



## 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 CGL 2018 Tier-I Previous Year Paper (04-Jun-2019) (Shift 3)

Total Time: 1 Hour

Total Marks: 200

## Instructions

Sl No.	Section Name	No. of Question	Maximum Marks
1	General Intelligence and Reasoning	25	50
2	General Awareness	25	50
3	Quantitative Aptitude	25	50
4	English Comprehension	25	50

- 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.

## General Intelligence and Reasoning

1. Select the number – pair in which the two numbers are related in the same way as are the two numbers of the following number – pair (+2, -0.5)

28 : 63

- a. 48 : 98
- b. 16 : 36
- c. 36 : 78
- d. 12 : 28

2. Select the Venn diagram that best illustrates the relationship between the following classes (+2, -0.5)

Doctors, Salaried Persons, Parents





d.

3. If POSTER is coded as 592314 and DARK is coded as 8647, then how will STROKE be coded as? (+2, -0.5)

a. 234971

b. 234917

c. 493287

d. 329417

4. Which two signa should be interchanged in the following equation to make it correct? (+2, -0.5)

$$12 - 6 \div 12 \times 6 + 6 = 9$$

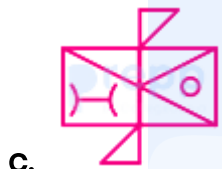
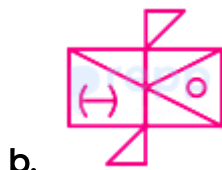
a. + and ÷

b. × and +

c. and +

d. ÷ and ×

5. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure. (+2, -0.5)



6. 'Dumbness' is related to 'Speech' in the same way as '\_\_\_\_\_' is related to 'Memory'. (+2, -0.5)

- a. Illusion
- b. Thoughtless
- c. Recognition
- d. Amnesia

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

Happy : Glad :: Sad : ?

- a. Gloomy
- b. Merry
- c. Contented
- d. Mellow

8. How many triangles are there in the following figure? (+2, -0.5)



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

9. Arrange the following words in a logical and meaningful order. (+2, -0.5)

- 1. Writing
- 2. Distributing
- 3. Publishing

4. Printing

5. Editing

a. 2, 3, 4, 5, 1

b. 2, 4, 3, 1, 5

c. 1, 5, 4, 3, 2

d. 1, 2, 3, 4, 5

---

10. Select the set in which the numbers are related in the same way as are the numbers of the following set. (+2, -0.5)

(12, 16, 28)

a. (20, 25, 35)

b. (9, 15, 21)

c. (18, 24, 42)

d. (36, 48, 77)

---

11. Rs. 820 is divided among 6 men, 8 women, and 12 boys in such a way that every woman gets an amount equal to that received by one man and one boy combined and that every man gets one and a half times the amount received by a boy. What is the total amount received by 8 women? (+2, -0.5)

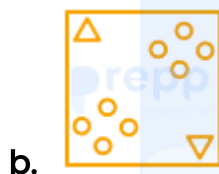
a. Rs. 380

b. Rs. 240

c. Rs. 300

d. Rs. 400

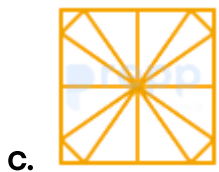
12. A square paper is folded and cut as shown below. How will it appear when unfolded? (+2, -0.5)



13. Select the option in which the given figure is embedded. (+2, -0.5)







14. In a family of eight persons, there are two couples, each having two children. C and D are cousin brothers. The father of E is married to G, who is the aunt of F. F's mother, H is married to B, the brother of A. C is the nephew of H. How is A related to D? (+2, -0.5)

- a. Father
- b. Brother
- c. Nephew
- d. Uncle

15. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster. (+2, -0.5)

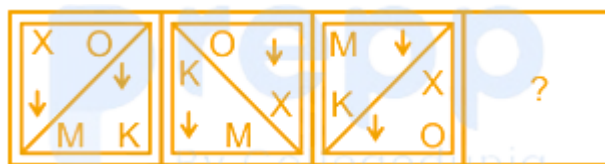
JKLM : HLKO :: PQRS : ?

- a. MRQV
- b. ORQT
- c. NRQU
- d. NQRU

16. Three of the following four numbers are alike in a certain way and one is different, Pick the number that is different from the rest. (+2, -0.5)

- a. 341
- b. 209
- c. 166
- d. 154

17. Select the figure that will come next in the following figure series. (+2, -0.5)



b.



c.



d.

18. Three of the following four words are alike in a certain way and one is different. Pick the odd word out. (+2, -0.5)

- a. Papaya
- b. Guava
- c. Cucumber
- d. Pomegranate

19. Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements. (+2, -0.5)

**Statements:**

Some students are players

Some players are athletes

**Conclusions:**

I. Some students are athletes.

II. Some players are students

III. No students is an athlete.

a. Only conclusion II and either conclusion I or III follow

b. Only conclusion I follows

c. Only conclusions II and III follow

d. None of the conclusions follows.

- 
20. Select the combination of letters that when sequentially placed in the gaps of the given letter series will complete the series. (+2, -0.5)

dc\_abc\_cb\_bcd\_ba\_c

a. cbadb

b. bdacb

c. dbacb

d. dcbab

- 
21. Which number will replace the question mark (?) in the following series? (+2, -0.5)

2, 3, 6, 10, 17, 28, ?

a. 43

b. 46

c. 39

d. 45

22. Select the set in which the numbers are related in the same way as are the numbers of the following set. (+2, -0.5)

(15, 22, 31)

a. (23, 30, 40)

b. (7, 14, 23)

c. (11, 18, 29)

d. (5, 11, 20)

23. Two different positions of the same dice are shown. Which number will be at the top if 1 is at the bottom? (+2, -0.5)



a. 5

b. 6

c. 2

d. 4

24. In a code language, TEACHING is written as SDBDGH OH. How will BOOKWORM be written as in that language? (+2, -0.5)

a. ANPLVNSN

- b.** ANPLXNNS
- c.** CPNJXPSL
- d.** ANPLXPSL

---

**25.** Three of the following four letter -clusters are alike in a certain way and one is different. Pick the odd one out. (+2, -0.5)

- a.** PAST
- b.** ZOOM
- c.** DECK
- d.** BIRD

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## General Awareness

26. A sustained rise in the general price level in an economy is called (+2, -0.5)

-----.

