Prepp

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	UPTET
IBPS RRB	IBPS CLERK	IES	UPSC CAPF
SSC Stenogr..	RRB NTPC	SSC GD	RBI GRADE B
RBI Assistant	DSSSB		

SSC MTS Previous Year Paper (Held on: 21 Oct 2017 Shift 1)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	General English	25	25	0.25	1
2	General Intelligence & Reasoning	25	25	0.25	1
3	Numerical Aptitude	25	25	0.25	1
4	General Awareness	25	25	0.25	1

1.) A total of 90 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.

General English

1. In the following question, one part of the sentence may have an error. Find   (+1, -0.25)
   out which part of the sentence has an error and click the option
   corresponding to it. If the sentence is free from error, click the "No error"
   option.

   International Mother Earth Day is celebrated (1)/ every year to remind us
   that the Earth provides us with life (2)/ and we should be grudgeful for the
   same. (3)/ No error (4)

   a. 1

   b. 2

   c. 3

   d. 4

2. In the following question, one part of the sentence may have an error. Find   (+1, -0.25)
   out which part of the sentence has an error and click the option
   corresponding to it. If the sentence is free from error, click the "No error"
   option.

   A shepherd boy (1)/ tended his masters sheep (2)/ near a dark forest not
   far from the village. (3)/ No error (4)

   a. 4

   b. 1

   c. 2

   d. 3

3. The sentence(s) given with blanks are to be filled with an appropriate word(s). Four alternatives are suggested for each question. For each question, choose the correct alternative and click the button corresponding to it. (+1, -0.25)

Her heart was _ _ _ _ _ _ with joy.

a. full

b. fulled

c. filled

d. filing

4. The sentence(s) given with blanks are to be filled with an appropriate word(s). Four alternatives are suggested for each question. For each question, choose the correct alternative and click the button corresponding to it. (+1, -0.25)

Abhishek has a bad habit of _ _ _ _ _ _ his car keys.

a. misplace

b. misplacing

c. misplaces

d. misplaced

5. In the following question, out of the four alternatives, choose the word which best expresses the meaning of the given word and click the button corresponding to it. (+1, -0.25)

Clamour

a. Depress

b. Explain

c. Uproar

d. Foresee

---

6. In the following question, out of the four alternatives, choose the word which best expresses the meaning of the given word and click the button corresponding to it.   (+1, -0.25)

Quash

a. Secret

b. Permit

c. Shameful

d. Crush

---

7. In the following question, out of the four alternatives, choose the word which best expresses the meaning of the given word and click the button corresponding to it.   (+1, -0.25)

Abandon

a. Try

b. Join

c. Keep with

d. Forsake

8. In the following question, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it. **(+1, -0.25)**

   Movement

   a. Static

   b. Rolling

   c. Loading

   d. Moving

9. In the following question, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it. **(+1, -0.25)**

   Kindness

   a. Meanness

   b. Service

   c. Shameful

   d. Fatal

10. In the following question, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it. **(+1, -0.25)**

    Recondite

    a. Difficult

b. Straight forward

c. Hard

d. Occult

---

11. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the Idiom/ Phrase. (+1, -0.25)

Ball is in your court

a. It is up to me to make the next decision or step

b. It is up to you to make the next decision or step

c. Chasing others to take decisions

d. Running away from taking decisions

---

12. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the Idiom/ Phrase. (+1, -0.25)

Bag and baggage

a. All the clothing

b. Without any belonging

c. Leave

d. With all one's belongings

---

13. Below are three alternatives which may be used to improve the sentence by replacing the words given in the brackets. You may choose option 1, 2 (+1, -0.25)

or 3. In case no improvement is needed, choose 4.

One must (be in the company) a doctor during sickness.

a. visit

b. accompany

c. charge

d. No improvement

---

14. Below are three alternatives which may be used to improve the sentence   (+1, -0.25)
by replacing the words given in the brackets. You may choose option 1, 2
or 3. In case no improvement is needed, choose 4.

His father won't be able to leave for Mumbai until (they have arrived).

a. until they arrive

b. until they will have arrived

c. until they will arrive

d. No improvement

---

15. In the following question, out of the four alternatives, select the alternative   (+1, -0.25)
which is the best substitute of the phrase.

One who hoards wealth and spends as little money as possible

a. Member

b. Macho

c. Miser

d. Militant

---

16. In the following question, out of the four alternatives, select the alternative which is the best substitute of the phrase.   (+1, -0.25)

Sudden uncontrollable fear or anxiety, often causing wildly unthinking behaviour.

   a. Passive

   b. Pity

   c. Panic

   d. Fun

---

17. Find the correctly spelt word.   (+1, -0.25)

   a. Transition

   b. Transishion

   c. Traansition

   d. Trasition

---

18. In the following question, four words are given out of which one word is correctly spelt. Find the correctly spelt word.   (+1, -0.25)

   a. Ganitor

   b. Janitor

   c. Genitor

---

    d. Jenitor

---

19. 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 sentence.   (+1, -0.25)

Life

P: is a

Q: great

R: teacher

    a. RPQ

    b. QRP

    c. PQR

    d. QPR

---

20. 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 sentence.   (+1, -0.25)

Parenthood

P: so much joy

Q: gives

R: to people

    a. RPQ

    b. QRP

c. PQR

d. QPR

---

21. 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.

(+1, -0.25)

From Rameswaram to the Rashtrapati Bhavan, it's been a _ _ _ _ _ _ _ journey. Taking to Nona Walia on the eve of Teacher's Day, President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ _ learnt and his mission _ _ _ _ _ _ _ a teacher to the Indian youth. "A proper education would help nurture a sense of _ _ _ _ _ _ _ _ _ and self-respect among our youth," said President Kalam. There was always a child in him though, and he was always curious about learning new things. Life was _ _ _ _ _ _ _ mission for President Kalam.

it's been a _ _ _ _ _ _ _ journey.

a. sharp

b. long

c. short

d. malign

---

22. 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.

(+1, -0.25)

From Rameswaram to the Rashtrapati Bhavan, it's been a _ _ _ _ _ _ _ journey. Taking to Nona Walia on the eve of Teacher's Day, President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ _ learnt and his mission _ _ _ _ _ _ _ a teacher to the Indian youth. "A proper education

would help nurture a sense of _ _ _ _ _ _ _ _ _ and self-respect among our youth," said President Kalam. There was always a child in him though, and he was always curious about learning new things. Life was _ _ _ _ _ _ _ mission for President Kalam.

President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ _ learnt

a. ignorance

b. lessons

c. advice

d. period

23. 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.

(+1, -0.25)

From Rameswaram to the Rashtrapati Bhavan, it's been a _ _ _ _ _ _ _ journey. Taking to Nona Walia on the eve of Teacher's Day, President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ learnt and his mission _ _ _ _ _ _ _ a teacher to the Indian youth. "A proper education would help nurture a sense of _ _ _ _ _ _ _ _ _ and self-respect among our youth," said President Kalam. There was always a child in him though, and he was always curious about learning new things. Life was _ _ _ _ _ _ _ mission for President Kalam.

his mission _ _ _ _ _ _ _ a teacher to the Indian youth.

a. were

b. being

c. was

d. had

---

24. 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.   (+1, -0.25)

From Rameswaram to the Rashtrapati Bhavan, it's been a _ _ _ _ _ _ _ journey. Taking to Nona Walia on the eve of Teacher's Day, President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ _ learnt and his mission _ _ _ _ _ _ _ a teacher to the Indian youth. "A proper education would help nurture a sense of _ _ _ _ _ _ _ _ _ and self-respect among our youth," said President Kalam. There was always a child in him though, and he was always curious about learning new things. Life was _ _ _ _ _ _ _ mission for President Kalam.

A proper education would help nurture a sense of _ _ _ _ _ _ _ _ _

a. dignity

b. dishonour

c. evil

d. insignificance

---

25. 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.   (+1, -0.25)

From Rameswaram to the Rashtrapati Bhavan, it's been a _ _ _ _ _ _ _ journey. Taking to Nona Walia on the eve of Teacher's Day, President Dr. A.P.J. Abdul Kalam talked about life's toughest _ _ _ _ _ _ _ _ learnt and his mission _ _ _ _ _ _ _ a teacher to the Indian youth. "A proper education would help nurture a sense of _ _ _ _ _ _ _ _ _ and self-respect among our youth," said President Kalam. There was always a child in him though, and

he was always curious about learning new things. Life was _ _ _ _ _ _ _
mission for President Kalam.

