs. crore) of the company in the year 2015?

- a. 30
- b. 40
- c. 20
- d. 50

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71. The lengths of the two diagonals of a rhombus are 5 cm and 12 cm. Find its area (in  $\text{cm}^2$ ). (+2, -0.5)

- a. 30
- b. 15
- c. 60
- d. 45

72. What is the sum of the measures of all the interior angles of a regular polygon of 9 sides? (+2, -0.5)

- a. 1260
- b. 1440
- c. 1800
- d. 2340

73. The surface area of a sphere is  $1386 \text{ cm}^2$ . Find its diameter (in cm). (+2, -0.5)

- a. 10.5
- b. 42
- c. 21
- d. 31.5

74.  $\Delta PQR$  is right angled at Q. If  $\angle R = 60^\circ$ , then find the value of  $(\sec P - 1/\sqrt{3})$ . (+2, -0.5)

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

75.  $\Delta PQR$  is right angled at Q. If  $\operatorname{cosec} P = 25/24$ , then what is the value of  $\cot R$ ? (+2, -0.5)

- a.  $25/7$
- b.  $24/25$
- c.  $7/24$
- d.  $24/7$

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## General Awareness

76. National Income refers to \_\_\_\_\_. (+2, -0.5)
- a. Money value of goods and services produced in a country during a year
  - b. Money value of stocks and shares of a country during a year
  - c. Money value of capital goods produced by a country during a year
  - d. Money value of consumer goods produced by a country during a year
- 
77. State Land Reform is under which schedule of the Indian Constitution? (+2, -0.5)
- a. 7<sup>th</sup> Schedule
  - b. 8<sup>th</sup> schedule
  - c. 9<sup>th</sup> Schedule
  - d. 10<sup>th</sup> schedule
- 
78. The remains of the resistant rocks found in the river eroded plain or peneplain are called \_\_\_\_\_. (+2, -0.5)
- a. Monadnock
  - b. Jukenberg
  - c. Hum
  - d. No option is correct

---

79. Which of the following rivers does not make an estuary? (+2, -0.5)

- a. Narmada
  - b. Tapi
  - c. Mandovi
  - d. Mahanadi
- 

80. Which ruler of Bengal had relations with China? (+2, -0.5)

- a. Ghiyasuddin Azamshah
  - b. Sikandar Shah
  - c. Nusrat Shah
  - d. Hussein Shah
- 

81. When was the Arya Samaj divided on principles of vegetarianism? (+2, -0.5)

- a. 1893
  - b. 1895
  - c. 1903
  - d. 1913
- 

82. Ustad Mansur was a famous painter during the rule of which among the following Mughal Emperors? (+2, -0.5)

- a. Akbar
  - b. Jahangir
  - c. Shah Jahan
  - d. Aurangzeb
- 

**83.** Which country on 23 October 2017 signed the Paris agreement on climate change, leaving the United States and Syria as the only two countries holding out to sign this global climate pact? **(+2, -0.5)**

- a. Nicaragua
  - b. Colombia
  - c. Peru
  - d. Uganda
- 

**84.** Which singer was in January 2018, chosen for the 5<sup>th</sup> Edition of the Yash Chopra Memorial Award 2018 for her outstanding contribution to the Hindi film industry? **(+2, -0.5)**

- a. Alka Yagnik
  - b. Asha Bhosle
  - c. Sunidhi Chauhan
  - d. Kavita Krishnamurthy
- 

**85.** Where is the tomb of the Mughal Emperor Jahangir in Pakistan? **(+2, -0.5)**

- a. Islamabad
  - b. Hyderabad
  - c. Lahore
  - d. Karachi
- 

86. What is the number of groups and periods in the modern periodic table? (+2, -0.5)

- a. 18, 7
  - b. 18, 8
  - c. 16, 7
  - d. 16, 8
- 

87. Which among the following is an example of a mixture? (+2, -0.5)

- a. Milk
  - b. Gasoline
  - c. Liquefied petroleum gas
  - d. All options are correct.
- 

88. Which Schedule of the Indian Constitution was added by the 74<sup>th</sup> Constitutional Amendment Act? (+2, -0.5)

- a. Ninth Schedule
- b. Tenth Schedule

c. Eleventh Schedule

d. Twelfth Schedule

---

89. Which among the following comes under the elements of Basic Structure of Indian Constitution? (+2, -0.5)

I. Supremacy of Constitution

II. Free and Fair Election

III. Judicial Review

a. Only I

b. Only II

c. Both I and II

d. All I, II and III

---

90. The plasma of the blood contains which among the following constituents? (+2, -0.5)

I. Proteins

II. Salts

III. Hormones

a. Only I and II

b. Only I and III

c. Only II and III

d. All I, II and III

---

91. What is the basis of first level of classification among plants? (+2, -0.5)

- a. Differentiated plant body
- b. Specialised tissues
- c. Ability to bear seeds
- d. No option is correct.

---

92. On 5 September 2017, which among the following launched an online quiz competition named 'PrakritiKhoj'? (+2, -0.5)

- a. Health Ministry
- b. Commerce Ministry
- c. Environment Ministry
- d. Home Ministry

---

93. Researchers at the University of Illinois have discovered new form of matter called Excitonium which was coined by \_\_\_\_\_ in the 1960's. (+2, -0.5)

- a. Bertrand Halperin
  - b. Eugene Wigner
  - c. Paul Dirac
  - d. Felix Bloch
-

94. On 24 October 2017, the Government of India announced a massive package of \_\_\_\_\_ to boost economy. (+2, -0.5)

- a. Rs. 7 lakh crore
- b. Rs. 9 lakh crore
- c. Rs. 15 lakh crore
- d. Rs. 5 lakh crore

95. On 22 November 2017, the Union cabinet approved expansion of which mission for a Pan India coverage in all the 640 districts of the country? (+2, -0.5)

- a. Make in India
- b. Swatchh Bharat
- c. Beti Bachao Beti padhao
- d. Skill India

96. A body is initially moving with a velocity of 5 m/s. It undergoes an acceleration of  $2 \text{ m/s}^2$  for 4 seconds. Find the displacement (in m) of this body in these 4 seconds. (+2, -0.5)

- a. 4
- b. 72
- c. 36
- d. 8

97. If the velocity of a body is halved its kinetic energy \_\_\_\_\_. (+2, -0.5)

- a. become 4 times
- b. becomes  $1/4^{\text{th}}$
- c. is also doubled
- d. becomes half

98. Plants utilise \_\_\_\_\_ from the atmosphere for photosynthesis. (+2, -0.5)

- a. Oxygen
- b. Nitrogen
- c. Carbon dioxide
- d. Hydrogen

99. Which of the statements given below is / are correct? (+2, -0.5)

- A) Russia hosted the Golf 2017 Players Championship.
  - B) Elina Svitolina won the Tennis 2017 Italian Open Women's Singles.
  - C) Henri Kontinen and John Peers won the Tennis 2017 ATP World Tour Finals Men's Doubles.
- a. Only A
  - b. Only B
  - c. Both A and B

d. Both B and C

---

100. In Microsoft Excel, left arrow key stroke leads to \_\_\_\_\_ movement on a spreadsheet. (+2, -0.5)

- a. One cell up
- b. One cell down
- c. One cell Left
- d. One cell right

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## Answers

### 1. Answer: c

#### Explanation:

The correct answer is **Frenetically**.

#### ★ Key Points

The correctly spelt word is *frenetically*.

It means involving a lot of excitement and activity (in an uncontrollable way).

- Example: *The political party campaigned frenetically.*

Thus, the correct answer is **option 3**.

---

### 2. Answer: c

#### Explanation:

The correct answer is **ACB**.

#### ★ Key Points

- The *first part of the sequence is part A*. It suitably follows the given phrase. ' So we did get to read a whole lot...' seems logical.
- This can be appropriately be *followed by part C* as it tells us the reading is related to what.
- *Part B* can suitably form the *ending of the sentence*.

*So we did get to read a whole lot on how we can save a wounded sparrow from dying.*

Thus, the correct sequence is ACB, making **option 3** the correct answer.