- a. Stagflation
- b. Inflation
- c. Deflation
- d. Disinflation

---

27. TV remote controls work on the principle of ----- (+2, -0.5)

- a. Bluetooth technology
- b. Ultrasonic waves
- c. Laser technology
- d. Infrared waves

---

28. In March 2019, who among the followings was appointed as India's first Lokpal? (+2, -0.5)

- a. Justice N V Ramana
- b. Justice S A Bobde
- c. Justice Pinaki Chandra Ghose
- d. Justice A K Sikri

29. Poush Mela displays local artisans displaying folk dances, music, food and culture of -----.

- a. Uttarakhand
- b. Gujarat
- c. West Bengal
- d. Rajasthan

---

30. Who among the following was one of the Governors during the reign of Alauddin Khilji? (+2, -0.5)

- a. Ghiyasuddin Tughlaq
- b. Nasiruddin Mahmud
- c. Shams-ud-din Iltutmish
- d. Jalal-ud-din Khilji

---

31. Pramod Sawant became Chief Minister of which Indian state in March, 2019? (+2, -0.5)

- a. Tamil Nadu
  - b. Maharashtra
  - c. Goa
  - d. Kerala
-



**32.** Which of the following passes connects Tawang with Lhasa? **(+2, -0.5)**

- a. Bum La Pass
  - b. Chankan Pass
  - c. Kumjawng Pass
  - d. Hpungan Pass
- 

**33.** \_\_\_\_\_ is the study of the microanatomy of cells, tissues and organs as seen through a microscope. **(+2, -0.5)**

- a. Paleontology
  - b. Ichthyology
  - c. Histology
  - d. Entomology
- 

**34.** The invasion of Delhi by Timur in \_\_\_\_\_ A.D marked the end of the Tughlaq empire. **(+2, -0.5)**

- a. 1452
  - b. 1645
  - c. 1215
  - d. 1398
-

**35.** Which of the following passes is known as the gateway connecting Jammu and Srinagar? **(+2, -0.5)**

- a.** Lanak-La Pass
  - b.** Chang-La Pass
  - c.** Banihal Pass
  - d.** Aghil Pass
- 

**36.** \_\_\_\_\_ is a scientific discipline concerned with the study of plant pollen, spores, and certain microscopic planktonic organisms, in both, living and fossil form. **(+2, -0.5)**

- a.** Dendrology
  - b.** Ethnobotany
  - c.** Palynology
  - d.** Paleobotany
- 

**37.** In March 2019, India won five silver medals at the Makran Cup Boxing Tournament in Iran. Who among the following is NOT one of the silver medallist? **(+2, -0.5)**

- a.** Duryodhan Singh Negi
- b.** Deepak Singh
- c.** Manish Kaushik
- d.** P Lalitha Prasad

38. Rust needs three components to occur, i.e., \_\_\_\_\_. (+2, -0.5)

- a. Iron, nitrogen and moisture
- b. Iron, oxygen and moisture
- c. Helium, hydrogen and nitrogen
- d. Steel, iron and oxygen

39. Who founded the Indian Statistical Institute on 17 December 1931? (+2, -0.5)

- a. P.C. Mahalanobis
- b. M.H. Hansen
- c. R.A. Fischer
- d. F. Yates

40. Which of the following articles promotes equal justice and free legal aid for all the citizens? (+2, -0.5)

- a. 39A
- b. 43A
- c. 48A
- d. 32A

41. Majuli, the largest river island in the world is located in \_\_\_\_\_. (+2, -0.5)

- a. Uttar Pradesh
  - b. Assam
  - c. Nagaland
  - d. Arunachal Pradesh
- 

42. \_\_\_\_\_ was observed nationwide from 24th to 30th April, 2019. (+2, -0.5)

- a. World Environment Week
  - b. World Postal Week
  - c. World Tourism Week
  - d. World Immunization Week
- 

43. Government of India nominated member of NITI Aayog, \_\_\_\_\_ to head the Food and Agriculture Organisation (FAO) in March 2019. (+2, -0.5)

- a. V K Paul
  - b. Amitabh Kant
  - c. Binay Ranjan Sen
  - d. Ramesh Chand
- 

44. Who founded the Sayyid dynasty? (+2, -0.5)

- a. Khizr Khan
- b. Nizam Shah

- c. Bahlul Khan
  - d. Muhammad-bin-Farid
- 

45. Kala Bhavana, founded in 1919, is a noted institution of education and research in visual arts. It is located in \_\_\_\_\_. (+2, -0.5)

- a. West Bengal
  - b. Bihar
  - c. Sikkim
  - d. Uttar Pradesh
- 

46. Who was appointed as the director of Bhabha Atomic Research Centre (BARC) for a period of three years in March 2019? (+2, -0.5)

- a. Ajit Kumar Mohanty
  - b. Kamlesh Nilkanth Vyas
  - c. Vishvapavan Pati
  - d. Satyaajeet Rajan
- 

47. \_\_\_\_\_ in Himachal Pradesh is a famous tourist attraction. (+2, -0.5)

- a. Rohtang Pass
- b. Mintaka Pass
- c. Chang-La Pass

d. Aghil Pass

---

48. \_\_\_\_\_ is the branch of zoology concerned with the study of amphibians. (+2, -0.5)

- a. Morphology
  - b. Herpetology
  - c. Mammology
  - d. Ethology
- 

49. In March 2019, the government of India appointed \_\_\_\_\_ as the director-general of the National Archives of India. (+2, -0.5)

- a. V K Paul
  - b. Kamlesh Vyas
  - c. P V Ramesh
  - d. Binay Sen
- 

50. \_\_\_\_\_ created history in its second Twenty-20 International against Ireland by achieving the highest-ever T20 total at the Rajiv Gandhi International Cricket Stadium in Dehradun, Uttarakhand. (+2, -0.5)

- a. India
- b. Afghanistan
- c. Pakistan

d. Australia

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## Quantitative Aptitude

51. When the price of an item was reduced by 20%, then its sale increased by  $(+2, -0.5)$  x%. If there is an increase of 60% in the receipt of the revenue, then the value of x is:

- a. 80
- b. 120
- c. 96
- d. 100

52. The value of  $16 \div 4$  of  $4 \times [3 \div 4$  of  $\{4 \times 3 \div (3 + 3)\}] \div (2 \div 4$  of 8) is:  $(+2, -0.5)$

- a. 16
- b. 48
- c. 9
- d. 6

53. The efficiencies of A, B and C are in the ratio 5 : 3 : 8. Working together they  $(+2, -0.5)$  can complete a work in 30 days. A and B worked together for 20 days. The remaining work will be completed by C alone in:

- a. 30 days
- b. 32 days
- c. 36 days
- d. 40 days



---

54. If  $\sin \theta = 4 \cos \theta$ , then what is the value of  $\sin \theta \cos \theta$ ? (+2, -0.5)

- a.  $4/17$
- b.  $2/9$
- c.  $3/4$
- d.  $3/10$

---

55. The length of a metallic pipe is 7.56 m. Its external and internal radii are 2.5 cm and 1.5 cm respectively. If  $1 \text{ cm}^3$  of the metal weight 7.5 g, then the weight of the pipe is : (Take  $\pi = 22/7$ ) (+2, -0.5)

- a. 70.14 kg
- b. 69.68 kg
- c. 72.82 kg
- d. 71.28 kg

---

56. If  $2x^2 + y^2 + 6x - 2xy + 9 = 0$ , then the value of  $(4x^3 - y^3 + x^2y^2)$  is: (+2, -0.5)

- a. 0
  - b. -9
  - c. -3
  - d. 9
-

57. A trader marks his goods at 40% above the cost price. He sells 70% of the goods at the marked price and the rest, he sells by allowing a 40% discount on the marked price. His percentage profit is: (+2, -0.5)

- a. 23.2
- b. 23.4
- c. 24.4
- d. 24.2

58. The table shows the production of different types of cars (in thousands). (+2, -0.5)

City/ Year	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

The total production of all type of cars, except type B, in 2012 is what percent less than the total production of all types of cars in 2016?