Life was _ _ _ _ _ _ _ mission for President Kalam.

a. a

b. the

c. not

d. scheduled
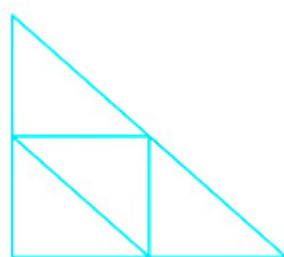
26. In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.   (+1, -0.25)

4	6	9
5	8	7
6	7	8
3	7	?

a. 7

b. 9

c. 8

d. 6

---

27. How many triangles are there in the given figure?   (+1, -0.25)

a. 3

b. 7

c. 5

d. 9

---

28. 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 form 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example, 'Y' can be represented by 42, 78, etc., and 'N' can be represented by 04, 89, etc. Similarly, you have to identify the set for the word "FACT"

(+1, −0.25)

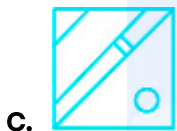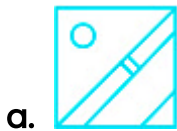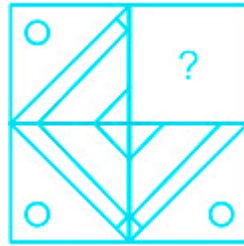| Matrix – I						Matrix – II					
	0	1	2	3	4		5	6	7	8	9
0	F	E	J	T	N	5	U	E	S	V	X
1	Y	M	B	C	A	6	O	K	F	C	Z
2	Z	G	W	I	Q	7	L	Q	Z	Y	D
3	D	F	A	L	R	8	A	E	I	S	N
4	U	I	Y	V	X	9	L	M	T	C	I

a. 00, 14, 13, 97

b. 31, 32, 02, 03

c. 67, 86, 97, 98

d. 23, 89, 68, 23

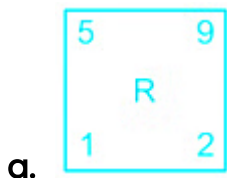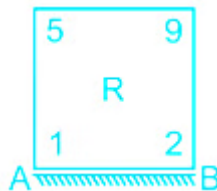29. Form the given answer figures, select the one in which the question figure (+1, −0.25) is hidden/embedded.
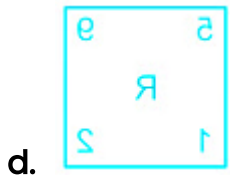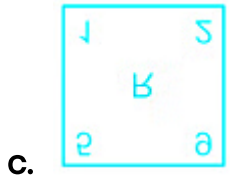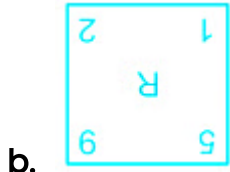

a.

b.

c.

d.
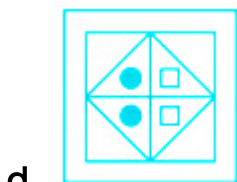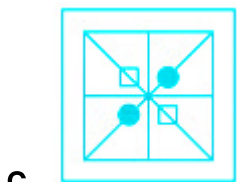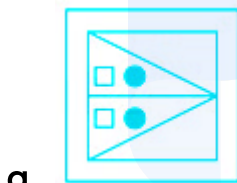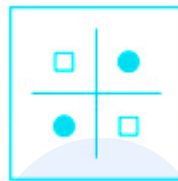
30. Which answer figure will complete the pattern in the question figure?   (+1, -0.25)

a.

b.

c.

d.

31. If a mirror is placed on the line AB, then which of the answer figures is the   (+1, -0.25)
right image of the given figure?

a.

b.

c.

d.

---

32. A piece of paper is folded and punched as shown below in the question figures. Form the given answer figures, indicates how it will appear when opened? (+1, -0.25)

a.

b.

c.

d.

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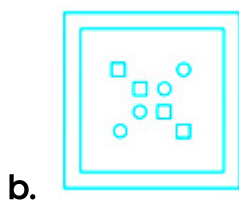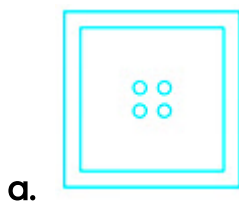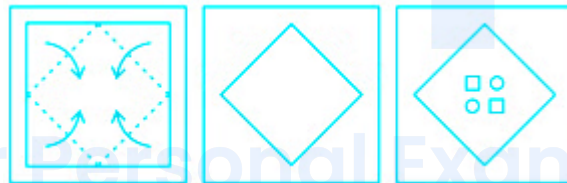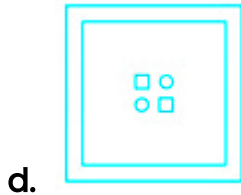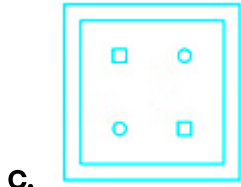
33. If 'Z' means '×', 'Y' means ' + ', 'A' means '÷' and 'C' means '−', then   **(+1, −0.25)**

27 Y 3 Z 12 A 4 = ?

a. 90

b. 36

c. 42

d. 30

---

34. If 4 P 3 L 6 = 2 and 12 P 3 L 4 = 9, then   **(+1, −0.25)**

6 P 4 L 6 = ?

a. 12

b. 4

c. 11

d. 9

---

35. Arrange the given words in the sequence in which they occur in the dictionary.

(+1, −0.25)

1. Trail

2. Trump

3. Triology

4. Tripod

5. Triangle

a. 13524

b. 15324

c. 15342

d. 13542

---

36. In the following question, select the missing number from the given series.

(+1, −0.25)

2, 5, 11, 20, ?

a. 30

b. 31

c. 32

d. 33

---

37. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

(+1, −0.25)

T, Q, N, K, ?, E

a. J

b. I

c. H

d. G

---

38. In the following question, select the odd word from the given alternatives.   (+1, -0.25)

a. Square

b. Equilateral Triangle

c. Regular Hexagon

d. Rectangle

---

39. In the following question, select the odd number pair from the given alternatives.   (+1, -0.25)

a. 19 − 21

b. 13 − 17

c. 18 − 20

d. 23 − 28

---

40. In the following question, select the odd letters from the given alternatives.   (+1, -0.25)

a. AD

b. MP

c. QU

d. WZ

---

41. Identify the diagram that best represents the relationship among the given classes.   (+1, -0.25)

Snake, Crocodile, Reptiles

a.

b.

c.

d.

---
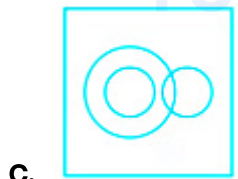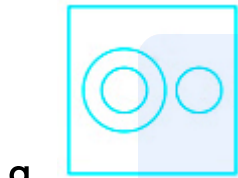
42. In the following question, select the related word from the given alternatives.   (+1, -0.25)

Hockey : Stick : : Badminton : ?

a. Bat

b. Racquet

c. Court

d. Ball

---

43. In the following question, select the related number from the given alternatives.

(+1, -0.25)

9 : 728 : : 10 : ?

a. 729

b. 1000

c. 998

d. 999

---

44. In the following question, select the related letters from the given alternatives.

(+1, -0.25)

AZ : CX : : MN : ?

a. OP

b. OL

c. KS

d. CZ

---

45. In the following question, select the word which cannot be formed using the letters of the given word. (+1, −0.25)

RUDIMENTARY

a. RUDE

b. MARRY

c. YARD

d. ROAD

46. A and B starts from same point and walks 30 km in opposite directions to each other. A turns left and walks 10 km. B turns left and walks 10 km. How far (in km) are they from each other? (+1, −0.25)

a. 20√10

b. 40√5

c. 80

d. 60

47. Mango tree is 21st from either end in a row of trees. How many trees are there in the row? (+1, −0.25)

a. 40

b. 42

c. 41

d. 39

48. In the following question below are given some statements followed by some conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusion logically follows the given statements. **(+1, -0.25)**

Statements:

I. All cup are plates.

II. Some plates are red.

Conclusions:

I. All plates are cup.

II. Some red are plates.

a. Only conclusion (I) follows.

b. Only conclusion (II) follows.

c. Both conclusion follow.

d. Neither conclusion (I) nor conclusion (II) follows.

49. In a certain code language, "EURO" is written as "DTQN". How is "FAKE" written in that code language? **(+1, -0.25)**

a. EZJD

b. EZLD

c. EBJF

d. GBJF

50. In a certain code language, "BUS" is written as "43" and "BUY" is written as   (+1, -0.25)
"49". How is "CAP" written in that code language?

a. 22

b. 10

c. 20

d. 21

Numerical Aptitude

51. If $N = \sqrt{9} + \sqrt{6}$, then what is the value of 1/N? **(+1, −0.25)**

    a. $\sqrt{9} - \sqrt{6}$

    b. $3\left(\sqrt{9} - \sqrt{6}\right)$

    c. $\dfrac{\sqrt{9} - \sqrt{6}}{3}$

    d. $\dfrac{\sqrt{9} - \sqrt{6}}{4}$

---

52. What is the value of 17 + 18 + …… + 40? **(+1, −0.25)**

    a. 504

    b. 724

    c. 684

    d. 324

---

53. What is the unit digit of $12^{81} \times 13^{87}$? **(+1, −0.25)**

    a. 6

    b. 3

    c. 4

    d. 2

---

54. How many numbers are there from 500 to 590 which are divisible by both 2 and 7? **(+1, −0.25)**

   a. 6

   b. 7

   c. 9

   d. 8

---

55. Which of the following statement(s) is/are true? **(+1, −0.25)**

   I. $\sqrt{7} - \sqrt{6} > \sqrt{5} - \sqrt{3}$

   II. $\sqrt{4} - \sqrt{3} > \sqrt{6} - \sqrt{5}$

   a. Only I

   b. Only II

   c. Both I and II

   d. Neither I nor II

---

56. What is the value of $\sqrt{40 + \sqrt{9} + \sqrt{36}}$? **(+1, −0.25)**

   a. 5

   b. 6

   c. 8

   d. 7

---

57. P alone can do a work in 25 days. P is 40% less efficient than Q. In how many days can Q alone do the work?   (+1, −0.25)