### 3. Answer: c

#### Explanation:

The correct answer is **gained**.

#### ★ Key Points

Reading the sentence we find that:

- The sentence is talking about something that happened in the near past.
- Thus the sentence is in the simple past tense and should use an appropriate verb.
- The verb **gain** should be used in the simple past tense in order to fit into the grammatical structure of the sentence.
- The past tense of the verb gain is **gained**.
- Other given options are incorrect as **option 1 is a continuous verb** and **option 2 is a verb denoting the future**.
- Thus the correct answer is **gained**.

*LPG quickly **gained** popularity as it was easy to use and did not tarnish vessels.*

Thus, the correct answer is **option 3**.

### 4. Answer: a

#### Explanation:

The correct answer is **Inclined**.

#### ★ Key Points

Reading the above sentence we find that:

- The modal verb **might** is used in the sentence.

- As a rule, the verb that follows **might be** should be in the **past participle** form
  - **Example** : *She might be interested in this .*
- The verb in the given sentence is **incline**.
- Thus the correct form to be used here is **inclined**, as it is the **past participle** of incline.
- Thus, the correct answer is **option 1** .

Correct Sentence : *You might be **inclined** to put the blame on infrastructure and officials, which is understandable.*

## 5. Answer: d

### Explanation:

Let us look into the meaning of the given words:

Mirthful – full of laughter or humour

Exultant – joyful and proud (because of triumph or success)

Apathetic – having or showing little or no emotion

Melancholic – affected by sadness or depression

Thus, the correct answer is **option 4** .

## 6. Answer: d

### Explanation:

Let us look into the meaning of the given words:

Twang – the sharp, tinny sound of a plucked string or banged metal object

Resonance – the production of a sound as a result of vibration of another object

Oratory – skillful and effective public speaking

Phonetics – the study and systematic classification of speech sounds

Thus, the correct answer is **option 4** as *phonetics* expresses the meaning.

---

## 7. Answer: d

### Explanation:

The correct answer is **The time has come when someone is doomed to suffer a disaster.**

#### ★ Key Points

- When someone's number is up, it means that the time has come when he\she is doomed to die or suffer some other disaster or setback.
    - *I have suffered so many crises. I think my number is up.*
  - Thus, the correct answer is **option 4**.
- 

## 8. Answer: d

### Explanation:

The correct answer is **An encouraging stimulus.**

#### ★ Key Points

- The phrase *a shot in the arm* refers to something that has a sudden and positive effect on something.
    - *Winning this tournament has been a shot in the arm for me.*
  - *Stimulus* refers to a thing that arouses energy in someone.
  - So, **option 4** expresses the best meaning of the given phrase.
-

## 9. Answer: a

### Explanation:

*If* is used to introduce a conditional clause. It is used to say that a thing can happen only after something else happens.

So, in the given sentence, *if* fits the blank. The last sentence conveys that we can be free from tyranny *if* (*condition*) we lead ourselves away from the field of unworthy thoughts.

Thus, the correct answer is **option 1**.

---

## 10. Answer: d

### Explanation:

We need to understand the difference between *to* and *too*.

*To* is a preposition used to show the relationship between the subject and the other elements of the sentence.

*I cannot deliver this package to the owner.*

*Too* is used to indicate the idea of something in excess. It refers to the excessive or extra amount of something. It can also mean also.

*I am too tired to go to the mall.*

*You are worried too. (Here, too means also)*

In the given sentence, we are looking for the word that will emphasize the excessive (extra) amount of time and energy involved.

*...enters, requires **too** much time and energy...*

Thus, the correct answer is **option 4**.

## 11. Answer: a

### Explanation:

The correct answer is ' **entrance** '

#### ★ Key Points

- The blank needs to be filled with a noun.
- Verbs will not fit into the context and the structure of the sentence. (... *which seeks entering...* is incorrect.)
- Entrance seems a proper fit - ... *which seeks **entrance** . To stand guard...*

The correct answer is **option 1** .

## 12. Answer: a

### Explanation:

The correct answer is ' **not** '.

#### ★ Key Points

- The word *not* will fit into the given context. Other words are not grammatically correct.
- ...*It is **not** enough that we have...*
- Thus, the correct answer is **option 1** .

#### ★ Important Points

- We use *neither* to mean *not the one or the other of two*.
  - *Example : Neither of my parents likes the movie (The mother and the father do not like the movie)*

13. Answer: c

**Explanation:**

Given the structure of the sentence, we need to use an adverb (that will describe how necessary it is). The meaning of the word *vitally* is 'in an important way'.

*...which makes it **vitally** necessary that our interests...*

Thus, the correct answer is **option 3**.

14. Answer: b

**Explanation:**

The correctly spelt word is *handkerchief*. It refers to a piece of clothing / fabric which we use to blow our nose or tears.

*Example : She took out her handkerchief and used it to wipe his tears.*

Thus, the correct answer is **option 2**.

15. Answer: d

**Explanation:**

The correct sentence in indirect speech is '**Sneha said that she was buying a gaming console that day.**'

★ Key Points

- In Direct speech, the actual words of the speaker are quoted within quotation marks.
- In Indirect speech, we report someone else's statement in our own words.

- When we change the speech from Direct to Indirect, we drop the quotation marks and use the conjunction '**that**' before the Indirect statement. We make suitable changes in tenses as well.
- A simple present becomes a simple past:
  - Drinks --> drank
- A present continuous becomes a past continuous:
  - Is drinking --> was drinking
- A present perfect becomes a past perfect:
  - Has eaten --> had eaten
- A simple past becomes a past perfect:
  - Ate --> had eaten

### ★ Additional Information

- Also, *am* changes to *was*, *today* changes to *that day*, *now* changes to *then*, *tomorrow* changes to *the next day*, etc.
- So, keeping these points in mind, the sentence in the question, when changed from Direct to Indirect speech, becomes: *Sneha said that she was buying a gaming console that day.*

Therefore, the correct answer is **option 4**.

## 16. Answer: a

### Explanation:

The correct sentence in passive voice is ' **The assistant was made to work late by the boss.**'

### ★ Key Points

- In the given sentence, the subject is *someone* that works on the object.
- A sentence is said to be in Active Voice when the subject performs the action.
- When the subject is being acted upon by the verb – it is Passive Voice.
  - The sequence in Active voice – Subject + verb + object
  - The sequence in Passive voice – Object + verb + Subject

### ★ Additional Information

- The meaning conveyed by the sentence in both voices will remain the same, only the sequence of the subject and the object (or the action) changes.
- Let us understand this through an example
  - **Active Voice:** *She kept the book in the cupboard.*
  - **Passive Voice:** *The book was kept in the cupboard by her.*
- Note that 'kept' changes to 'was kept'.
- The given sentence is in Active Voice as somebody is the subject performing an action.
- The sentence when converted in Passive voice becomes:
  - *The assistant was made to work late by the boss.*

Therefore, the correct answer is **option 1**.

## 17. Answer: a

### Explanation:

The correct answer is **QRP**

### ★ Key Points

- The sentence starts with 'A serious critic'
- Hence the next part should refer to or talk about this *critic* in one way or another
- Out of **P, Q and R**, only '**Q**' talks about to the critic who 'has to comprehend...'
- Logically, the next part should talk about that which the critic should comprehend. Thus **R**, which talks about the '*content, unique structure...*' is the logical successor.
- The adjectives used in **R** should refer to something (noun) which is provided by **P** - '*meaning of a work of art*'

Thus the correct sentence is: *A serious critic has to comprehend the particular content, unique structure, and the special meaning of a work of art*

18. Answer: a

Explanation:

The correct answer is **Flexible**

★ Key Points

- Let's look at the meaning of each word given:

|          |                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------|
| Dogmatic | strong belief in a set of principles/ beliefs while thinking that other beliefs are untrue and wrong |
| Flexible | capable to change according to the circumstances in order to adapt easily                            |
| Arrogant | behaving in a proud and unpleasant manner                                                            |
| Formal   | public or official                                                                                   |
| Stubborn | unwilling to change one's mind                                                                       |

19. Answer: d

Explanation:

The correct answer is- '**Rough**'

★ Key Points

- Exquisite means very beautiful and delicate. (बहुत सुंदर और नाजुक।)
- Let us look into the meaning of the difficult words:
- Stale** – no longer fresh or new (अब ताजा या नया नहीं)
- Elaborate** – containing a lot of details (and complexities) (बहुत सारे विवरण (और जटिलताओं) से युक्त)

- **Consummate** – to complete (an arrangement, agreement, or the like) by a pledge or the signing of a contract ( एक प्रतिज्ञा या अनुबंध पर हस्ताक्षर करके पूरा करना (एक व्यवस्था, समझौता, या पसंद) )
- Thus, among all the options, the word *rough* best expresses the opposite meaning. This makes **option 4** the correct answer.