- a. 40
- b. 25.8
- c. 26.7
- d. 42

---

59. The vertices of  $\Delta PQR$  lie on a circle with centre  $O$ ,  $SR$  is a tangent to the circle at the point  $R$ . If  $QR$  bisects the  $\angle ORS$ , then what is the measures of  $\angle RPQ$ ? (+2, -0.5)

- a.  $60^\circ$
- b.  $30^\circ$
- c.  $40^\circ$
- d.  $45^\circ$

---

60. The table shows the production of different types of cars (in thousands). (+2, -0.5)

City/ Year	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

If the data related to the production of type D cars is represented by a pie chart, then the central angle of the sector representing the production of cars in 2013 will be:

- a.  $77^\circ$
- b.  $84^\circ$
- c.  $75^\circ$
- d.  $60^\circ$

61. In a circle with center O, ACBO is a parallelogram where C is a point on the minor arc AB. What is the measure of  $\angle AOB$ ? (+2, -0.5)

- a.  $110^\circ$

b.  $120^\circ$

c.  $150^\circ$

d.  $100^\circ$

---

62. If  $x^2 + y^2 + z^2 = 133$ ,  $xy + yz + zx = 114$  and  $xyz = 216$ , then the value of  $x^3 + y^3 + z^3$  is: (+2, -0.5)

a. 948

b. 942

c. 1009

d. 999

---

63. The ratio of the present ages of A and B is 8 : 9. After 9 years, this ratio will become 19 : 21. C is 3 years younger to B. What is the present (in years) of C? (+2, -0.5)

a. 49

b. 48

c. 51

d. 52

---

64. What is the compound interest on a sum of Rs. 10,000 at 14% p.a. for  $2\frac{5}{7}$  years where the interest is compounded yearly? (+2, -0.5)

a. Rs. 4,259

**b.** Rs. 4,439

**c.** Rs. 4,394

**d.** Rs. 4,296

**65.** The table shows the production of different types of cars (in thousands). **(+2, -0.5)**

City/ Year	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

What is the ratio of the total production of type E cars in 2014 and type C cars in 2016 taken together to the total production of type B cars in 2014 and type D cars in 2013 taken together?

**a.** 9 : 8

**b.** 10 : 7

**c.** 11 : 5

d. 11 : 8

---

66. If  $\frac{\cos^2 \theta}{\cot^2 \theta - \cos^2 \theta} = 3$ ,  $0^\circ < \theta < 90^\circ$ , then the value of  $\cot \theta + \operatorname{cosec} \theta$  is: (+2, -0.5)

a.  $\sqrt{3}/2$

b.  $\sqrt{3}$

c.  $2\sqrt{3}$

d.  $(3\sqrt{3})/4$

---

67. The distance between two station A and B is 800 km. A train X starts from A and moves towards B at 40 km/h and another trains Y starts from B and moves towards A at 60 km/h. how far from A will they cross each other? (+2, -0.5)

a. 300 km

b. 320 km

c. 380 km

d. 360 km

---

68. ABDC is a parallelogram in which diagonals AD and BC intersect at O. AE and DF are perpendicular on BC at E and F, respectively. Which of the following is not true? (+2, -0.5)

a.  $\triangle ADC \cong \triangle ABD$

b.  $\triangle AOE \cong \triangle DOF$

c.  $\triangle ABC \cong \triangle DCB$

d.  $\triangle AEB \cong \triangle DFC$

---

69. If  $x + y = 12$  and  $xy = 27$ ,  $x > y$ , then the value of  $(x^3 - y^3)$  is: (+2, -0.5)

a. 720

b. 724

c. 710

d. 702

---

70. If a 9-digit number  $32x4115y2$  is divisible by 88, then the value of  $(4x - y)$  for the smallest possible value of  $y$  is: (+2, -0.5)

a. 20

b. -1

c. 31

d. 11

---

71. The average of twelve numbers is 46. The average of the first four numbers is 43 and that of the last five numbers is 49.4. The 5<sup>th</sup> and the 6<sup>th</sup> numbers are respectively 4 and 6 more than the 7<sup>th</sup> number. What is the average of the 5<sup>th</sup> and 7<sup>th</sup> numbers? (+2, -0.5)

a. 44.5

b. 43

c. 44



d. 43.5

---

72. In  $\triangle ABC$  with sides 6 cm, 7 cm and 8 cm, the angle bisector of the largest angle divides the opposite side into two segments. What is the length of the shorter segment? (+2, -0.5)

a.  $56/13$  cm

b.  $48/13$  cm

c.  $21/5$  cm

d.  $24/5$  cm

---

73. Abhi bought two articles for Rs. 624. He sold one at a loss of 14% and the other at a profit of 14%. If the selling price of both the articles is equal, then the difference between their cost prices (in Rs.) is: (+2, -0.5)

a. 89.64

b. 87.36

c. 89.68

d. 88.84

---

74. The table shows the production of different types of cars (in thousands). (+2, -0.5)

City/ Year	2012	2013	2014	2015	2016
A	54	58	60	63	55
B	40	54	56	61	67
C	46	50	63	73	77
D	33	35	48	45	49
E	47	43	53	48	52

The total production of type E cars in 2012 and 2013 is approximately what percent more than the average production of type A cars during the years 2012 to 2016?

- a. 56.4
- b. 53.8
- c. 52.2
- d. 55.2

75. Let  $a = \frac{2 \sin x}{1 + \sin x + \cos x}$  and  $b = \frac{c}{1 + \sin x}$ . then  $a = b$ , if  $c = ?$

(+2, -0.5)

- a.  $1 + \sin x \cos x$
- b.  $1 + \sin x - \cos x$

c.  $1 + \cos x - \sin x$

d.  $1 - \sin x \cos x$

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## English Comprehension

76. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. (+2, -0.5)

The Head has been so busy to go through these files and resolve the matter

- a. too busy to go through
- b. so busy to go through
- c. such busy to go through
- d. No improvement

77. In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+2, -0.5)

In 1914 a war began in Europe which engulfed the entire world. The damage (1)\_\_\_\_\_ by this war has no precedent in history. (2)\_\_\_\_\_ the earlier wars, the civilian populations were (3)\_\_\_\_\_ not involved and the casualties were mostly (4)\_\_\_\_\_ to the warring armies. The war (5)\_\_\_\_\_ began in 1914 was a total war in which all the resources of the warring states were mobilized.

Select the most appropriate option for blank No. 2.

- a. In
- b. At
- c. Into

d. On

78. In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+2, -0.5)

In 1914 a war began in Europe which engulfed the entire world. The damage (1)\_\_\_\_\_ by this war has no precedent in history. (2)\_\_\_\_\_ the earlier wars, the civilian populations were (3)\_\_\_\_\_ not involved and the casualties were mostly (4)\_\_\_\_\_ to the warring armies. The war (5)\_\_\_\_\_ began in 1914 was a total war in which all the resources of the warring states were mobilized.