a. 18

b. 20

c. 15

d. 16

---

58. Pipe A can fill a tank in 10 hours and pipe B can fill the same tank in 12 hours. Pipe C can empty the same full tank in 6 hours. If all the pipes are opened together, then what portion of the tank will be filled after 12 hours?   (+1, −0.25)

a. 3/4

b. 1/5

c. 1/4

d. 4/5

---

59. The length of two parallel sides of a trapezium are 10 cm and 13 cm. If the area of the trapezium is 460 cm^2, then what is the value (in cm) of its height?   (+1, −0.25)

a. 42

b. 40

c. 36

d. 48

---

60. A wholesaler offers 10% discount on pens which have been marked 60% above the cost price. Sumit bought the pen for Rs 504. What was the cost price (in Rs) of the pens? **(+1, -0.25)**

  a. 220

  b. 300

  c. 350

  d. 280

---

61. A man purchases a pair of shoes for Rs 528 and fixes its marked price in such a way that after allowing a discount of 12%, he earns a profit of 40%. What is the marked price (in Rs) of the shoes? **(+1, -0.25)**

  a. 840

  b. 770

  c. 860

  d. 700

---

62. Divide Rs. 9180 among M, N and O so that M get $(10/5)^{th}$ of N's share and O gets $(6/5)^{th}$ of M's share. What is the share (in Rs.) of O? **(+1, -0.25)**

  a. 2200

  b. 2350

  c. 4080

d. 4800

---

63. If 5.4 of a = 9.9 of b, then what is a : b? **(+1, −0.25)**

   a. 6 : 7

   b. 11 : 6

   c. 9 : 11

   d. 11 : 13

---

64. The average of 11 numbers is 8. If a number 12 is removed, then what will be the new average? **(+1, −0.25)**

   a. 7.4

   b. 7.6

   c. 7.8

   d. 8.2

---

65. By selling 40 grams of rice, a person loss the cost price of 20 grams of rice. Find his loss percent? **(+1, −0.25)**

   a. 33.33

   b. 66.66

   c. 50

   d. 75

---

66. If some books are bought at Rs. 9 each and sold at Rs. 15 each, then what is the profit percentage?　　(+1, -0.25)

　　a. 75

　　b. 120

　　c. 80

　　d. 66.67

67. Sum of two numbers is 150% of the larger number. If smaller number is 16, then what is the value of the larger number?　　(+1, -0.25)

　　a. 32

　　b. 48

　　c. 24

　　d. 30

**68.** In a city 20% people are literates. If the number of literate people is 5000, then what is the total number of people?　　(+1, -0.25)

　　a. 25000

　　b. 35000

　　c. 20000

　　d. 40000

69. The speed of a boat in still water is 50 km/hr. It covers a distance of 500 km upstream in 20 hours. What is the speed (in km/hr) of the stream?   **(+1, −0.25)**

   a. 20

   b. 25

   c. 45

   d. 30

---

70. A train running with a speed of 9 km/hr, crosses a telephone pole. If the length of train is 360 meters, then what is the time taken (in seconds) by the train to cross the pole?   **(+1, −0.25)**

   a. 140

   b. 125

   c. 144

   d. 150

---

71. A sum becomes 3 times in 5 years at compound interest. In how many years the same sum will become 9 times?   **(+1, −0.25)**

   a. 5

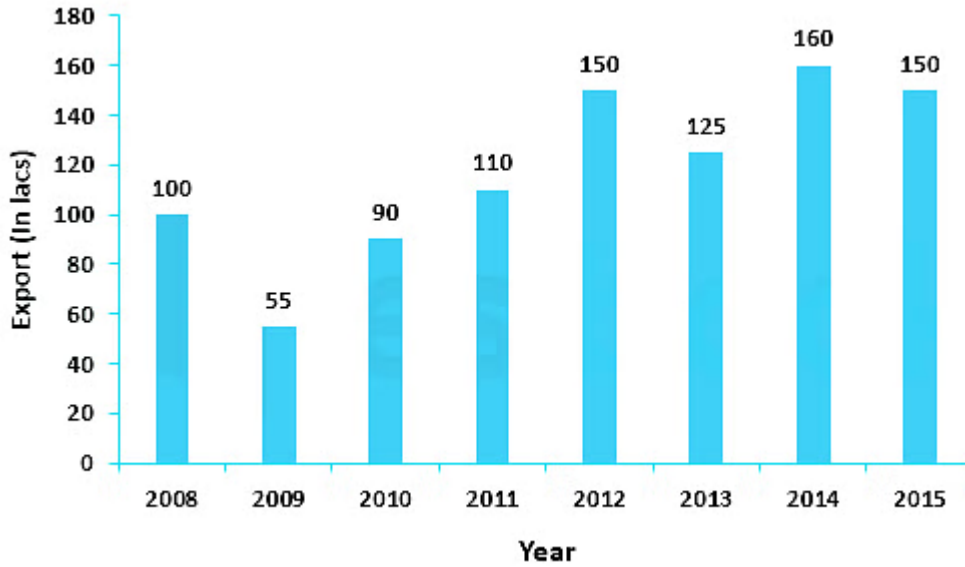   **b.** 10

   c. 15

   d. 20

72. **Direction:** The bar chart given below shows the export (in lacs) from India   (+1, −0.25)
from year 2008 to 2015.
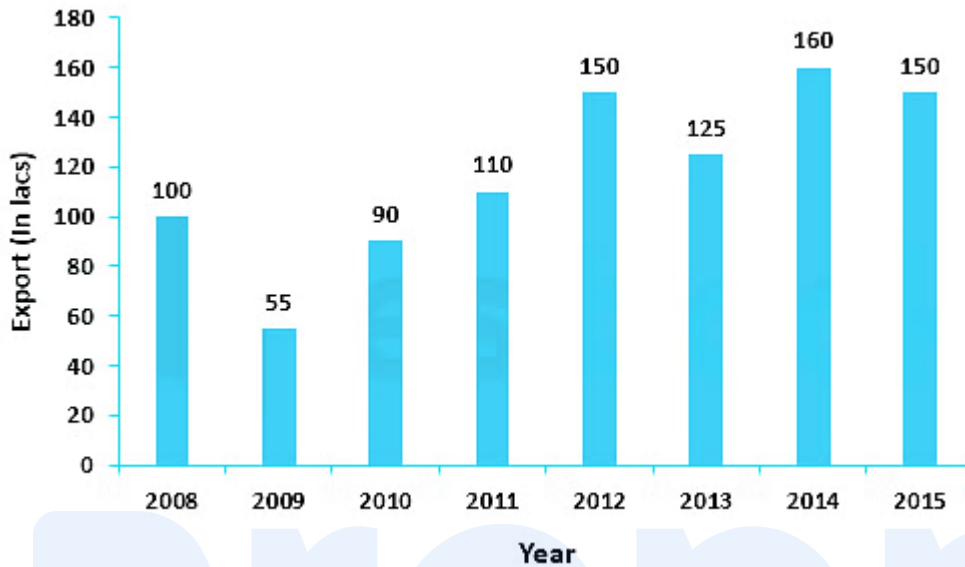
What is the percentage change in the exports from year 2012 to year 2013?

a. 16.66

b. 33.33

c. 25

d. 66.67

73. **Direction:** The bar chart given below shows the export (in lacs) from India   (+1, −0.25)
from year 2008 to 2015.

For how many years was the exports from India (in lacs) more than 110 lacs?

a. 5

b. 4

c. 6

d. 2

74. **Direction:** The bar chart given below shows the export (in lacs) from India from year 2008 to 2015.   (+1, −0.25)

What was the difference (in lacs) between exports from India in year 2011 and year 2014?