---

## 20. Answer: d

### Explanation:

Scrumptious means extremely delicious / tasting good. Let us look into the meaning of the difficult words:

Stale – no longer fresh or new

Crushable – that can be crushed

Devotedness – the quality of being extremely loyal

Thus, among all the options, the word *tasty* best expresses the meaning of the given word. This makes **option 4** the correct answer.

---

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## 21. Answer: c

### Explanation:

Dour means unfriendly, unhappy and serious in manner or appearance. Let us look into the meaning of the difficult words:

Cheery – in a positive mood giving comfort or encouragement to someone

Morose – unhappy and annoyed

Approachable – friendly and easy to talk to.

Thus, the word *morose* best expresses the meaning of the given word, making **option 3** the correct answer.

---

**22. Answer: c**

**Explanation:**

The word *tweak* means to pull and twist something with a small sudden movement. Here, the sentence should use *will tweak* in the blank to make a sensible and a grammatically correct sentence.

Complete sentence - *The mechanic **will tweak** the car according to his own liking.*

Thus, the correct answer is **option 3**.

---

**23. Answer: a**

**Explanation:**

The correct phrase is *discharge from the hospital*. It means to leave the hospital after treatment.

Complete sentence - *She was discharged **from** the hospital after treatment.*

Thus, the correct answer is **option 1**.

---

**24. Answer: b**

**Explanation:**

The correct answer is **2**

★ Key Points

- Let's look at each part:
  - ***The Creole language is a:***
    - To refer to a specific noun (here Creole language), article '**the**' is used correctly since superlative is used to refer to specific things, e.g., *The Brahmaputra, The Himalayas*, etc.
  - ***stable natural language develop from:***
    - Here, the adjectives *stable* and *natural* qualify the noun *language*
    - Since the part is talking about the Creole language's development and since this developed in the past from *a mixture of different languages*, the past tense form of the root verb 'develop', i.e., '**developed**' should be used
  - ***a mixture of different languages:***
    - This conveys that Creole developed from a mixture of varied languages and this part is grammatically correct

Thus the correct sentence is: *The Creole language is a stable natural language developed from a mixture of different languages.*

25. Answer: c

Explanation:

The correct answer is 3

### ★ Key Points

- Let's look at each part of the sentence:
  - ***The 26th of January was chosen:***
    - This part is grammatically correct since the superlative article '**the**' is used to refer to a very special date in our country's history
  - ***to commemorate the Purna Swaraj:***
    - Here, the usage of the superlative article '**the**' to refer to *Purna Swaraj* is correct as it refers to a specific historical declaration
  - ***declaration for the complete independence, of 1930:***
    - The word *declaration* means a formal statement of something

- It is followed by the preposition *of*. Example: Declaration of freedom, declaration of love etc
- The part '*..., of 1930*' is used to convey that the declaration was made in the year 1930 and is grammatically correct

**The correct sentence is:** *The 26th of January was chosen to commemorate the Purna Swaraj declaration **of** the complete independence, of 1930.*

---

**26. Answer: a**

**Explanation:**

Wine is made from grapes by the process of fermentation. Similarly, Curd is made from Milk by the process of fermentation. Hence, "Curd : Milk" is the correct answer.

---

**27. Answer: b**

**Explanation:**

The pattern followed here is:

In  $36 : 9, 3 + 6 = 9$

Similarly,

$4 + 9 = 13$

Hence, 13 is the correct answer.

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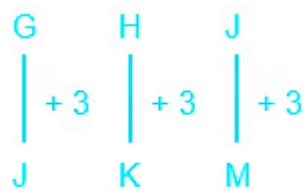
**28. Answer: a**

**Explanation:**

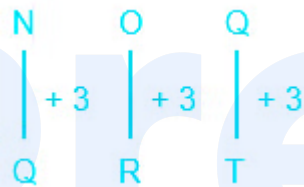
The pattern followed here is:

| 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  |

In GHJ : JKM



Similarly, for NOQ



Hence, the correct answer is "QRT".

29. Answer: b

Explanation:

Here Rice, Wheat, and Bajra are included in the category of cereals/crop, while rubber is not.

Hence, "Crop – Rubber" is the correct answer.

30. Answer: d

Explanation:

$$17 \times 2 = 34$$

$$19 \times 2 = 38$$

$$23 \times 2 = 46$$

$$27 \times 2 = 54 \neq 56$$

Hence, "27 – 56" is the correct answer.

### 31. Answer: a

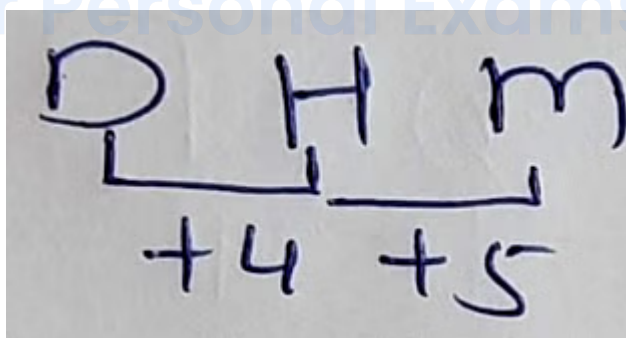
#### Explanation:

The table shows the place value of the alphabet.

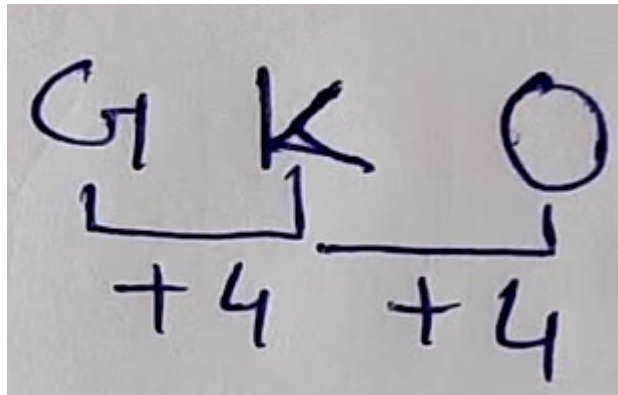
| Alphabets        | A  | B  | C  | D  | E  | F  | G  | H  | I  | J  | K  | L  | M  |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Positional value | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 |
| Positional value | 26 | 25 | 24 | 23 | 22 | 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:

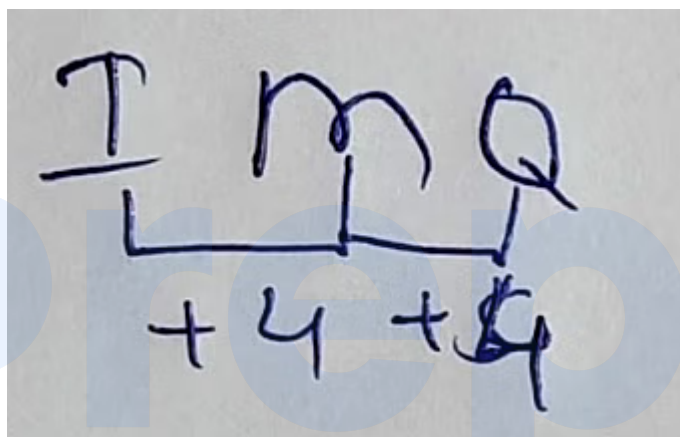
1) DHM →



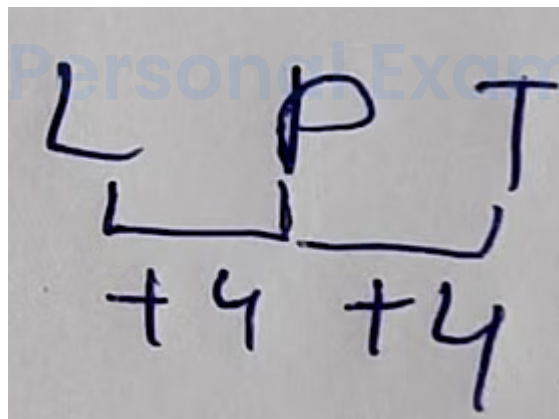
2) GKO →



3) IMQ →



4) LPT →



Hence, the correct answer is "DHM".