Select the most appropriate option for blank No. 4

- a. bound
- b. confined
- c. belonged
- d. attained

79. Given below are four jumbled sentences. Select the option that gives their correct order. (+2, -0.5)

- A. In China, thousands of people celebrated it.
- B. The Lunar New Year of the Pig began on 5th February.
- C. Others burned the first joss sticks of the year to bring them good fortune.
- D. Some performers re-enacted historical ceremonies.

- a. DABC

b. ABCD

c. BADC

d. BDCA

---

80. Select the correct passive form of the given sentence. (+2, -0.5)

Take this suitcase upstairs.

a. You are requested to take this suitcase upstairs.

b. Let this suitcase been taken upstairs.

c. This suitcase should be taken upstairs.

d. You must be taking this suitcase upstairs.

---

81. Select the correct active form of the given sentence. (+2, -0.5)

The wall of this park is being painted by children.

a. Children painted the wall of this park.

b. Children are painting the wall of this park.

c. The wall is painting children of this park.

d. Children have been painting the wall of this park.

---

82. Select the word which means the same as the group of words given. (+2, -0.5)

Persons living at the same time

a. contemporaries

- b. colleagues
  - c. cosmopolitans
  - d. compatriots
- 

83. Select the synonym of the given word. (+2, -0.5)

DUBIOUS

- a. fishy
  - b. loyal
  - c. certain
  - d. steady
- 

84. Select the synonym of the given word. (+2, -0.5)

ENTICE

- a. enrage
  - b. entail
  - c. entrap
  - d. ensue
- 

85. Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. (+2, -0.5)

You won't tell the secret, won't you?

- a. isn't it
- b. No improvement
- c. would you
- d. will you

---

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

Couch potato

- a. a person who watches too much television
- b. a person who is simple in nature
- c. a person who remains relaxed and calm
- d. a person who sleeps all day

---

87. In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+2, -0.5)

In 1914 a war began in Europe which engulfed the entire world. The damage (1)\_\_\_\_\_ by this war has no precedent in history. (2)\_\_\_\_\_ the earlier wars, the civilian populations were (3)\_\_\_\_\_ not involved and the casualties were mostly (4)\_\_\_\_\_ to the warring armies. The war (5)\_\_\_\_\_ began in 1914 was a total war in which all the resources of the warring states were mobilized.

Select the most appropriate option for blank No. 1.

- a. constructed
- b. caused



c. made

d. began

---

88. In the sentence identify the segment which contains the grammatical error. (+2, -0.5)

I know the cobbler which mends the shoes outside the gate of our colony.

a. the shoes

b. outside the gate

c. I know the cobbler

d. which mends

---

89. In the sentence identify the segment which contains the grammatical error. (+2, -0.5)

The street artist Satish Munjal has been painting this wall since the past one week.

a. this wall

b. since the past one week

c. has been painting

d. The street artist

---

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

In many countries the \_\_\_\_\_ in pay for men and women is quite common, for example, in Germany women are paid 21 per cent less as

compared to men.

- a. disparity
- b. unlikeliness
- c. equivalence
- d. disagreement

---

91. Select the most appropriate meaning of the given idiom.

(+2, -0.5)

Lead someone by the nose

- a. to quarrel with someone
- b. to do the right thing
- c. to force someone to take the blame
- d. to dominate someone

---

92. In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

(+2, -0.5)

In 1914 a war began in Europe which engulfed the entire world. The damage (1)\_\_\_\_\_ by this war has no precedent in history. (2)\_\_\_\_\_ the earlier wars, the civilian populations were (3)\_\_\_\_\_ not involved and the casualties were mostly (4)\_\_\_\_\_ to the warring armies. The war (5)\_\_\_\_\_ began in 1914 was a total war in which all the resources of the warring states were mobilized.

Select the most appropriate option for blank No. 5.

- a. what

b. whom

c. which

d. who

93. 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)

A. In fact, Canada accounts for nearly one-third of the world's production of news print.

B. Forest products, therefore, have been important export items of Canada for more than a century.

C. A large part of Canada is covered with coniferous trees.

D. Pulp and paper are their two most important forest products.

a. BACD

b. ABCD

c. CBDA

d. DCAB

94. In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank. (+2, -0.5)

In 1914 a war began in Europe which engulfed the entire world. The damage (1)\_\_\_\_\_ by this war has no precedent in history. (2)\_\_\_\_\_ the earlier wars, the civilian populations were (3)\_\_\_\_\_ not involved and the casualties were mostly (4)\_\_\_\_\_ to the warring armies. The

war (5)\_\_\_\_\_ began in 1914 was a total war in which all the resources of the warring states were mobilized.

Select the most appropriate option for blank No. 3.

- a. chiefly
  - b. broadly
  - c. generally
  - d. finally
- 

95. Select the wrongly spelt word.

(+2, -0.5)

- a. megre
  - b. measure
  - c. meadow
  - d. matter
- 

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---

96. Select the antonym of the given word.

(+2, -0.5)

FINITE

- a. finished
  - b. endless
  - c. limited
  - d. bound
-

97. Select the wrongly spelt word.

(+2, -0.5)

- a. renassaince
  - b. rendezvous
  - c. remuneration
  - d. remonstrate
- 

98. Select the word which means the same as the group of words given.

(+2, -0.5)

Someone who believes that people cannot change the way events will happen

- a. prophet
  - b. fatalist
  - c. seer
  - d. fanatic
- 

99. Select the antonym of the given word.

(+2, -0.5)

REPRIMAND

- a. blame
  - b. compliment
  - c. reproach
  - d. apprehend
-

100. Select the most appropriate option to fill in the blank.

(+2, -0.5)

Catholics and Protestants have a long history of \_\_\_\_\_ in Northern Ireland but volunteers from both communities came together to build the monument of Peace

- a. truce
- b. agreement
- c. contest
- d. conflict

Prepp

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## Answers

### 1. Answer: b

#### Explanation:

Ratio of 28 : 63 is  $\frac{4}{9}$

Similarly,

Ration of 16 : 36 is  $\frac{4}{9}$

Hence answer is 16 : 36.

---

### 2. Answer: b

#### Explanation:

- 1) Doctors can be Salaried person and also Parents.
- 2) Parents can be Salaried person and also a Doctor.
- 3) Salaried person can be a Doctor and also a Parent.

The final arrangement is:



Hence, Option 2 is the correct answer.

---

### 3. Answer: a

### Explanation:

Pattern followed is :

POSTER  $\rightarrow$  592314, P = 5, O = 9, S = 2, T = 3, E = 1, R = 4.

DARK  $\rightarrow$  8647, D = 8, A = 6, R = 4, K = 7

S = 2, T = 3, R = 4, O = 9, K = 7, E = 1.