a. 75

b. 25

c. 50

d. 100

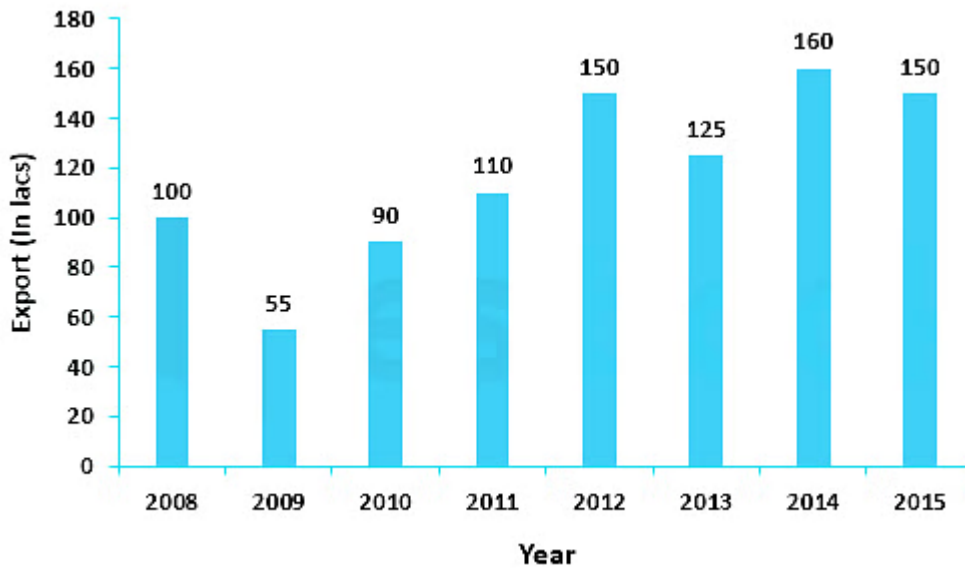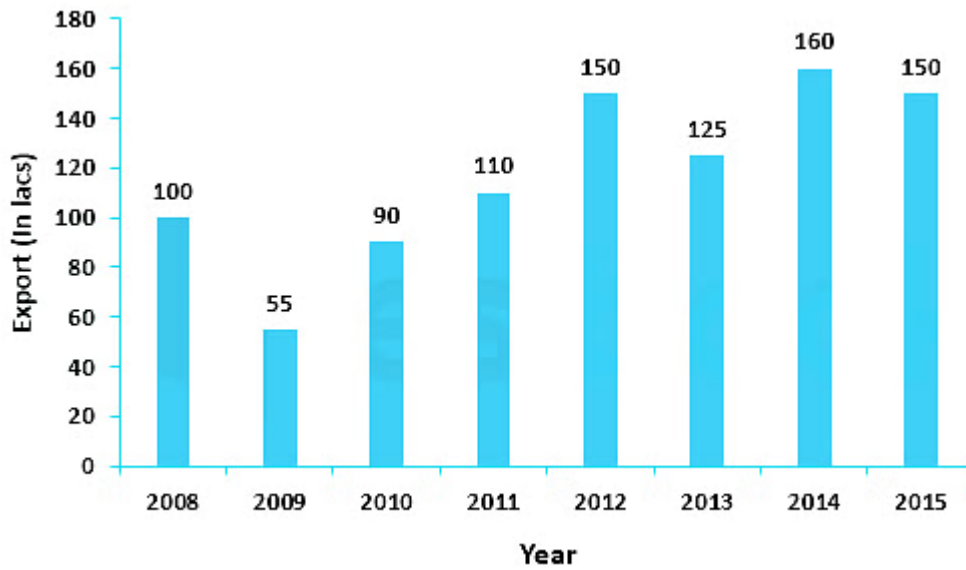75. **Direction:** The bar chart given below shows the export (in lacs) from India from year 2008 to 2015. **(+1, -0.25)**

In which year was the export more than that of the year 2015?

a. 2012

b. 2014

c. 2013

d. None of these

General Awareness

76. _ _ _ _ _ _ covers those enterprises or places of work where the terms of employment are regular.   **(+1, -0.25)**

    a. Unorganised sector

    b. Organised sector

    c. Both organised and unorganised sector

    d. Neither organized nor unorganised sector

77. What can be said about the interest rate on loans when compared to the interest rate offered on deposits?   **(+1, -0.25)**

    a. It is always higher

    b. It is always lower

    c. It is always equal

    d. It may be higher or lower

78. Who is the supreme law-making institution in India?   **(+1, -0.25)**

    a. Governor

    b. The Prime Minister of India

    c. The Chief Justice of India

    d. The Parliament of India

79. When did Constituent Assembly adopt Constitution?   (+1, −0.25)

    a. 26th November 1949

    b. 15th November 1949

    c. 26th January 1950

    d. 26th January 1949

---

80. Who among the following wrote the biography of 'Harshavardhana' named 'Harshacharita'?   (+1, −0.25)

    a. Herisena

    b. Banabhatta

    c. Bhawabhuti

    d. Chand Bardai

---

81. In which year Swadeshi Movement started?   (+1, −0.25)

    a. 1900

    b. 1890

    c. 1905

    d. 1911

---

82. What is the approximate distance (in km) of the Moon from the Earth?   (+1, −0.25)

a. 3,84,400

b. 2,80,500

c. 5,60,000

d. 6,00,000

---

83. What is the approximate East-West extent (in km) of India from Arunachal Pradesh to Kuchchh?   (+1, −0.25)

a. 7500

b. 2900

c. 1200

d. 6600

---

84. We usually get all the minerals we need from _ _ _ _ _ _.   (+1, −0.25)

a. Only roughage

b. Only mineral water

c. Only mineral tablets

d. Food

---

85. The classification of the group 'algae' is based on _ _ _ _ _ _.   (+1, −0.25)

a. Nature of shape

b. Nature of pigment

c. Nature of length

d. None of these

---

86. The energy produced by 1 g of carbohydrate is _ _ _ _ _ _.   **(+1, -0.25)**

a. 4.8 calorie

b. 4.2 kilo calorie

c. 27 joules

d. 18 kilocalorie

---

87. Momentum is a measure of _ _ _ _ _ _.   **(+1, -0.25)**

a. Speed

b. Mass

c. Quantity of motion

d. Force

---

88. Soda bottles are made of thick glass so that they can withstand the   **(+1, -0.25)**
_ _ _ _ _ _.

a. pressure in summer

b. temperature in winter

c. decrease in viscosity

d. increase in potential energry

89. What is the shape of a DVD?   (+1, -0.25)

    a. Square

    b. Round

    c. Triangular

    d. Hexagonal

90. Which of the following is acidic in nature?   (+1, -0.25)

    a. Apple juice

    b. Soap solution

    c. Slaked lime

    d. Quick lime

91. The experiment which led to the discovery of nucleus was performed by   (+1, -0.25)
_____.

    a. Goldstein

    b. J.J. Thomson

    c. Milkman

    d. Rutherford

92. Which one of the following is an aquatic eco system ?   (+1, -0.25)

a. Wetland

b. Desert

c. Mountain

d. Island

---

93. 'Pradhan Mantri Gram Sadak Yojana' is a flagship scheme of which ministry?   (+1, -0.25)

a. Ministry of Social Justice and Empowerment

b. Ministry of Finance

c. Ministry of Human Resource and Development

d. Ministry of Rural Development

---

94. Who discovered Nitrous Oxide (Laughing Gas)?   (+1, -0.25)

a. John Napier

b. Gay Lussac

c. Joseph Priestly

d. John Venn

---

95. Which place is also known by the name "Mecca of Indian Football"?   (+1, -0.25)

a. Darjeeling

b. Kolkata

c. Pune

d. Ernakulam

---

96. Which state is famous for its 'tie and dye' fabrics called Bandhni? (+1, -0.25)

a. Rajasthan

b. Bihar

c. Karnataka

d. Kerala

---

97. Who won the Pulitzer Prize 2017 for Drama named "Sweat"? (+1, -0.25)

a. Hisham Matar

b. Lynn Nottage

c. C.J. Chivers

d. Art Cullen

---

98. Who is the author of a book named "Worshipping False Gods"? (+1, -0.25)

a. Harbhajan Singh

b. Tulsidas

c. Arun Shourie

d. Lal Krishna Advani

---

99. 'Khanjar' is joint military exercise between India and _ _ _ _ _.   (+1, -0.25)

   a. Iran

   b. Kyrgyzstan

   c. Indonesia

   d. Vietnam

100. Which is NOT among the 3 rivers of Indus water system over which   (+1, -0.25)
     Pakistan got control under Indus Water Treaty with India?

   a. Indus

   b. Chenab

   c. Jhelum

   d. Ravi

Answers

1. **Answer: c**

   Explanation:

   The error lies in the third part of the given sentence as one should be 'grateful' or thankful to the Earth for all it provides. 'Grudgeful' refers to someone who holds bitterness against someone. Thus, option 3 is the correct answer.

---

2. **Answer: c**

   Explanation:

   'To tend' means to look after. The given sentence carries the meaning that the shepherd boy looked after the sheep that *belonged to the master* . Thus the possessive form of master/ masters should be used, i.e., master's or masters' (if there are more than one masters).

---

3. **Answer: c**

   Explanation:

   'Was' indicates that the action happened in the past, therefore the past form of the word 'fill' should be used. Thus option 3 is the correct answer. 'Fulled' is grammatically incorrect.

---

4. **Answer: b**

   Explanation:

Among all the given options, 'misplacing' conveys the correct meaning. Thus, **option 2** is the correct answer.

From the sentence, it is evident that a participle would fit the blank. The present participle form of the base form of the verb 'misplace' is 'misplacing'

It means *putting (an object) in the wrong place and so lose it temporarily*

---

5. **Answer: c**

   Explanation:

   The meanings of some of the words are as follows:

   Clamour => a loud and confused noise
   Uproar => a loud noise or disturbance
   Foresee => predict

   Thus, option 3 is the synonym of the given word.

---

6. **Answer: d**

   Explanation:

   'Quash' means to crush or squeeze something. Thus, option 4 is the best fit answer.

---

7. **Answer: d**

   Explanation:

   'Abandon' means to leave something or no longer take care of it. 'Forsake' carries the same meaning, thus option 4 is the correct answer.

---

8. Answer: a

Explanation:

All the words except 'static' show movement. 'Static' refers to something that is still and does not move. Thus, option 1 is the correct answer.

9. Answer: a

Explanation:

'Meanness' is opposite in meaning to kindness, thus, option 1 is the correct answer.

10. Answer: b

Explanation:

Let's look at the meanings of some of the words first:

Recondite => little known, abstract
Occult => mystical, supernatural

Clearly, 'straight forward' carries the opposite meaning to 'recondite'. Options 1 and 3 are its synonyms.

11. Answer: b

Explanation:

When we say that the *ball is in someone's court*, it means that it is up to them to make the next decision. Thus, option 2 is the correct answer.