32. Answer: c

### Explanation:

Upon arranging the words as per dictionary order,

- (3) **C**ara van
- (2) **C**ard igan
- (4) **C**art on
- (5) **C**hal lenge
- (1) **C**har ity

Hence, "Cardigan" is the correct answer.

### 33. Answer: c

### Explanation:

Here, the logic followed is:

The image shows a handwritten calculation on a piece of paper. At the top, the numbers 1, 2, 6, 42, and 1806 are written in a sequence. Below each number is a bracketed expression:  $\times(1+1)$  under 1,  $\times(2+1)$  under 2,  $\times(6+1)$  under 6, and  $\times(42+1)$  under 42. The final result 1806 is written at the end of the sequence. A large, faint watermark 'prepp' is visible in the background.

Hence, the correct answer is "1806".

### 34. Answer: c

### Explanation:

$$L \xrightarrow{+3} O \xrightarrow{+2} Q \xrightarrow{+3} T \xrightarrow{+2} V \xrightarrow{+3} \boxed{Y}$$

$$L + 3 = O; O + 2 = Q$$

$$Q + 3 = T; T + 2 = V$$

$$V + 3 = Y$$

Hence, "Y" is the correct answer.

### 35. Answer: b

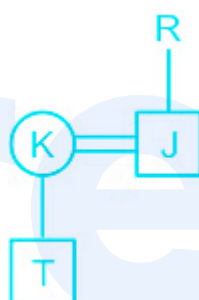
#### Explanation:

Let us first decode the given symbols and then draw a family tree.

|         |        |      |     |        |
|---------|--------|------|-----|--------|
| R is    |        |      |     |        |
| Symbol  | +      | -    | ×   | ÷      |
| Meaning | Mother | Wife | Son | Father |
| of S    |        |      |     |        |

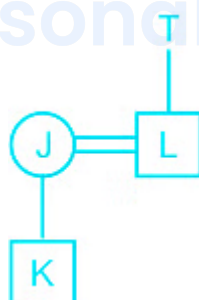
| Symbol in Diagram | Meaning                    |
|-------------------|----------------------------|
| ○                 | Female                     |
| □                 | Male                       |
| ==                | Married Couple             |
| —                 | Siblings               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

1)  $K + T \times J \times R$



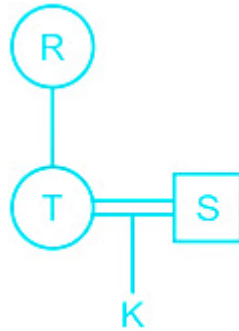
Here K is mother of T. So, this is not the correct answer.

2)  $J + K \times L \times T$



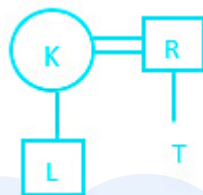
Here K is grandson of T. Hence this option is the correct answer.

3)  $R + T - S \div K$



Here the gender of K cannot be determined.

4)  $K + L \times R \div T$



Here K is mother of T. So, this is not the correct option

Therefore, " $J + K \times L \times T$ " is the correct answer.

36. Answer: c

Explanation:

1) Can → Re **ca** lcitra nt

2) Rent → **Re** calcitra nt

3) Recall → **Recal** citrant, this word cannot be formed as there is single L in the word Recalcitrant.

4) Calcite → R **ecalci** rant

Hence, "Recall" word cannot be formed from the given word.

37. 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  |

FRANK is written as GQBL. The pattern followed here is,



Similarly, MARCO can be coded as,



Hence, the correct answer is, "NZSBP".

38. Answer: d

Explanation:

Changing operations as per the given format:

| Symbol   | Meaning  |
|----------|----------|
| $\times$ | $+$      |
| $\div$   | $\times$ |
| $-$      | $\div$   |
| $+$      | $-$      |

Given expression:  $20 + 16 \times 6 \div 10 - 4 = ?$

After changing the symbols:  $20 - 16 + 6 \times 10 \div 4 = ?$

$$= 20 - 16 + 15$$

$$= 19$$

Thus, 19 is the correct answer.

39. Answer: b

Explanation:

Given expression:  $13 \times 8 + 25 - 6 \div 10 = 20$

$$1) \div \text{ and } - \rightarrow 13 \times 8 + 25 \div 6 - 10 \neq 20$$

$$2) \times \text{ and } - \rightarrow 13 - 8 + 25 \times 6 \div 10 = 20$$

$$3) + \text{ and } \div \rightarrow 13 \times 8 \div 25 - 6 + 10 \neq 20$$

$$4) - \text{ and } + \rightarrow 13 \times 8 - 25 + 6 \div 10 \neq 20$$

Hence, “ $\times$  and  $-$ ” on interchanging in the given equation we can get the required answer. So “ $\times$  and  $-$ ” is the correct answer.

**40. Answer: c**

**Explanation:**

$$30 \% 3 = 100 \rightarrow 30 \div 3 \times 10 = 100$$

$$70 \% 14 = 50 \rightarrow 70 \div 14 \times 10 = 50$$

$$20 \% 8 = 25 \rightarrow 20 \div 8 \times 10 = 25$$

Similarly,

$$50 \% 5 \rightarrow 50 \div 5 \times 10 = 100$$

Hence, 100 is the correct answer.

**41. Answer: d**

**Explanation:**

Given series,

CBABABAB, BACBABAB, BABACBAB, BABABACB, BCABABAB, \_\_\_\_\_

The logic followed here is shown in the table given below.

|          |          |          |          |          |   |          |   |
|----------|----------|----------|----------|----------|---|----------|---|
| <u>C</u> | B        | A        | B        | A        | B | A        | B |
| B        | A        | <u>C</u> | B        | A        | B | A        | B |
| B        | A        | B        | A        | <u>C</u> | B | A        | B |
| B        | A        | B        | A        | B        | A | <u>C</u> | B |
| B        | <u>C</u> | A        | B        | A        | B | A        | B |
| B        | A        | B        | <u>C</u> | A        | B | A        | B |

The position of C is shifting by two places ahead in a cyclic manner.

So, the next term in the series will be BABCBAB.

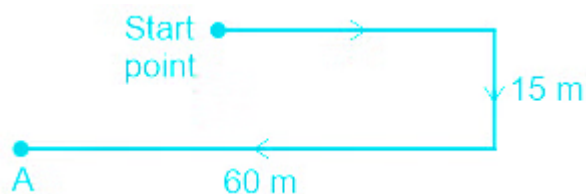
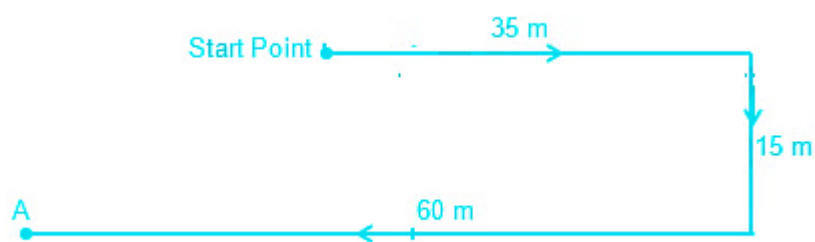
Hence, the correct answer is, **"BABCBAB"**.