Hence For STROKE  $\rightarrow$  234971

### 4. Answer: c

### Explanation:

Interchanging + and  $\div$

$$12 - 6 + 12 \times 6 \div 6 = 12 - 6 + 12 \times 1$$

$$6 + 12 \neq 9$$

Interchanging  $\times$  and +

$$12 - 6 \div 12 + 6 \times 6 = 12 - \frac{6}{12} + 36$$

$$48 - \frac{1}{2} \neq 9$$

Interchanging - and +

$$12 + 6 \div 12 \times 6 - 6 = 12 + \frac{6}{12} \times 6 - 6$$

$$12 + 3 - 6 = 9$$

Interchanging  $\div$  and  $\times$

$$12 - 6 \times 12 \div 6 + 6 = 12 - 6 \times 2 + 6$$

$$12 - 12 + 6 \neq 9$$

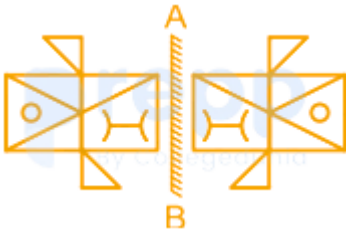


Hence by interchanging – and + we get correct equation.

---

**5. Answer: c**

**Explanation:**



**6. Answer: d**

**Explanation:**

Dumbness is not communicating vocally (not using Speech)

Similarly,

Amnesia is referred when a person losses memory.

---

**7. Answer: a**

**Explanation:**

Happy and glad are synonyms.

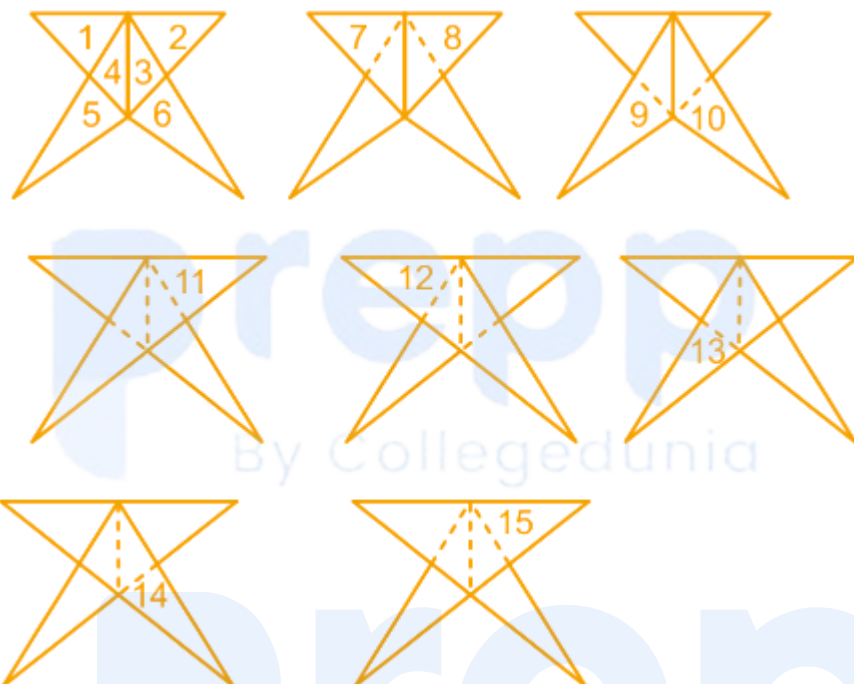
Similarly, sad and gloomy are synonyms.

Hence, gloomy is the correct answer.

---

**8. Answer: c**

**Explanation:**



Hence total triangles are 15.

**9. Answer: c**

**Explanation:**

Logical sequence is:

Writing – Editing – Printing – Publishing – Distributing

Hence 1, 5, 4, 3, 2 is correct sequence.

**10. Answer: c**

**Explanation:**

$$2^{\text{nd}} \text{ term} = 1^{\text{st}} \text{ term} + \frac{1^{\text{st}} \text{ term}}{3}$$

$$3^{\text{rd}} \text{ term} = (1^{\text{st}} \text{ term} \times 2) + \frac{1^{\text{st}} \text{ term}}{3}$$

$$(12, 16, 28) \rightarrow 12 + \frac{12}{3} = 16 \text{ and } 12 \times 2 + 4 = 28$$

$$(20, 25, 35) \rightarrow 20 + \frac{20}{3} \neq 25$$

$$(9, 15, 21) \rightarrow 9 + \frac{9}{3} \neq 15$$

$$(18, 24, 42) \rightarrow 18 + \frac{18}{3} = 24 \text{ and } 18 \times 2 + \frac{18}{3} = 42$$

$$(36, 48, 77) \rightarrow 36 + \frac{36}{3} = 48 \text{ and } 36 \times 2 + \frac{36}{3} \neq 77$$

Hence (18, 24, 42) is correct answer.

### Alternate Method

Question set is (12, 16, 28) the simple ratio is (3, 4, 7)

(20, 25, 35) the simple ratio is (4, 5, 7)

(9, 15, 21) the simple ratio is (3, 5, 7)

(18, 24, 42) the simple ratio is (3, 4, 7)

(36, 48, 77) the simple ratio is (36, 48, 77)

## 11. Answer: d

### Explanation:

Let amount received by 1 boy = X

Then amount received by 1 man = 1.5 X

And amount received by 1 woman = 2.5 X

Total amount =  $(12 \times X + 6 \times 1.5X + 8 \times 2.5X) = (12X + 9X + 20X)$

$(12X + 9X + 20X) = 820$

$$41X = 820$$

$$X = 20$$

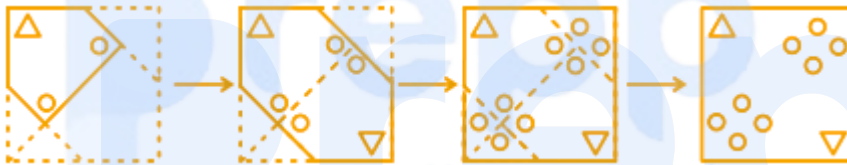
Amount received by 1 woman =  $20 \times 2.5 = 50$

Amount received by 8 women's =  $50 \times 8 = 400$ .

Hence 400 is correct answer.

12. Answer: b

Explanation:



Hence option 2) is correct answer.

13. Answer: d

Explanation:



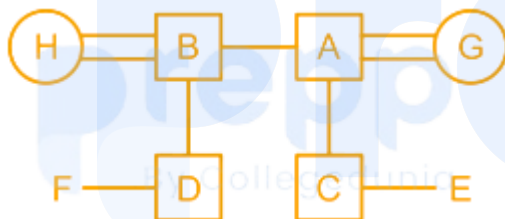
Hence option 4 is correct answer.

14. Answer: d

**Explanation:**

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

Tree diagram:



Hence A is uncle of D.

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**15. 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

Pattern followed is :

$$J - 2 = H$$

$$K + 1 = L$$

$$L - 1 = K$$

$$M + 2 = O$$

Similarly,

$$P - 2 = N$$

$$Q + 1 = R$$

$$R - 1 = Q$$

$$S + 2 = U$$

Hence NRQU is answer.

---

16. **Answer: c**

**Explanation:**

Pattern followed is:

341, 209 and 154 are divisible by 11 but 166 is not.