12. **Answer: d**

    Explanation:

    The idiom 'bag and baggage' means 'with all one's belongings'. Thus, option 4 is the correct answer.

13. **Answer: a**

    Explanation:

    You go to a doctor when you are sick, i.e., you 'visit' her. 'Accompany' means to go somewhere along with someone. Thus, option 1 is the best fit answer.

14. **Answer: a**

    Explanation:

    The first clause of the given sentence talks about an action that will take place in the future. The clause after 'until' indicates the condition for it. In a sentence where the main clause is in the future, the subordinate sentence introduced by a time conjunction (when, while, by the time, until, etc.) must remain in the present tense. Thus, option 1 is the correct answer.

15. **Answer: c**

    Explanation:

    One who hoards wealth and spends as little money as possible is known as a miser. Thus, option 3 is the correct answer.

16. **Answer: c**

Explanation:

A *sudden uncontrollable fear or anxiety, often causing wildly unthinking behaviour* is known as anxiety. Thus, option 3 is the correct answer.

17. **Answer: a**

Explanation:

The word given in option 1 has been spelled correctly. 'Transition' means change or transformation.

18. **Answer: b**

Explanation:

The word given in option 2 has been spelled correctly. A 'janitor' is a caretaker or doorkeeper of a building.

19. **Answer: c**

Explanation:

The given part must be followed by P as mentions the verb. Q follows next as has the adjective for the noun 'teacher' (that has been mentioned in R).

20. **Answer: d**

Explanation:

Q must follow the given part as it tells what 'parenthood' does. P should follow next as it states what exactly it gives. R completes the sentence. Thus, QPR is the correct logical order.

21. **Answer: b**

Explanation:

The concerned sentence conveys the meaning that Dr. A.P.J. Abdul Kalam had worked and experienced a lot of things before finally becoming the President of India. Therefore, 'long' is the correct adjective to fill the blank space.

22. **Answer: b**

Explanation:

You learn lessons and take advices. Thus, option 2 is the best fit answer.

23. **Answer: b**

Explanation:

The given sentence means that Dr. A.P.J. Abdul Kalam shared the lessons he learnt in life and his mission *as* a teacher. Thus, 'being' (existing as a) should be put in the third blank to convey the appropriate meaning.

24. Answer: a

Explanation:

Education will obviously result into something positive. Since all the option except 'dignity' express negative things, option 1 is the correct answer.

25. Answer: a

Explanation:

It has been established that Kalam was curious about learning new things about life. Thus it can be said that he treated life like a mission. Since mission is a singular 'noun' and has not been already specified, the article 'a' should be used before it. 'Scheduled mission' is inappropriate in the given context. Thus, option 1 is the best fit answer.

26. Answer: c

Explanation:

In each column: 1 element + 2 element - 3 element = 4 element

In I column:

4 + 5 - 6 = 3

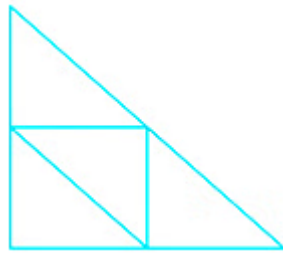In column II:

6 + 8 - 7 = 7

In column III:

9 + 7 - 8 = 8

Therefore, answer is 8.

---

27. **Answer: c**

Explanation:

Triangles in the given figure can be counted as given below,

Therefore, there are total 5 triangles.

---

28. **Answer: a**

Explanation:

1) 00, 14, 13, 97 ⇒ F, A, C, T

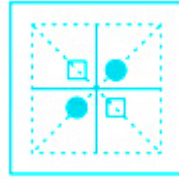2) 31, 32, 02, 03 ⇒ F, A, J, T

3) 67, 86, 97, 98 ⇒ F, E, T, C

4) 23, 89, 68, 23 ⇒ I, N, C, I

Hence 00, 14, 13, 97 is the right answer.
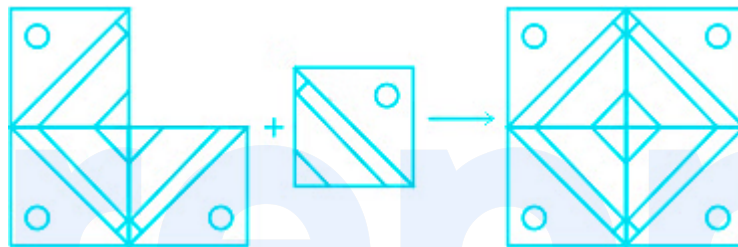
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29. **Answer: c**

Explanation:

The above diagram shows that the question figure is hidden in figure 3.
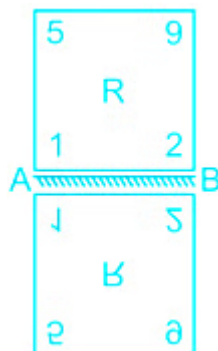
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30. Answer: d

Explanation:

The left side is vertically opposite to right side of the figure. Hence, option 4) completes the figure.
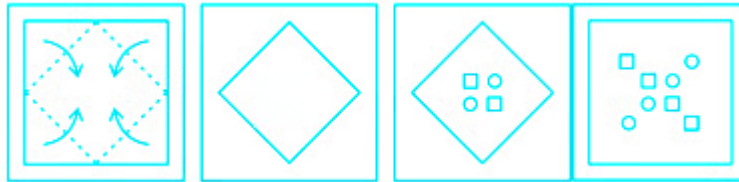
---

31. Answer: c

Explanation:

Above diagram showed mirror image of question figure.

Hence, image present in option 3) is the correct answer.

32. Answer: b

Explanation:

After cutting and unfolding the piece of paper will look as shown above.

33. Answer: b

Explanation:

27 Y 3 Z 12 A 4 = ? (Given equation)

Symbol	Z	Y	A	C
Meaning	x	+	÷	−

⇒ 27 + 3 × 12 ÷ 4 = ? (After replacement)

⇒ 27 + 3 × 3 = ?

⇒ 27 + 9 = ?

⇒ 36 = ?

Therefore, 36 is the answer.

34. Answer: b

Explanation:

$(4 \times 3) \div 6 = 2$

$(12 \times 3) \div 4 = 9$

$(6 \times 4) \div 6 = 4$

Therefore, correct answer is 4.

---

35. Answer: c

Explanation:

On arranging in dictionary order

1. **Tra** il

5. **Tri** angle

3. **Trio** logy

4. **Trip** od

2. **Tru** mp

Hence, 15342 is the correct order.

---

36. Answer: c

Explanation:

$5 - 2 = 3,$

11 – 5 = 6,

20 – 11 = 9,

Similarly, ? – 20 = 12

So, ? = 32

Therefore, answer is 32.

---

37. Answer: c

Explanation:

The pattern followed here is

$T - 3 = Q$; $Q - 3 = N$; $N - 3 = K$, **$K - 3 = H$** ; $H - 3 = E$

Thus, H is the correct answer.

---

38. Answer: d

Explanation:

Square, Equilateral Triangle and Regular Hexagon are figures having equal sides whereas Rectangle does not have all equal sides.

---

39. Answer: c

Explanation:

Comparing the pairs:

Number lying between:

1) 19 – 21 is 20,

2) 13 – 17 is 14, 15, 16

3) 18 – 20 is 19

4) 23 – 28 is 24, 25, 26, 27

Only in 18 – 20, 19 is prime number whereas rest is not prime.

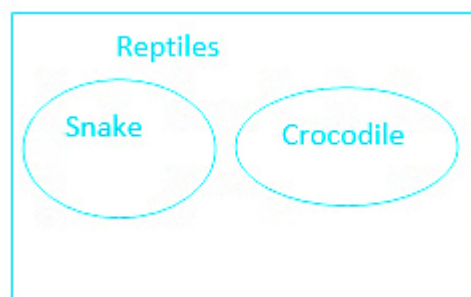Therefore, "18 – 20" is odd pair among given alternatives.

---

40. Answer: c

Explanation:

1) A + 3→ D

2) M + 3 → P

3) Q + 4 → U

4) W + 3 → Z

Therefore, QU is the odd one out.

---

41. Answer: b

Explanation:

The above diagram best represents the relationship between Snake, Crocodile and Reptile.

---

42. Answer: b

Explanation:

For playing Hockey we use Stick. Similarly, for playing Badminton we need Racquet.

---

43. Answer: d

Explanation:

In 9 : 728

$\rightarrow$ 9 : $(9)^3$ – 1

Similarly,

In 10 : ?

$\rightarrow$ 10 : $(10)^3$ – 1

$\rightarrow$ 10 : 999

Therefore, 999 is the correct answer.

---

44. 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

In AZ : CX

→ A + 2 = C ; Z − 2 = X

Similarly,

→ M + 2 = O ; N − 2 = L

Hence, OL is the correctt answer.

45. Answer: d

Explanation:

1) RUDE ⇒ can be formed as *RUD*IM ENTARY

2) MARRY ⇒ can be formed as RUDI MENTA RY

3) YARD ⇒ can be formed as RU DIMENT ARY

4) ROAD ⇒ Can't be formed as "O" is missing letter.