#### 42. Answer: a

##### Explanation:

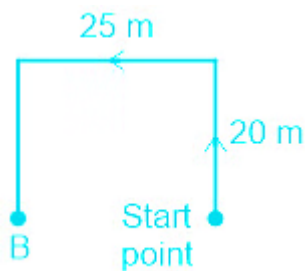
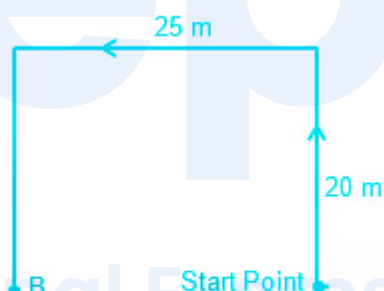
The movement of the footballer A is shown below,

A runs 35 m East, then 15 m South, turns to his right and runs 60 m

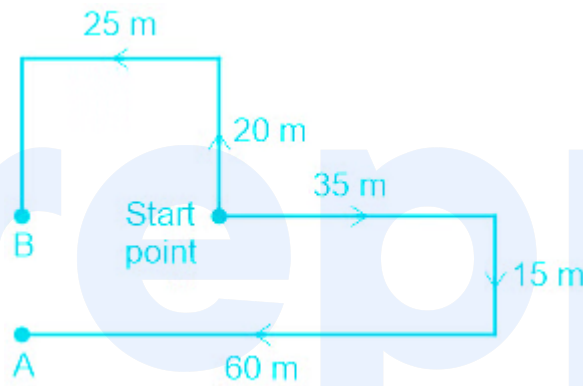
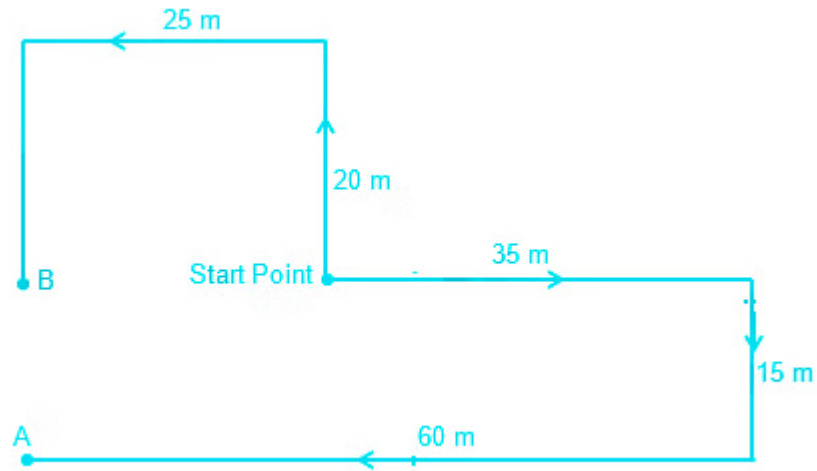


The movement of footballer B is shown below,

B runs 20 m North, then 25 m West, turns left and runs 20 m



Combining the movement of both the footballers having the common starting point, we get



From the above figure, we can conclude that B is 15 meters away from A in the north direction.

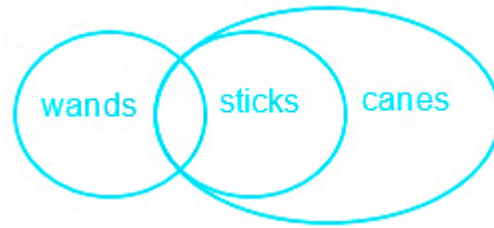
Hence, the correct answer is "15 m North".

#### 43. Answer: a

#### Explanation:

**Statement I:** All sticks are canes

**Statement II:** Some wands are sticks



**Conclusion I:** Some canes are wands  $\rightarrow$  True

**Conclusion II:** No wands are canes  $\rightarrow$  False (As those wands which are sticks are also canes)

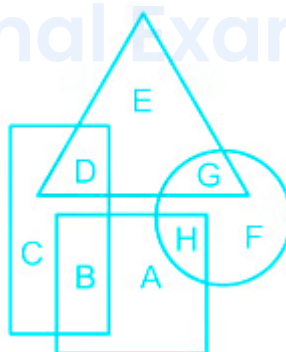
Hence, only Conclusion I, "Some canes are wands" follows.

#### 44. Answer: d

##### Explanation:

Rectangle represents Authors, Circle represents Art critics, Triangle represents Tattooists, Square represents Joggers.

The Letters that represents Joggers who are either Art critics or Authors i.e. square who are either circle or rectangle are B and H.

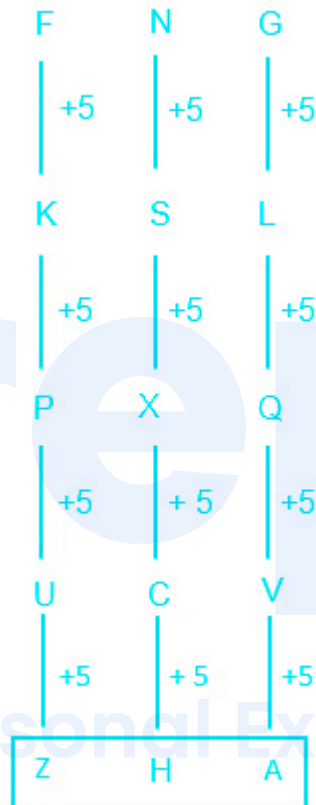


Hence, "BH" is the correct answer.

#### 45. 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  |



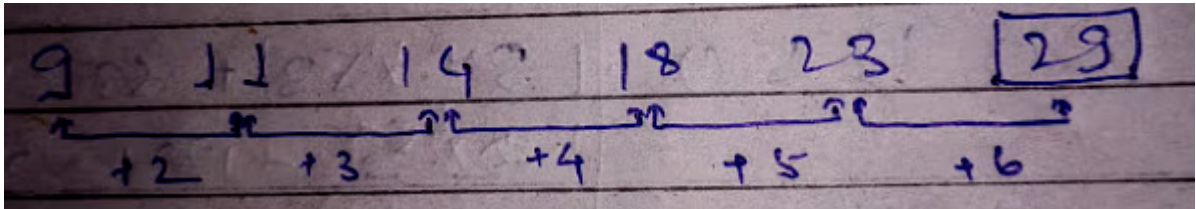
Hence, " ZHA" is the correct answer.

### 46. Answer: c

### Explanation:

The pattern followed here is,

Consecutive numbers (i.e. 2, 3, 4, 5 and 6) are added respectively to get the next term of the series.



Hence, the correct answer is "29".

47. Answer: b

Explanation:

- 1)  $(8, 17, 33) \rightarrow 8 \times 2 + 1 = 17; 17 \times 2 - 1 = 33$
- 2)  $(3, 7, 12) \rightarrow 3 \times 2 + 1 = 7; 7 \times 2 - 1 = 13 \neq 12$
- 3)  $(9, 19, 37) \rightarrow 9 \times 2 + 1 = 19; 19 \times 2 - 1 = 37$
- 4)  $(15, 31, 61) \rightarrow 15 \times 2 + 1 = 31; 31 \times 2 - 1 = 61$

Hence, "(3, 7, 12)" is the correct answer.

48. Answer: c

Explanation:

The image is flipped vertically.

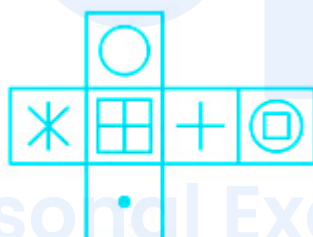


Hence Option 3 is the correct answer.

49. Answer: b

Explanation:

Given unfolded cube,



From the above figure, we can conclude that,

- 1) The face of dice having \* will be opposite +.
- 2) The side with a dot will be opposite to the circle.
- 3) The side with 4 squares will be opposite to that of the circle and square.

Now, in option 2



The top side has



and is adjacent to



which is not possible. Thus the above cube can not be formed.

Hence, the correct answer is, "Option 2".