Hence 166 is odd among them.

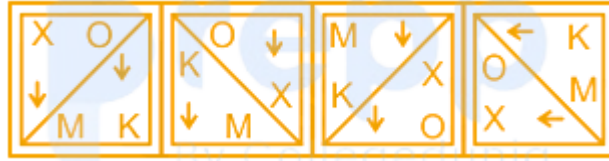
---

17. **Answer: c**

**Explanation:**

By looking at diagram we see that there are two symbols between two given arrows.

Only option 3 fulfils this pattern.



Hence, option 3 is the correct answer.

18. Answer: c

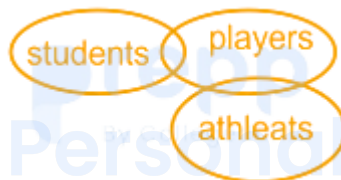
Explanation:

Cucumber is a vegetable but except that all three are fruits.

Hence Cucumber is odd one out.

19. Answer: a

Explanation:



Some students are athletes → False

Some players are students → True

No students is an athlete → False

Conclusion I and III are complimentary.

Hence Only conclusion II and either conclusion I or III follow.

20. Answer: b

### Explanation:

Pattern followed is:

Here d c b a b c is repeating term.

d c **ba** b c **dc** b **ab** c d **cb** a **bc** is complete series.

Hence **b d a c b** will complete the series.

### 21. Answer: b

### Explanation:



Here  $1 + 3 = 4$

$3 + 4 = 7$

$4 + 7 = 11$

$7 + 11 = 18$

18 is added to 28 for final answer.

Hence answer is 46.

### 22. Answer: b

### Explanation:

Pattern followed is:

$2^{\text{nd}} \text{ term} = 1^{\text{st}} \text{ term} + 7$



$$3^{\text{rd}} \text{ term} = 2^{\text{nd}} \text{ term} + 9$$

$$15 + 7 = 22, \text{ and } 22 + 9 = 31$$

$$(23, 30, 40) \rightarrow 23 + 7 = 30 \text{ and } 30 + 9 \neq 40$$

$$(7, 14, 23) \rightarrow 7 + 7 = 14 \text{ and } 14 + 9 = 23$$

$$(11, 18, 29) \rightarrow 11 + 7 = 18 \text{ and } 18 + 9 \neq 29$$

$$(5, 11, 20) \rightarrow 5 + 7 \neq 11$$

Hence (7, 14, 23) is answer.

---

**23. Answer: d**

**Explanation:**

If we rotate 1<sup>st</sup> cube to get 3 on the front face and 2 on the bottom face.

1, 6 are adjacent to 3 in 1<sup>st</sup> cube and 2, 4 are adjacent to 3 in 2<sup>nd</sup> cube.

6 is at top and 2 is on the bottom if we rotate the cube.

So 1 and 4 will be opposite to each other

Hence 4 will be on top when 1 is at the bottom.

---

**24. Answer: a**

**Explanation:**

Pattern followed is:

T	E	A	C	H	I	N	G
-1	-1	+1	+1	-1	-1	+1	+1
S	D	B	D	G	H	O	H

Similarly,

B	O	O	K	W	O	R	M
-1	-1	+1	+1	-1	-1	+1	+1
A	N	P	L	V	N	S	N

Hence ANPLVNSN is correct answer.

## 25. Answer: b

### Explanation:

Pattern followed is:

ZOOM has 2 vowels while all others have only one vowel.

Hence ZOOM is correct answer.

## 26. Answer: b

### Explanation:

- **Inflation**: It is a sustained rise in the general price level in an economy.
- **Stagflation**: A situation in which the inflation rate is high, the economic growth rate slows down, and unemployment remains steadily high.
- **Deflation**: It is a persistent fall in the general price level of goods and services.
- **Disinflation**: It is decrease in the rate of inflation.

27. Answer: d

Explanation:

- Working principle of TV remote is based on Infrared waves, as a medium of communication.
  - The wavelength of infrared waves ranges from **700 nm to 1 mm**.
  - The inventor of TV remote control: **Eugene Polley** .
- 

28. Answer: c

Explanation:

- **Justice Pinaki Chandra Ghose** was appointed as India's first Lokpal.
  - He was former Supreme Court judge and former member of the National Human Rights Commission (NHRC).
  - Post of Lokpal was created by **Lokpal Act, 2013**.
- 

29. Answer: c

Explanation:

- Poush Mela displays local artisans displaying folk dances, music, food and culture of West Bengal.
  - It is an annual festival which takes place in **Shantiniketan** in Birbhum District of West Bengal.
  - Governor: **Shri Jagdeep Dhankhar**
  - Chief Minister: **Mamata Banerjee**
  - Capital : **Kolkata**
-

30. Answer: a

Explanation:

- The founder of the Tughlaq dynasty was Ghiyasuddin Tughlaq.
- Ghiyasuddin Balban, who was also known as **Ulugh Khan** , served as Naib or regent to Sultan **Nasiruddin Mahmud** .
- Iltutmish belonged to the **Ilbari tribe** and hence his dynasty was named as **Ilbari dynasty**.
- The founder of the Khalji dynasty was **Jalaluddin Khalji**.

31. Answer: c

Explanation:

- Pramod Sawant became Chief Minister of Goa in March 2019.
- The post of Chief Minister was vacant due to the death of former Chief Minister Manohar Parikar.
- Governor of Goa: P.S. Sreedharan Pillai
- Capital of Goa: **Panaji**

32. Answer: a

Explanation:

Lhasa is major city of **Tibet Autonomous Region** . It is connected to Tawang, Arunachal Pradesh with Bum La Pass.

Name of the Pass	Location
Bum La Pass	Arunachal Pradesh with Lhasa(Tibet)
Kumjawng Pass	Arunachal Pradesh with Myanmar
Hpungan Pass	Arunachal Pradesh with Myanmar
Chankan Pass	Arunachal Pradesh with Myanmar

33. Answer: c

Explanation:

Option 3 is the correct answer.

Term	Meaning
Paleontology	Study of fossil animals and plants
<u>Histology</u>	Study of the microanatomy of cells, tissues and organs as seen through a microscope .
Ichthyology	Study of fishes
Entomology	Study of insects

34. Answer: d

### Explanation:

- The invasion of Delhi by Timur in **1398** A.D marked the end of the Tughlaq empire.
- Timur withdrew from India in 1399 and his invasion delivered a death blow to the Tughlaq dynasty.
- The founder of the Tughlaq dynasty was **Ghiyasuddin Tughlaq**.