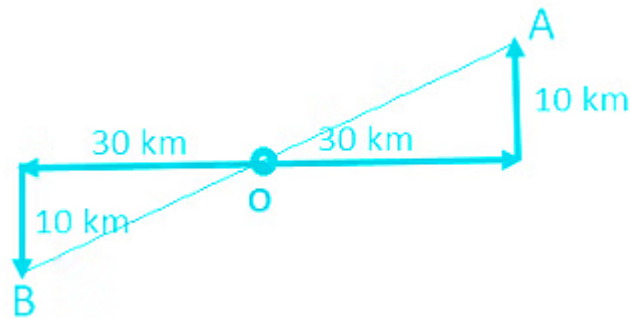O does not come in RUDIMENTARY.

Hence, "ROAD" can't be formed form letter of RUDIMENTARY

46. Answer: a

Explanation:

Based on given information direction diagram can be traced as,

Distance between A and B = AB = OA + OB

OA = $\sqrt{(30)^2 + (10)^2}$ = $\sqrt{(900 + 100)}$ = $\sqrt{1000}$ = 10 $\sqrt{10}$ km

Similarly,

OB = OA = $\sqrt{(30)^2 + (10)^2}$ = $\sqrt{(900 + 100)}$ = $\sqrt{1000}$ = 10 $\sqrt{10}$ km

Therefore, A and B are 20$\sqrt{10}$ km (10$\sqrt{10}$ + 10$\sqrt{10}$) far away from each other.

---

47. **Answer: c**

Explanation:

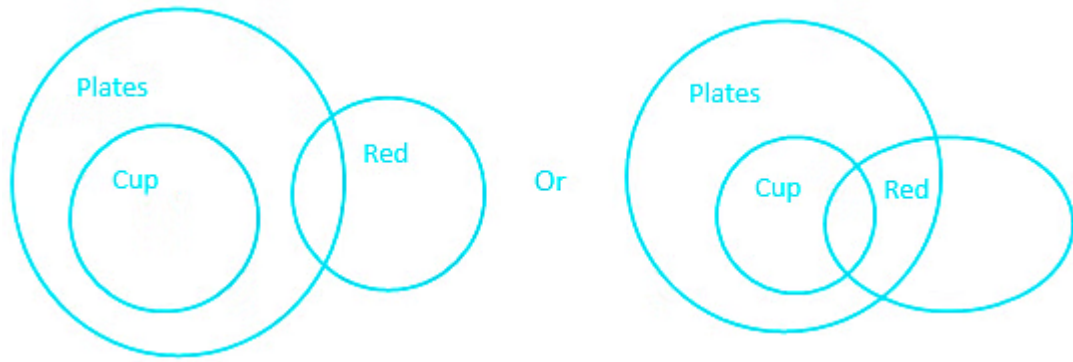Position of Mango Tree from left end is 21 and from right end is 21.

Thus, Total number of trees in the row = 21 + 21 – 1 = 41

Therefore, correct answer is 41.

---

48. **Answer: b**

Explanation:

Venn diagram of given statement can be drawn as shown below,

Clearly, some red are plates is true but all plates are not cup represented by above diagram.

---

49. **Answer: a**

Explanation:

"EURO" is written as "DTQN".

E − 1 = D;

U − 1 = T;

R − 1 = Q;

O − 1 = N

Similarly, In FAKE,

F − 1 = E;

A − 1 = Z;

K − 1 = J;

E − 1 = D

Hence, in this code language "FAKE" will be written as "EZJD"

---

50. **Answer: d**

Explanation:

With reference to English alphabet,

B = 2, U = 21, S = 19

⇒ BUS + 1 = B + U + S + 1 = 2 + 21 + 19 + 1 = 43

Similarly,

B = 2, U = 21, Y = 25

⇒ BUY = B + U + Y + 1 = 2 + 21 + 25 + 1 = 49

Similarly,

C = 3, A = 1, P = 16

⇒ CAP + 1 = C + A + P + 1 = 3 + 1 + 16 + 1 = 21

Hence, in the given code language "CAP" written as "21".

51. **Answer: c**

Explanation:

$N = \sqrt{9} + \sqrt{6}$

$\therefore \frac{1}{N} = \frac{1}{\sqrt{9} + \sqrt{6}}$

$\Rightarrow \frac{1}{N} = \frac{\sqrt{9} - \sqrt{6}}{\left(\sqrt{9} + \sqrt{6}\right)\left(\sqrt{9} - \sqrt{6}\right)}$

$\Rightarrow \frac{1}{N} = \frac{\sqrt{9} - \sqrt{6}}{\left(\sqrt{9}\right)^2 - \left(\sqrt{6}\right)^2}$

$\Rightarrow \frac{1}{N} = \frac{\sqrt{9} - \sqrt{6}}{9 - 6}$

$\Rightarrow \frac{1}{N} = \frac{\sqrt{9} - \sqrt{6}}{3}$

---

52. Answer: c

Explanation:

We know that,

$1 + 2 + 3 + \ldots + n = \frac{n(n+1)}{2}$

We can write the given equation as,

$\Rightarrow$ 17 + 18 + 19 + …… + 40 = (1 + 2 + 3 + … + 40) – (1 + 2 + … + 16)

$= \frac{40(40+1)}{2} - \frac{16(16+1)}{2}$

= (20 × 41) – (8 × 17)

= 820 – 136

= 684

---

53. Answer: c

Explanation:

Unit digit of 12^1 = 2

Unit digit of 12^2 = 4

Unit digit of 12^3 = 8

Unit digit of 12^4 = 6

Unit digit of 12^5 = 2

Same unit digit repeats after every 4th power

∴ Unit digit of 12^{81} = $(12^4)^{20}$ × 12^1 = 2

Unit digit of 13^1 = 3

Unit digit of 13^2 = 9

Unit digit of 13^3 = 7

Unit digit of 13^4 = 1

Unit digit of 13^5 = 3

Same unit digit repeats after every 4th power

∴ Unit digit of 13^{87} = $(13^4)^{21}$ × 13^3 = 7

∴ Unit digit of 12^{81} × 13^{87} = unit digit of $(2 × 7)$ = 4

---

54. **Answer: b**

Explanation:

If a number is divisible by both 2 and 7, then the number should be divisible by their LCM.

LCM of 2 and 7 = 2 × 7 = 14

Now,

14 × 36 = 504

14 × 37 = 518

14 × 38 = 532

14 × 39 = 546

14 × 40 = 560

14 × 41 = 574

14 × 42 = 588

∴ 7 numbers are there from 500 to 590 which are divisible by both 2 and 7.

---

55. Answer: b

Explanation:

For statement I:

$$\Rightarrow \sqrt{7} - \sqrt{6} = \frac{\left(\sqrt{7}-\sqrt{6}\right)\left(\sqrt{7}+\sqrt{6}\right)}{\left(\sqrt{7}+\sqrt{6}\right)} = \frac{7-6}{\sqrt{7}+\sqrt{6}} = \frac{1}{\sqrt{7}+\sqrt{6}}$$

$$\Rightarrow \sqrt{5} - \sqrt{3} = \frac{\left(\sqrt{5}-\sqrt{3}\right)\left(\sqrt{5}+\sqrt{3}\right)}{\left(\sqrt{5}+\sqrt{3}\right)} = \frac{5-3}{\sqrt{5}+\sqrt{3}} = \frac{2}{\sqrt{5}+\sqrt{3}}$$

$$\because \sqrt{7} + \sqrt{6} > \sqrt{5} + \sqrt{3}$$

$$\therefore \frac{1}{\sqrt{7}+\sqrt{6}} < \frac{2}{\sqrt{5}+\sqrt{3}}$$

$$\Rightarrow \sqrt{7} - \sqrt{6} < \sqrt{5} - \sqrt{3}$$

Statement I is false

For statement I:

$$\Rightarrow \sqrt{4} - \sqrt{3} = \frac{\left(\sqrt{4}-\sqrt{3}\right)\left(\sqrt{4}+\sqrt{3}\right)}{\left(\sqrt{4}+\sqrt{3}\right)} = \frac{4-3}{\sqrt{4}+\sqrt{3}} = \frac{1}{\sqrt{4}+\sqrt{3}}$$

$$\Rightarrow \sqrt{6} - \sqrt{5} = \frac{\left(\sqrt{6} - \sqrt{5}\right)\left(\sqrt{6} + \sqrt{5}\right)}{\left(\sqrt{6} + \sqrt{5}\right)} = \frac{6 - 5}{\sqrt{6} + \sqrt{5}} = \frac{1}{\sqrt{6} + \sqrt{5}}$$

$$\because \sqrt{6} + \sqrt{5} > \sqrt{4} + \sqrt{3}$$

$$\therefore \frac{1}{\sqrt{6}+\sqrt{5}} < \frac{1}{\sqrt{4}+\sqrt{3}}$$

$$\Rightarrow \sqrt{6} - \sqrt{5} < \sqrt{4} - \sqrt{3}$$

Statement II is true

---

56. Answer: d

Explanation:

$$\Rightarrow \sqrt{40 + \sqrt{9} + \sqrt{36}} = \sqrt{40 + \sqrt{3^2} + \sqrt{6^2}}$$

$$= \sqrt{40 + \sqrt{3^2} + \sqrt{6^2}}$$

$$= \sqrt{40 + 3 + 6}$$

$$= \sqrt{49}$$

$$= \sqrt{7^2}$$

$$= 7$$

---

57. Answer: c

Explanation:

P alone can do a work in 25 days

Part of work done by P in a day = 1/25

P is 40% less efficient than Q

∴ Part of work done by P in a day = (1 – 0.40) × Part of work done by Q in a day

⇒ 1/25 = 0.60 × Part of work done by Q in a day

⇒ Part of work done by Q in a day = 1/(25 × 0.60)

⇒ Part of work done by Q in a day = 1/15

∴ Q can complete the work in 15 days

58. **Answer: b**

Explanation:

Pipe A can fill a tank in 10 hours

∴ Part of the tank A can fill in 1 hour = 1/10

Pipe B can fill a tank in 12 hours

∴ Part of the tank B can fill in 1 hour = 1/12

Pipe C can empty the tank in 6 hours

∴ Part of the tank C can empty in 1 hour = 1/6

∴ Part of tank can be filled in 12 hours when all three pipes are opened

$= \left(\frac{1}{10} + \frac{1}{12} - \frac{1}{6} \right) \times 12$

$= \left(\frac{6+5-10}{60} \right) \times 12$

$= \frac{12}{60}$

= 1/5

59. **Answer: b**

Explanation:

Given:

Length of two parallel sides = 10 cm and 13 cm.