**50. Answer: d**

**Explanation:**

1) 34, 75, 23, 75 → EVDV

2) 30, 59, 43, 98 → MQLY

3) 14, 75, 23, 69 → CVDW

4) 68, 78, 95, 34 → TONE

Hence, the set which represents TONE is 68,78,95,34.

**51. Answer: d**

**Explanation:**

We can write,

$$\Rightarrow \sqrt{243} = \sqrt{(81 \times 3)} = 9\sqrt{3}$$

$$\Rightarrow \sqrt{108} = \sqrt{(36 \times 3)} = 6\sqrt{3}$$

$$\Rightarrow \sqrt{147} = \sqrt{(49 \times 3)} = 7\sqrt{3}$$

$$\therefore \sqrt{243} - \frac{1}{2} \times (\sqrt{108}) - \sqrt{147} = 9\sqrt{3} - 3\sqrt{3} - 7\sqrt{3} = -\sqrt{3} = -1.732$$

---

**52. Answer: c**

**Explanation:**

Place value is the value of the digit with reference to its position in the number

$\Rightarrow$  Place value of 7 in given number = 70000

While, face value is the actual value of the digit

$\Rightarrow$  Face value of 7 = 7

$\therefore$  Required difference = 70000 - 7 = 69993

---

**53. Answer: c**

**Explanation:**

Given,  $\sqrt{(1 + y/16)} = 7/4$

Squaring both sides,

$$\Rightarrow 1 + y/16 = 49/16$$

$$\Rightarrow 16 + y = 49$$

$$\Rightarrow y = 49 - 16 = 33$$

$$\therefore 5y - 15 = 5(33) - 15 = 165 - 15 = 150$$

---

**54. Answer: b**

### Explanation:

**Given:**  $x^2 + 1/x^2 = 6$

**Formula:**  $(a - b)^2 = a^2 + b^2 - 2ab$

As we know,  $(x - 1/x)^2 = x^2 + 1/x^2 - 2$

$$\Rightarrow (x - 1/x)^2 = 6 - 2 = 4$$

$$\Rightarrow (x - 1/x) = \sqrt{4} = 2$$

Now, we can write,

$$\Rightarrow x^3 - x^2 - x + 1 = x^3 - x - x^2 + 1 = x(x^2 - 1) - 1(x^2 - 1)$$

$$= (x - 1)(x^2 - 1)$$

Hence,

$$\therefore \frac{2x(x-1)}{x^3-x^2-x+1}$$

$$= \frac{2x(x-1)}{(x-1)(x^2-1)}$$

$$= 2x/(x^2 - 1)$$

$$= 2x/\{(x(x - 1/x))\}$$

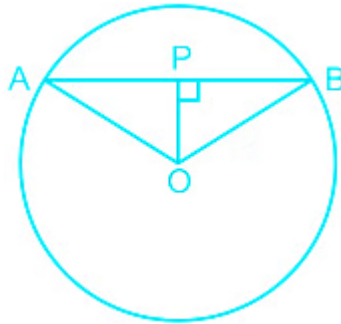
$$= 2/(x - 1/x)$$

$$= 2/2 = 1$$

### 55. Answer: a

### Explanation:

The given figure can be drawn as,



Let O be the centre of the circle, AB be the chord and P is the centre point of chord AB, such that OP is the distance of the chord from the centre of the circle

Now,  $OA = OB = \text{radius of circle} = 25 \text{ cm}$

Length of chord  $= AB = 48 \text{ cm}$

$$\Rightarrow PB = AB/2 = 48/2 = 24 \text{ cm}$$

Applying Pythagoras theorem in  $\triangle OPB$ ,

$$\Rightarrow OB^2 = OP^2 + PB^2$$

$$\Rightarrow 25^2 = OP^2 + 24^2$$

$$\Rightarrow OP^2 = 625 - 576 = 49$$

$$\Rightarrow OP = \sqrt{49} = 7 \text{ cm}$$

$\therefore$  Distance of chord from centre of circle  $= 7 \text{ cm}$

## 56. Answer: c

### Explanation:

In the given figure,  $\angle OBC = 40^\circ$

$\therefore OB = OC = \text{radius of the circle}$

$\Rightarrow \triangle OBC$  is an isosceles triangle

$$\Rightarrow \angle OCB = \angle OBC = 40^\circ$$

$$\Rightarrow \angle BOC = 180^\circ - 40^\circ - 40^\circ = 100^\circ$$

Now, the angle subtended by an arc at the centre of the circle is double the angle subtended by it at any other point of the circle.

$$\therefore \angle BAC = \frac{1}{2} \times \angle BOC = 100^\circ / 2 = 50^\circ$$

**57. Answer: a**

**Explanation:**

Let the initial weight of A and B be '7x' and '8x' units respectively

$$\text{Total weight of A \& B} = 7x + 8x = 15x$$

When A's weight increases by 10% & total weight increases by 20%,

$$\Rightarrow \text{A's increased weight} = 110\% \text{ of } 7x = 1.1 \times 7x = 7.7x$$

$$\Rightarrow \text{Total increased weight} = 120\% \text{ of } 15x = 1.2 \times 15x = 18x$$

Hence,

$$\text{B's increased weight} = 18x - 7.7x = 10.3x$$

$$\Rightarrow \text{Increase in B's weight} = 10.3x - 8x = 2.3x$$

$$\therefore \text{Percentage increase in B's weight} = \frac{2.3x}{8x} \times 100 = 28.75\%$$

**58. Answer: b**

**Explanation:**

Given, X's income = Rs. 18000

But, X's income : Y's income = 3 : 4

$$\Rightarrow 18000/Y's \text{ income} = 3/4$$

$$\Rightarrow Y's \text{ income} = 18000 \times 4/3 = \text{Rs. } 24000$$

$$\text{Now, } X's \text{ savings} = \text{Rs. } 3000$$

$$\therefore \text{Expenses} = \text{Income} - \text{Savings}$$

$$\Rightarrow X's \text{ expenses} = 18000 - 3000 = \text{Rs. } 15000$$

$$\text{But, } X's \text{ expenses} : Y's \text{ expenses} = 5 : 5$$

$$\Rightarrow 15000/Y's \text{ expenses} = 1$$

$$\Rightarrow Y's \text{ expenses} = \text{Rs. } 15000$$

$$\therefore Y's \text{ savings} = 24000 - 15000 = \text{Rs. } 9000$$

**59. Answer: c**

**Explanation:**

Let 'x' units of P and Q alloys are melted to form third alloy

Tin-lead ratio in P alloy = 12 : 5

$$\Rightarrow \text{Quantity of Tin in 'x' units of P alloy} = (12/17)x$$

$$\Rightarrow \text{Quantity of Lead in 'x' units of P alloy} = (5/17)x$$

Similarly,

Tin-lead ratio in Q alloy = 4 : 3

$$\Rightarrow \text{Quantity of Tin in 'x' units of Q alloy} = (4/7)x$$

$$\Rightarrow \text{Quantity of Lead in 'x' units of Q alloy} = (3/7)x$$

Hence,

Total quantity of Tin in R alloy =  $(12/17)x + (4/7)x = (152/119)x$

Total quantity of Lead in R alloy =  $(5/17)x + (3/7)x = (86/119)x$

$\therefore$  Tin-lead ratio in R alloy =  $(152x/119) : (86x/119) = 152 : 86 = 76 : 43$

---

**60. Answer: b**

**Explanation:**

The first 5 positive even numbers divisible by 9 are the first 5 even multiples of 9

$\Rightarrow$  Sum of first 5 even multiples of 9 =  $9(2 + 4 + 6 + 8 + 10) = 9 \times 30 = 270$

$\therefore$  Required average =  $270/5 = 54$

---

**61. Answer: a**

**Explanation:**

**Given:**

The simple interest on a sum for 20 years is  $5/4$  of the principal.

**Concept used:**

Simple interest =  $PRT/100$

**Calculation:**

Given, time = 20 years

$\Rightarrow (5/4)P = (P \times R \times 20)/100$

$\Rightarrow R = 5/4 \times 5 = 25/4$

$\therefore$  The rate of interest is 6.25% p.a.