### 35. Answer: c

### Explanation:

**Banihal Pass** is known as the gateway connecting Jammu and Srinagar.

Pass	In between	Additional Information
Banihal Pass	Jammu and Srinagar	Across the Pir-Panjal Range
Chang-La Pass	Ladakh with Tibet	This has a temple dedicated to <b>Chang-La Baba</b> after whom the temple has been named
Lanak-La Pass	India and China (Aksai-Chin area of Jammu and Kashmir)	This pass provides passage between <b>Ladak and Lhasa</b> .
Aghil Pass	Ladakh region of India with the Xinjiang Province of China	North of <b>K-2 Peak</b> (the highest peak in India and the second highest peak in the world)

### 36. Answer: c

### Explanation:

Term	Meaning
<u>Palynology</u>	Study of plant pollen, spores, and certain microscopic planktonic organisms, in both, living and fossil form.
Ethnobotany	Study of particular region's plant and their practical application through traditional knowledge
Paleobotany	Study of plant fossils
Dendrology	Study of characteristics of trees

37. Answer: b

Explanation:

- Deepak Singh won Gold medal at the Makran Cup Boxing Tournament in Iran.
- Deepak Singh defeated **Jaafar Naseri** in the finals.
- P Lalitha Prasad ( **52kg** ), Manish Kaushik ( **60kg** ), Duryodhan Singh Negi ( **69kg** ), Sanjeet ( **91kg** ) and Satish Kumar ( + **91kg** ) were other silver medalist.

38. Answer: b

Explanation:

- Rust needs three components to occur, i.e., Iron, oxygen and moisture.
- The reaction for rusting can be given as follows:
- Iron (Fe) + Oxygen (O<sub>2</sub>) + water (H<sub>2</sub>O) → Rust ( **Iron oxide Fe<sub>2</sub>O<sub>3</sub>** )
- If the moisture content in the air is **high** , rusting becomes **faster**.

39. Answer: a

### Explanation:

- Indian Statistical Institute was founded by Professor P.C. Mahalanobis on 17th December 1931.
- Headquarters: **Kolkata**.
- Indian Statistical Institute has the status of an Institution of National Importance. This status was given by an act of the **Indian Parliament in 1959**.
- Statistics, natural sciences and social sciences are main areas of research.

### 40. Answer: a

### Explanation:

- **Article 39-A** is included in **Part 4** of the Indian Constitution.
- It provides an idea of **equal justice and free legal aid for all citizens**.
- Part 4 of the Indian Constitution deals with the **Directive Principles of State Policy**.

Additional Information about other articles is provided in the following table:

Article	Deals with
39-A	Promoting equal justice and providing free legal aid to the poor
43-A	Securing the participation of workers in the management of industries.
48-A	Safeguarding forests and wildlife and protecting the environment
32-A	Article repealed

### 41. Answer: b

### Explanation:



- **Majuli** is the largest river island in the world. It is located in Assam.
- It is situated in **Bhramhaputra river**.
- It was made first island district in the year **2016**.
- **Capital:** Dispur

42. Answer: d

Explanation:

- World Immunization Week was observed nationwide from 24th to 30th April 2019.
- The theme of the 2019 World Immunization Week is ' **Vaccines work: We are protected together** '.

Additional information about other options:

Day	Important Dates
World Tourism Day	27 September
World Postal Day	9 October
World Environment Day	5 June

43. Answer: d

Explanation:

- Government of India nominated a member of NITI Aayog, Ramesh Chand to head the Food and Agriculture Organisation (FAO) in March 2019.
- **Headquarters of Food and Agricultural Organisation (FAO):** Rome, Italy

Information about Ramesh Chand:

Profession	Indian agricultural economist
Education	<ul style="list-style-type: none"> <li>• Bachelor's and Master's degrees in Agriculture from Punjab Agricultural University, Ludhiana</li> <li>• Ph.D. in Agricultural Economics</li> </ul>
Awards/Recognitions	<ul style="list-style-type: none"> <li>• <b>Atal Bihari Vajpayee Award 2018</b></li> <li>• <b>Rafi Ahmed Kidwai Award 2011</b> (Indian Council of Agricultural Research)</li> <li>• <b>Jawaharlal Nehru Award 1985</b> (Indian Council of Agricultural Research )</li> </ul>

44. Answer: a

Explanation:

Timur appointed **Khizr Khan** as governor of **Multan** . He captured Delhi and founded the Sayyid dynasty in the year 1414.

★ Key Points

Additional information about other rulers:

Founder	Dynasty
Qutbuddin Aibak.	Slave dynasty
Iluttmish	First Ilbari dynasty
Balban	Second Ilbari dynasty
Jalaluddin Khalji.	Khalji dynasty
Ghiyasuddin Tughlaq	Tughlaq dynasty

45. Answer: a

Explanation:

- Kala Bhavana is located in Birbhum district of West Bengal.
- It was established by Nobel laureate Rabindranath Tagore.

Additional information about Kala Bhavana:

About Kala Bhavana	It is a Centre for Visual Art practice and research
Founded in	1919
Subjects Taught	<ul style="list-style-type: none"> <li>• Painting</li> <li>• Graphic Art (Print-making)</li> <li>• Design (Ceramic &amp; glass)</li> <li>• Design (Textile)</li> <li>• History of Art</li> <li>• Sculpture</li> </ul>

46. Answer: a

### Explanation:

- Ajit Kumar Mohanty was appointed as the director of Bhabha Atomic Research Centre (BARC) for a period of three years.
- He is a well-known nuclear **physicist**. He obtained Ph.D degree from Bombay University.
- Dr Homi Bhabha established the **Atomic Energy Establishment, Trombay (AEET)** in January **1954**.
- In **1966**, Atomic Energy Establishment, Trombay was renamed **Bhabha Atomic Research Centre (BARC)**.

### 47. Answer: a

### Explanation:

The correct answer is Rohtang Pass.

- **Rohtang Pass** in Himachal Pradesh is a famous tourist attraction.
- Himachal Pradesh is located in the **Northern** part of India.
- **Chief Minister of Himachal Pradesh:** Jairam Thakur
- **Governor of Himachal Pradesh:** Rajendra Vishwanath Arlekar
- **Capital:** Shimla

★ Additional Information

Pass	In between	Additional Information
Banihal Pass	Jammu and Srinagar	Across the Pir-Panjal Range
Chang-La Pass	Ladakh with Tibet	This has a temple dedicated to Chang-La Baba after whom the temple has been named
Mintaka Pass	Pakistan and Xinjiang in China	The Mintaka Pass is located in the Karakoram Range
Aghil Pass	Ladakh region of India with the Xinjiang Province of China	North of K-2 Peak (the highest peak in India and the second highest peak in the world)

48. Answer: b

Explanation:

Term	Meaning
<u>Herpetology</u>	<u>Study of amphibians</u>
Morphology	Study of forms and structure of various organisms
Mammology	Study of Mammals
Ethology	Study of animal behaviour

49. Answer: c

Explanation:

- The government of India appointed **P V Ramesh** as the director-general of the National Archives of India on March 2019.
- **Dr P.V. Ramesh:** Andhra Pradesh Cadre-1985 batch IAS officer
- **Director-General of Archives:** Shri Chandan Sinha (As on 10 December 2021 )
- **Headquarters of National Archives of India :** New Delhi

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50. Answer: b

Explanation:

- **Afghanistan** created history in its second Twenty-20 International against Ireland by achieving the highest-ever T20 total at the Rajiv Gandhi International Cricket Stadium in Dehradun, Uttarakhand.
- Afghanistan scored 278 runs in 20 overs.
- **Captain of Afghanistan Test Cricket team:** Rahmat Shah
- **ODI captain:** Gulbadin Naib
- **T20 captain:** Rashid Khan