Formula Used:

Area of trapezium = (1/2) × (Sum of two parallel sides) × Height

Calculation:

Area = 460 cm^2

$\therefore 460 = \frac{1}{2} \times (10 + 13)\, cm \times Height$

$\Rightarrow 460 = 1/2 \times 23 \times Height$

$\Rightarrow Height = (2 \times 20)$

$\therefore$ Height = 40 cm

---

60. **Answer: c**

Explanation:

Short Trick:

Cost price = 504 × (100/160) × (100/90) = Rs. 350

Detailed Solution:

Let the cost price of pens be Rs. x

Marked price is 60% above the cost price

$\therefore$ Marked price = Rs. 1.60x

Discount = 10%

$\therefore$ Selling price = Rs. (0.90 × 1.60x) = Rs. 1.44x

Sumit bought the pen for Rs. 504, it means the Wholesaler sold the pen for Rs. 504

Selling price = Rs. 504

$\therefore$ 1.44x = Rs. 504

$\Rightarrow$ x = Rs. 350

61. Answer: a

Explanation:

Given,

Cost price = Rs. 528

Let the marked price be Rs. m

After allowing a discount of 12%, he earns a profit of 40%

∴ 0.88 × Marked price = 1.40 × Cost price

⇒ 0.88m = 1.40 × 528

⇒ 11m = 140 × 66

⇒ m = 140 × 6

⇒ m = 840

62. Answer: c

Explanation:

Given,

M get $(10/5)^{th}$ of N's share

∴ $\frac{Share\ of\ M}{Share\ of\ N} = \frac{10}{5}$

O gets $(6/5)^{th}$ of M's share

∴ $\frac{Share\ of\ O}{Share\ of\ M} = \frac{6}{5} = \frac{6 \times 2}{5 \times 2} = \frac{12}{10}$

∴ Share of M : Share of N : Share of O = 10 : 5 : 12

Total amount = Rs. 9180

∴ Share of O in Rs.

$= \frac{12}{10+5+12} \times 9180$

$= \frac{12}{27} \times 9180$

= 4 × 1020

= 4080

---

63. **Answer: b**

Explanation:

Given,

5.4 of a = 9.9 of b

⇒ 5.4 × a = 9.9 × b

⇒ a/b = 9.9/5.4

⇒ a/b = 11/6

⇒ a : b = 11 : 6

---

64. **Answer: b**

Explanation:

Average of 11 numbers = 8

∴ Sum of 11 numbers = 11 × 8 = 88

After a number 12 is removed

Sum of remaining 10 numbers = 88 – 12 = 76

∴ Average of remaining 10 numbers

= 76/10

= 7.6

---

65. **Answer: c**

Explanation:

Let the cost price of 1 gram = Rs. x

∴ Cost price of 40 gram = Rs. 40x

Cost price of 20 gram = Rs. 20x

By selling 40 grams of rice, a person loss the cost price of 20 grams

∴ Loss percentage $= \frac{Loss}{Cost\ price} \times 100$

$= \frac{20x}{40x} \times 100$

$= \frac{1}{2} \times 100$

= 50%

---

66. **Answer: d**

Explanation:

Given:

Cost price = Rs. 9

Selling price = Rs. 15

Formula used:

Profit % = {(Selling price − Cost price)/(Cost price)} × 100%

Calculation:

Profit % $= \frac{15-9}{9} \times 100$

Profit % $= \frac{2}{3} \times 100$

Profit % $= (200/3)\ 66.67$

∴ profit percentage 66.67%.

---

67. Answer: a

Explanation:

Let the larger number be x

Given,

Smaller number is = 16

Sum of two numbers is 150% of the larger

∴ x + 16 = 1.50x

⇒ 0.50x = 16

⇒ x = 16/0.50 = 32

---

68. Answer: a

Explanation:

Let total number of people be x

Given,

Percentage of literate people = 20%

∴ Number of literate people = 0.20x

Given,

Number of literate people = 5000

∴ 0.20x = 5000

⇒ x = 5000/0.80 = 25000

---

69. **Answer: b**

Explanation:

Let the speed of the stream = x km/hr

Given,

Speed of the boat in still water = 50 km/hr

∴ Speed of the boat towards upstream = (50 – x) km/hr

Distance covered = 500 km

Time taken = 20 hr

∵ Distance covered = Speed × Time taken

⇒ 500 = (50 – x) × 20

⇒ 25 = (50 – x)

⇒ x = 25 km/hr

---

70. **Answer: c**

Explanation:

We know that,

Distance covered = Speed × Time

Speed = 9 km/hr $= \frac{9 \times 1000 \; m}{60 \times 60 \; sec} = \frac{5}{2} \; m/sec = 2.5 \; m/sec$

Distance covered by the train = Length of the train = 360 m

∴ 360 m = (2.5 m/sec) × Time

⇒ Time = 360 /2.5

⇒ Time = 144 sec

---

71. **Answer: b**

Explanation:

Short Trick:

```
Amount        Time
  3P          5 Years
   │×3          │+5
   ↓            ↓
  9P          10 Years
```

Detailed Solution:

We know that,

$\Rightarrow$ Total amount $= P \times \left(1 + \frac{r}{100}\right)^{t}$
Where,

P = Principal

R = Rate of interest

t = Time period

Given,

A sum becomes 3 times in 5 years.

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

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

Let,

After t years the sum becomes 9 times

$\therefore 9P = P\left(1 + \frac{r}{100}\right)^t$

$\Rightarrow 9 = \left(1 + \frac{r}{100}\right)^t$

$\Rightarrow 3^2 = \left(1 + \frac{r}{100}\right)^t$

Using equation (1)

$\Rightarrow \left(1 + \frac{r}{100}\right)^{10} = \left(1 + \frac{r}{100}\right)^t$

$\therefore$ t = 10 years

72. Answer: a

Explanation:

Export in year 2013 = 125 Lacs

$\therefore$ Required percentage of change

$= \frac{Export\ in\ 2012 - Export\ in\ 2013}{Export\ in\ 2012} \times 100\%$

$= \frac{150 - 125}{150} \times 100\%$

$= \frac{25}{150} \times 100\%$

$= \frac{1}{6} \times 100\%$

= 16.66%

---

73. **Answer: b**

Explanation:

It is seen that in the years 2012, 2013, 2014 and 2015 the exports are 150 Lacs, 125 Lacs, 160 Lacs and 150 Lacs respectively.

∴ The export was more than 110 Lacs in 4 years

---

74. **Answer: c**

Explanation:

From the bar graph,

Export in year 2011 = 110 lacs

Export in year 2014 = 160 lacs

∴ Difference is

= (160 – 110) Lacs

= 50 Lacs

---

75. **Answer: b**

Explanation:

From the bar graph,

Exports in 2015 = 150 lacs

∴ Exports in 2015 is more than export in the years 2008, 2009, 2010, 2011 and 2013

∴ From the given options, Exports in 2015 is more than the export in the year 2014

---

76. Answer: b

Explanation:

- Organised sector is the sector where the terms of employment are fixed and the employees have the assured work.
- There are number of acts which apply to the organised sector like, *Bonus Act, Factories Act, Minimum Wages Act, PF Act,* etc.
- The rules of the government are strictly followed in the organisational sector.
- The salaries of the employees in the organised sector are as per the government norms.
- Job security is also there in the organised sector.

---

77. Answer: a

Explanation:

- Interest rate on loans is **always higher** than the interest rate offered on deposits.
- Bank makes profit by charging higher interest rate on loans than the interest they pay on the accounts of depositors.
- Interest rate on loan is the percentage of the principal which is charged by the lender for the use of its money.
- Bank charges fixed or variable interest rates.

---

78. **Answer: d**

Explanation:

⭐ **Key Points**

- The **Parliament of India** is the supreme law-making institution in India.
- **Parliament** is composed of the **President** of Indian and the two houses which are **Rajya Sabha** and **Lok Sabha** .
- The proposal of legislatives is brought before house of Parliament in the form of the bill.
- The bill becomes an Act of Parliament when the draft of the legislative proposal is passed by both houses of Parliament and assented to by the President.
- The council of the states have power to make the recommendations over the bills to the house within a period of 14 days.