---

**62. Answer: b**

**Explanation:**

Cost price of 13 articles = Rs. 12

⇒ Cost price of 1 article = Rs.  $12/13$

Similarly,

Selling price of 12 articles = Rs. 13

⇒ Selling price of 1 article = Rs.  $13/12$

∴ Profit = Selling price - Cost price

⇒ Profit on 1 article =  $13/12 - 12/13 = \text{Rs. } 25/156$

∴ Profit percentage =  $(25/156)/(12/13) \times 100 = 25/144 \times 100 = 17.36\%$

---

**63. Answer: c**

**Explanation:**

Given:

The successive discount are 20%, 30% and 20%.

Formula:

Successive discount =  $X + Y - (XY)/100$

Where,

X = First discount

Y = Second discount

Calculation:

$$\text{Successive discount} = X + Y - (XY)/100$$

$$\Rightarrow 20 + 30 - 600/100$$

$$\Rightarrow 44\%$$

Now, again

$$\text{Successive discount} = X + Y - (XY)/100$$

$$X = 44\%, Y = 20\%$$

$$\Rightarrow 44 + 20 - (44 \times 20)/100$$

$$\Rightarrow 64 - 8.8 = 55.2\%$$

$\therefore$  The single equivalent discount is 55.2%.



### Alternate Method

Let the marked price of the tyre be Rs. 'x'

$$\text{Price after first discount} = x - 20\% \text{ of } x = x - 0.2x = 0.8x$$

$$\text{Price after second discount} = 0.8x - 30\% \text{ of } 0.8x = 0.8x - 0.24x = 0.56x$$

$$\text{Price after third discount} = 0.56x - 20\% \text{ of } 0.56x = 0.56x - 0.112x = 0.448x$$

$$\Rightarrow \text{Total discounted price} = x - 0.448x = 0.552x$$

$$\therefore \text{Net discount percentage} = 0.552x/x \times 100 = 55.2\%$$

## 64. Answer: a

### Explanation:

$$\text{As we know, } 36 = 6^2 \Rightarrow \sqrt{36} = 6$$

$$\text{Also, } 729 = 9^3 \Rightarrow \sqrt[3]{729} = 9$$

$$\text{Also, } 81 = 9^2 \Rightarrow \sqrt{81} = 9$$

$$\text{Also, } 64 = 4^3 \Rightarrow \sqrt[3]{64} = 4$$

$$\therefore (\sqrt{36} + \sqrt[3]{729})/(\sqrt{81} \times \sqrt[3]{64}) = (6 + 9)/(9 \times 4) = 15/36 = 5/12$$

---

**65. Answer: d**

**Explanation:**

$$\text{Robin's 1 day work} = 1/9$$

$$\text{Amit's 1 day work} = 1/6$$

When they work together, they received Rs. 2500

$\therefore$  Ratio of wages = Ratio of work efficiencies

$$\Rightarrow \text{Robin's share: Amit's share} = (1/9) : (1/6) = 6 : 9 = 2 : 3$$

$$\text{Sum of ratios} = 2 + 3 = 5$$

$$\therefore \text{Robin's share} = 2/5 \times 2500 = \text{Rs. } 1000$$

---

**66. Answer: d**

**Explanation:**

$$\text{Upstream speed} = \text{Distance/time} = 63/9 = 7 \text{ km/hr}$$

$$\text{Downstream speed} = \text{Distance/time} = 63/7 = 9 \text{ km/hr}$$

$$\therefore \text{Speed in still water} = 1/2 \times (\text{Upstream speed} + \text{Downstream speed})$$

$$\therefore \text{Speed of boat in still water} = (9 + 7)/2 = 8 \text{ km/hr}$$

---

67. Answer: d

**Explanation:**

The sales per employee increases in the year 2016 as compared to the previous year

$\therefore$  Sales per employee in 2016 is greater than that of the previous year

---

68. Answer: c

**Explanation:**

Sales per employee in 2011 = Rs. 70 lakhs

Sales per employee in 2015 = Rs. 50 lakhs

$\therefore$  Required difference =  $70 - 50 = \text{Rs. } 20 \text{ lakhs}$

---

69. Answer: c

**Explanation:**

Sales per employee in 2012 = Rs. 70 lakhs

Sales per employee in 2015 = Rs. 50 lakhs

Difference =  $70 - 50 = \text{Rs. } 20 \text{ lakhs}$

$\therefore$  The Sales per employee in 2012 were greater than that in 2015 by  $= 20/50 \times 100 = 40\%$

---

70. Answer: b

**Explanation:**

Sales per employee in 2015 = Rs. 50 lakhs

No. of employees in 2015 = 80

$\therefore$  Sales of company in 2015 =  $50 \times 80 = \text{Rs. } 4000 \text{ lakhs} = \text{Rs. } 40 \text{ crores}$

---

**71. Answer: a****Explanation:**

As we know,

Area of rhombus =  $\frac{1}{2} \times \text{Product of its diagonals}$

Given diagonals = 5 cm & 12 cm

$\therefore$  Area of rhombus =  $(5 \times 12)/2 = 30 \text{ cm}^2$

---

**72. Answer: a****Explanation:**

For a regular polygon with  $n$  sides,

Sum of interior angles =  $(n - 2) 180^\circ$

$\therefore$  Sum of interior angles of a regular polygon with 9 sides =  $(9 - 2) \times 180^\circ = 1260^\circ$

---

**73. Answer: c****Explanation:**

For a sphere with radius ' $r$ ',

$$\text{Surface area} = 4\pi r^2$$

$$\Rightarrow 1386 = 4 \times (22/7) \times r^2$$

$$\Rightarrow r^2 = 441/4$$

$$\Rightarrow \text{Radius of sphere} = \sqrt{(441/4)} = 21/2 = 10.5 \text{ cm}$$

$$\therefore \text{Diameter of sphere} = 2(10.5) = 21 \text{ cm}$$

---

**74. Answer: c**

**Explanation:**

Given, in  $\Delta PQR$ ,  $\angle Q = 90^\circ$  and  $\angle R = 60^\circ$

Sum of angles of a triangle =  $180^\circ$

$$\Rightarrow \angle P + \angle Q + \angle R = 180^\circ$$

$$\Rightarrow \angle P + 90^\circ + 60^\circ = 180^\circ$$

$$\Rightarrow \angle P = 180^\circ - 150^\circ = 30^\circ$$

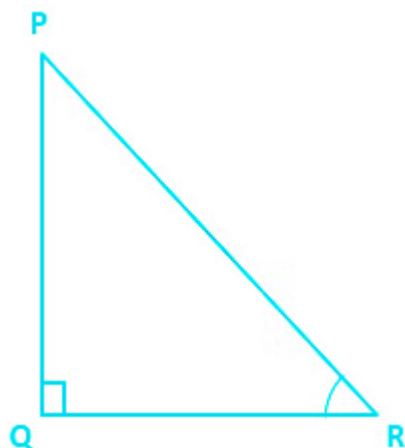
$$\therefore (\sec P - 1/\sqrt{3}) = \sec 30^\circ - 1/\sqrt{3} = 2/\sqrt{3} - 1/\sqrt{3} = 1/\sqrt{3}$$

---

**75. Answer: d**

**Explanation:**

In the given  $\Delta PQR$ ,



Given,  $\operatorname{cosec} P = 25/24$

As we know,  $\cot P = \sqrt{(\operatorname{cosec}^2 P - 1)}$

$$\Rightarrow \cot P = \sqrt{(625/576 - 1)} = \sqrt{(49/576)} = 7/24$$

But,  $\cot P = \text{base/Perpendicular}$

$$\Rightarrow PQ/QR = 7/24$$

Now,  $\cot R = \text{base/Perpendicular} = QR/PQ$

$$\therefore \cot R = 1/\cot P = 24/7$$

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76. Answer: a

**Explanation:**

- National Income is defined as the total value of all the final goods and services produced by a country in a certain year.
- It includes all the payments made to all the resources in the forms of wages, interests, rent and profits.

77. Answer: c

### Explanation:

- The first amendment to the Indian Constitution added the Ninth Schedule to it in 1951.
  - It ensured that the laws related to land reforms were not challenged in courts for violation of fundamental rights.
- 

### 78. Answer: a

### Explanation:

- Monadnock is an isolated rock hill or small mountain that rises abruptly from a gently sloping or virtually level surrounding plain.
  - They are left as erosional remnants because of their resistant rock composition.
- 

### 79. Answer: d

### Explanation:

- The Mahanadi River does not make an estuary.
  - The most important estuary in India is made by the Hooghly River.
  - An estuary is defined as the place where the tide meets the stream.
- 

### 80. Answer: a

### Explanation:

- Ghiyasuddin Azam Shah established diplomatic relationship with the Ming Empire in China.
- He was the third ruler of the Ilyas Shahi Dynasty in Bengal.

**81. Answer: a**

**Explanation:**

- The AryaSamaj was divided in 1893 over the question of vegetarianism.
  - The group that continued consumption of meat was known as 'the Cultured Party' whereas the other group that refrained from eating meat was known as 'Mahatma'.
  - Arya Samaj was founded by Swami Dayanand Saraswati in 1875 in Bombay.
- 

**82. Answer: b**

**Explanation:**

- Ustad Mansur was a painter and court artist during the reign of the Mughal Ruler Jahangir (1605-1627).
  - He was one of the earliest painters to depict dodo in colour apart from depiction of the Siberian Crane.
- 

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**83. Answer: a**

**Explanation:**

- The Paris Agreement which was signed in 2015 by US and 187 other countries was joined by Nicaragua on 23 October 2017.
  - This leaves only United States and war-torn Syria against the global climate agreement.
- 

**84. Answer: b**

### Explanation:

- The 5<sup>th</sup> Yash Chopra Memorial Award was given to Asha Bhosle by Rekha for her outstanding contribution to the world of music over her six decades as a singer.
- The award has been constituted by MP T Subbarami Reddy in the memory of noted film maker, Yash Chopra, who died in 2012, in association with AnuRanjan and ShashiRanjan.

---

### 85. Answer: c

### Explanation:

- The tomb of the Mughal Emperor Jahangir is situated in Lahore
- It dates back to the year 1637.
- It is at Shahdara Baghin Lahore, Punjab and is located on the banks of the Ravi River.

---

### 86. Answer: a

### Explanation:

- There are 18 groups and 7 periods in the modern periodic table.
- A period is a horizontal row of the periodic table. There are seven periods in the periodic table, with each one beginning at the far left.
- A group is a vertical column of the periodic table, based on the organization of the outer shell electrons. There are a total of 18 groups.

---

### 87. Answer: d

### Explanation:

Solution: A mixture contains two or more substances that are not chemically combined.

| Mixture                 | Constituents                                                                                               |
|-------------------------|------------------------------------------------------------------------------------------------------------|
| Milk                    | Fats, Proteins and Lactose                                                                                 |
| Gasoline                | Lightweight hydrocarbons with between 4 and 12 carbon atoms per molecule (commonly referred to as C4-C12). |
| Liquefied Petroleum Gas | Propane, propylene, butane, and butylene in various mixtures                                               |

88. Answer: d

**Explanation:**

The correct answer is the Twelfth th Schedule.

- The twelfth schedule of the Indian Constitution was added by the 74<sup>th</sup> amendment to the constitution .
- It is associated with the municipalities in the country as the mechanism of local self-governance.
- Twelfth Schedule of the Indian constitution contains the powers, authority, and responsibilities of Municipalities.
- This schedule has 18 items.
- This was passed in the year 1992 and it came into effect from June 01, 1993.
- Constitution (Seventy Fourth Amendment) Act, 1992 has introduced a new Part IXA in the Constitution, which deals with Municipalities in an article 243 P to 243 ZG.

- This amendment, also known as Nagarpalika Act.
- 

**89. Answer: d**

**Explanation:**

- Supremacy of the Constitution is a doctrine where by the Constitution is the supreme law of the country and all have to obey it.
  - Free and fair elections refer to the elections that take place without any application of force.
  - Judicial Review refers to the power of the judiciary to review the functions of the central government and state governments.
- 

**90. Answer: d**

**Explanation:**

- Plasma is the largest component of blood, comprising about 55% of its overall content.
  - Along with water, plasma carries salts, hormones and enzymes.
  - The main purpose of plasma is to transport nutrients, hormones, and proteins to the parts of the body that need it.
- 

**91. Answer: a**

**Explanation:**

- The first level of classification among plants depends on whether the plant body has well- differentiated, distinct components.
- Depending upon this criteria plants are classified as Thallophyta, Bryophyta, and Pteridophyta.

**92. Answer: c**

**Explanation:**

- 'Prakriti Khoj' was the undertaking of the Environment Ministry to generate interest among school children about the science related to environment, interactions within it and the problems therein.
  - This will help in sensitizing the children/youth to issues related to environment and development and motivate children towards environment conservation-oriented lifestyles.
- 

**93. Answer: a**

**Explanation:**

- The term 'Excitonium' was coined by Bertrand Halperin who was a theoretical physicist at Harvard.
  - The researchers at the University of Illinois have discovered this new state of matter in 2017.
  - Excitonium is a state of matter is a condensate made up of excitons and exhibits macroscopic quantum phenomena just like a superconductor.
- 

**94. Answer: b**

**Explanation:**

- The Government unveiled plan of investing Rs. 9 lakh crore to boost the economy of the country.
- Out of the Rs. 9 lakh crores, a sum of Rs. 6.92 lakh crore is earmarked for infrastructure spending.

- Another Rs. 2.11 lakh crore was announced for bank recapitalisation to revive investments as well as growth.
- 

**95. Answer: c**

**Explanation:**

The government approved to extend the coverage of the BetiBachaoBetiPadhao program to all the 640 districts of India on 22<sup>nd</sup> November 2017.

The main initiatives of this campaign are

- Prevention of gender biased sex selective elimination
  - Ensuring survival & protection of the girl child
  - Ensuring education and participation of the girl child
- 

**96. Answer: c**

**Explanation:**

To solve this problem we will use the following equation,

$$s = ut + \frac{1}{2}at^2$$

Substitute  $u = 5$ ,  $a = 2$  and  $t = 4$

$$s = 5 \times 4 + \frac{1}{2} \times 2 \times 4^2$$

$$s = 36 \text{ m}$$

Hence, displacement is 36 m.

---

**97. Answer: b**

## Explanation:

### CONCEPT:

- **Velocity** : The **rate of change of displacement** is called **velocity** .  
 ◦ It is denoted by  $V$  and **SI unit** is **m/s** .
- **Kinetic energy** : The **energy of a particle due to its motion** is called **kinetic energy** .  
 ◦ It is denoted by  $KE$ , and the **SI unit** is the **joule (J)** .
- **Kinetic energy** is given by:

$$K.E = \frac{1}{2}mv^2$$

Where  $m$  is the mass of the body.

### CALCULATION:

- Kinetic energy is given by:

$$\Rightarrow K.E = \frac{1}{2}mv^2$$

- So, if we substitute  $\frac{1}{2}v$  instead of  $v$ , then we will obtain

$$\Rightarrow K.E_1 = \frac{1}{2}m \times \left(\frac{1}{2}v\right)^2 = \frac{1}{2}m \times \frac{1}{4}v^2 = \frac{1}{4}(K.E)$$

- Hence **the kinetic energy becomes a quarter of the original** . So option 2 is correct.

## 98. Answer: c

## Explanation:

- Plants use the carbon dioxide in the atmosphere to synthesize sugar which acts as their food source.
- This process can only take place in the presence of sunlight which is why the process is known as 'photo'synthesis.

99. Answer: d

**Explanation:**

Statements B and C are correct, the correction for statement A is:

USA hosted the Golf 2017 Players Championship in Florida.

---

100. Answer: c

**Explanation:**

- Pressing the left arrow keystroke leads to the selection of a cell which is one cell to the left of the previously selected cell.
- The arrow keys can be further used to navigate through cells using up, down, left and right directions.

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