79. **Answer: a**

Explanation:

- The **Constitution of India** was adopted by the **Constituent Assembly** on 26 [th] **November, 1949** but it **came into force on 26** [th] **January, 1950** .
- **Constitution of India** is known as the **supreme law of India** which consists of fundamental political codes, powers, procedures, structures and the duties of the government institutions, directive principles and the duties of the citizen.
- It is the longest written constitution of any country in the world.
- **B.R. Ambedkar** was considered to be its chief architect as he was the **Chairman** of the **Drafting Committee** .

80. **Answer: b**

Explanation:

- **Banabhatta** has written biography ' **Harshacharita** '.
- He was the **court poet** of ' **Harshavaradhana** ' and a **Sanskrit writer.**
- **Harshcharita** was the **first historical biography** in the **Sanskrit language** .
- Harshcharita is written in the poetic prose which narrates the biography of the emperor Harsha in eight chapters.
- It was **translated into English** by **Edward Byles Cowell** and **Frederic William Thomas** in **1897** .

---

81. **Answer: c**

Explanation:

- **Swadeshi Movement** started on **7th August 1905** at the **Calcutta Town Hall** in **Bengal** .
- It involved in boycotting the British products and the revival of the domestic products and production processes.
- Bal Gangadgar Tilak, Bipin Chandra Pal, Lala Lajpat Rai, Aurobindo Ghosh, etc. were the significant people involved in the movement.
- In Andhra Pradesh, Swadeshi Movement is also known as Vandemataram movement.

---

82. **Answer: a**

Explanation:

- The **approximate distance (in km)** of the Moon from the Earth is **384, 400 km** .
- When the moon is the farthest away (at **apogee**), it is 4,05,696 kms (approx.) away.
- But when its closest (at **perigee**), Moon is 3,63,105(approx.) kms away.

---

83. Answer: b

Explanation:

- The **approximate East-West extent** (in km) of India from Arunachal Pradesh to Kuchchh is **2900 km** .
- In India, the **North-South extent** is **larger than** the **East-West extent** .
- Distance of **North south extent is 3214 kms** while the distance of **East-West extent is 2933 kms** .
- The longitudinal extent of India is from the Rann of Kutch in the West to the Arunachal Pradesh in East.

84. Answer: d

Explanation:

- All the **mineral requirement** of the human body is fulfilled by **food** .
- Nutrients and Minerals are essentials for the human body to work properly.
- Foods in which minerals are found are in large amount are:
- Brown rice, wholemeal bread, nuts and pulses.
- Yoghurt and Milk
- Green leafy vegetables, sweet corn and peas.

85. Answer: b

Explanation:

- Different group of algae have different type of pigments and the **classification of algae is primarily based upon characters of pigments** .
- Algae, which were formerly classified as plants, contain the photosynthetic pigments Chlorophyll of different types like Chlorophyll A, B, C and D.

- There are 10 classes of Algae according to their colour which is imparted by the pigment present in them.

---

86. Answer: b

Explanation:

- **Carbohydrates** and **Protein** both contain **4 kilocalories per gram**, while **Fat** provides **9 kilocalories per gram**.
- Basically, the energy is measured in kilojoules (KJ) or kilocalories (Kcal) [1 kilo calorie equals to 4.2 kilojoules].

---

87. Answer: b

Explanation:

- **Momentum** is the measure of the mass in motion.
- Momentum is a measure of how much mass is in motion and how fast it is moving.
- It helps us to know how much motion a body contains.
- p = m.v (Where, p = Momentum, m= Mass and v= Velocity)
- The amount of matter present in an object known as Mass.
- The rate of speed in a unit of time in a particular direction is known as velocity.

---

88. Answer: a

Explanation:

- ⭐ Key Points

- **Soda bottles** are made of **thick glass** so that they can withstand the pressure in summer.

- Soda bottles are generally made of **'Polyethylene Terephthalate'** , commonly known as **PET** plastic, or glass using the blow molding process.
- Usually, the plastic bottles used to hold potable water, soda, and other drinks are made from PET material because that is both strong and light so that they can withstand pressure in summer.
- *To be able to withstand internal gas pressure, the bottle is made from thick, heavy glass

---

89. **Answer: b**

Explanation:

- **DVDs** came to the market in **1995** and are **round** in shape.
- A DVD is 12 cm in diameter, single- sided or homogeneous double sided.
- Each DVD set contains 2,418 bytes of data out of which 2,048 bytes are user data.

---

90. **Answer: a**

Explanation:

- **pH level of Apple juice** varies from **3.35 to 4** .
- **Malic Acid ,Quinic Acid** , and **Chlorogenic Acid** are found in Apple juice.
- Apple juice is a good source of **Vitamin C** , but excessive drinking of apple juice can damage the structure of teeth.
- Soap Solution, Slaked lime, Quick lime are basic in nature.

---

91. **Answer: d**

Explanation:

- The experiment which led to the **discovery of nucleus** was performed by **Ernest Rutherford** .
- The experiment is also known as **Rutherford-Geiger-Marsden experiment** .
- In experiment, beam of alpha particles was pointed at a thin foil of metal and measured the scattering pattern by using a fluorescent screen.
- Rutherford also determined that the **nucleus is positively charged** .
- The experiments were performed between 1908 and 1913.

---

92. Answer: a

Explanation:

- **Wetland** is an aquatic eco system.
- There are mainly four types of Wetlands: **Swamp** ,**Marsh** ,**Fen** and **Bog** .
- Because they have close proximity with water and soil, they are the **most productive natural ecosystems** .
- Wetlands consist of more vascular plants that have been adapted to saturated soil.
- For agriculture related purposes, Wetlands are converted into dry land with dikes and drains.

---

93. Answer: d

Explanation:

- ' **Pradhan Mantri Gram Sadak Yojana** ' scheme was launched by **Ministry of Rural Development** .
- It was introduced in the **year 2000** by the then **Prime Minister of India Late Atal Bihari Vajpayee** .
- The main aim is to provide **roads to all villages** .
- The project is funded by both Central Government and States Government in 60:40 ratio.
- It is managed by **National Rural Roads Development Agency (NRRDA)** .

94. Answer: c

Explanation:

- **Laughing gas** was discovered in **1772** by **Joseph Priestly** .
- Laughing gas is used as **anesthetic** in operations that are of short duration.
- He designed the experimental apparatus to collect the gas over water.
- He utilised the Hales apparatus and Black's concept of a gas.

95. Answer: b

Explanation:

The correct answer is <u>Kolkata</u>.

⭐ <u>Key Points</u>

- **Kolkata** is also known as the hub of Indian Football with the two most supported teams in the country i.e. **Mohun Bagan** and **East Bengal** .
- Various International Football stars have visited Kolkata as it is India's football capital.
- Kolkata has biggest football stadium in India, the Salt Lake Stadium.
- Salt Lake Stadium has a capacity of 85,000.

96. Answer: a

Explanation:

⭐ <u>Key Points</u>

- **Rajasthan** is famous for its ' **tie and dye' fabrics** called **Bandhni.**

- The tie and dye fabric in Rajasthan are as old as 5000 years and it is amongst the oldest traditions of the state and still in the practice.
- The work involves tying and dyeing of fabrics.
- Our ancestors discovered that colours could be extracted from different parts of plants such as leaves and flowers. This led to the discovery of dyes.
- It was brought to India by Muslim Khatris from Sindh, who introduced it in Kutch.

Thus, Rajasthan is famous for its 'tie and dye' fabrics called Bandhni.

---

97. Answer: b

Explanation:

- **Lynn Nottage** won the **Pulitzer Prize 2017** for Drama named " **Sweat** ".
- Lynn Nottage is first female playwright to win Pulitzer Prize twice.
- Sweat is a story of a group of friends who have spent their lives working together on the factory floor.
- Sweat is a personal and political drama exploring the Industrial decline of America.

---

98. Answer: c

Explanation:

- **Arun Shourie** is the **author** of the book " **Worshipping False Gods** ".
- Arun Shourie is a journalist, economist, author and politician.
- He has worked as an economist, consultant, and editor at World Bank, Planning Commission of India, Indian Express and Times of India respectively.
- He was also appointed as Minister of Communications and Information Technology in 1998 by Shri Atal Bihari Vajpayee.
- This book is regarding critical look at the legend B.R. Ambedkar.

---

99. **Answer: b**

Explanation:

- 'Khanjar' is **joint military exercise** between **India** and **Kyrgyztan** .
- Khanjar exercise includes insertion of troops by going stealthily from helicopters and destroying hiding places of terrorists.
- Till date there have been 5 joint military exercises between India and Kyrgyzstan.
- These Bilateral Military Exercises are conducted to uphold the values of Peace, Prosperity and Trust in the region.

100. **Answer: d**

Explanation:

- The control over **Ravi** was not given to Pakistan as per the treaty.
- **Indus Water Treaty** was signed on 9th **September, 1960** in **Karachi.**
- The Treaty administers the utilisation of water of river Indus and its tributaries by both the countries.
- According to treaty, rivers **Beas, Ravi** and **Sutlej** are under the jurisdiction of **India** while **Indus ,Chenab** and **Jhelum** are under the jurisdiction of **Pakistan** .
- Permanent Indus Commission was set up as bilateral commission to implement and manage the treaty.