---

51. Answer: d

Explanation:

Using the following formula :  $x + y + \frac{xy}{100}$  = Effective change

$$\Rightarrow x - 20 - \left[ \frac{20x}{100} \right] = 60$$

$$\Rightarrow x - \left[ \frac{x}{5} \right] = 80$$

$$\Rightarrow x = 100\%$$

---

52. Answer: d

Explanation:

$$\Rightarrow 16 \div 4 \text{ of } 4 \times [3 \div 4 \text{ of } \{4 \times 3 \div (3 + 3)\}] \div (2 \div 4 \text{ of } 8)$$

$$\Rightarrow 16 \div 16 \times [3 \div 4 \text{ of } \{4 \times 3 \div 6\}] \div (2 \div 32)$$

$$\Rightarrow 1 \times [3 \div 4 \text{ of } 2] \div 1/16$$

$$\Rightarrow [3 \div 8] \div 1/16$$

$$\Rightarrow [3/8] \div [1/16]$$

$$\Rightarrow 6$$

**53. Answer: d**

**Explanation:**

Efficiency of A, B and C are in the ratio 5 : 3 : 8

$$\text{Total work} = (5 + 3 + 8) \times 30 = 480$$

$$\Rightarrow \text{Total work completed by A and B in 20 days} = (5 + 3) \times 20 = 160$$

$$\Rightarrow \text{Remain work} = 480 - 160 = 320$$

$$\Rightarrow \text{C will complete the remain work} = 320/8 = 40 \text{ days}$$

**54. Answer: a**

**Explanation:**

$$\sin\theta = 4 \cos\theta$$

$$\Rightarrow \tan\theta = 4$$

$$\Rightarrow \tan\theta = \text{Perpendicular/Base}$$

By Pythagoras theorem

$$\Rightarrow H^2 = P^2 + B^2$$

$$\Rightarrow H^2 = 4^2 + 1^2 = 16 + 1 = 17$$

$$\Rightarrow H = \sqrt{17}$$

$$\Rightarrow \sin\theta \cos\theta$$

$$\Rightarrow \sin\theta = \text{Perpendicular/Hypotenuse}$$

$$\Rightarrow \cos\theta = \text{Base/Hypotenuse}$$

$$\Rightarrow \sin\theta \cos\theta$$

$$\Rightarrow [4/\sqrt{17}] \times [1/\sqrt{17}] = 4/17$$

55. Answer: d

Explanation:

As we know,

$$\text{Volume of metallic pipe} = \pi(R^2 - r^2)h$$

$$\Rightarrow 22/7 \times (2.5^2 - 1.5^2) \times 7.56 \times 100$$

$$\Rightarrow 22/7 \times 4 \times 1 \times 756$$

$$\Rightarrow 9504 \text{ cm}^3$$

$$\Rightarrow 1 \text{ cm}^3 \text{ of the metal weight} = 7.5\text{g}$$

$$\Rightarrow 9504 \text{ cm}^3 \text{ of the metal weight} = (7.5 \times 9504)/1000 = 71.28 \text{ kg}$$

56. Answer: a

Explanation:



Given:

$$2x^2 + y^2 + 6x - 2xy + 9 = 0$$

Calculation:

$$2x^2 + y^2 + 6x - 2xy + 9 = 0$$

$$\Rightarrow x^2 + 2 \times 3 \times x + 3^2 + x^2 + y^2 - 2xy$$

$$\Rightarrow (x + 3)^2 + (x - y)^2 = 0$$

$$\Rightarrow x = -3 \text{ and } x = y$$

$$\Rightarrow x = y = -3$$

Now,

$$(4x^3 - y^3 + x^2y^2)$$

$$= 3x^3 + x^4$$

$$= 3 \times (-3)^3 + (-3)^4$$

$$= -81 + 81$$

$$= 0$$

$\therefore$  required value is 0.

57. Answer: a

Explanation:

Let the total number of goods be  $100x$ .

According to the question

$$\Rightarrow \text{Selling price of 70\% of goods} = 100x \times (7/10) \times (7/5) = 98x$$

$$\Rightarrow \text{Selling price of 30\% of goods} = 100x \times (3/10) \times (7/5) \times (3/5) = 25.2x$$

$$\Rightarrow \text{Total selling price of goods} = 98x + 25.2x = 123.2x$$

$$\therefore \text{Profit Percentage} = [(123.2x - 100x)/100] \times 100 = 23.2\%$$

58. Answer: a

Explanation:

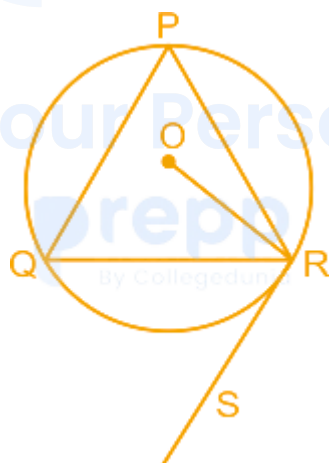
Total production of all type of cars, except type B, in 2012 =  $54 + 46 + 33 + 47 = 180$

Total production of all type of cars in 2016 =  $55 + 67 + 77 + 49 + 52 = 300$

Required percentage =  $[(300 - 180)/300] \times 100 = 40\%$

59. Answer: d

Explanation:



As we know,

$$\Rightarrow \angle ORS = 90^\circ \quad (\text{Tangent to the circle})$$

$\therefore$  RQ bisects  $\angle ORS$

$$\Rightarrow \angle ORQ = \angle OQR = 45^\circ [\because OR = QO]$$

In  $\triangle ORQ$

$$\Rightarrow \angle ROQ = 180^\circ - 90^\circ = 90^\circ$$

$$\Rightarrow \angle RPQ = \frac{1}{2} \times \angle ROQ = \frac{1}{2} \times 90^\circ = 45^\circ$$

60. Answer: d

**Explanation:**

Total production of type D cars =  $33 + 35 + 48 + 45 + 49 = 210$  thousands

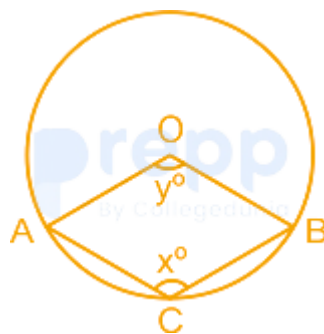
Production of type D cars in 2013 = 35 thousands

$$\Rightarrow 210 \text{ thousands represents } = 360^\circ$$

$$\Rightarrow 35 \text{ thousands will represent } = [360^\circ/210] \times 35 = 60^\circ$$

61. Answer: b

**Explanation:**



As we know, in a parallelogram opposite sides are equal and parallel and opposite angles are also equal.

Suppose  $\angle ACB = x$  and  $\angle AOB = y$

$$\angle ACB = \angle AOB \quad [\text{opposite angle}]$$

$$\text{Reflex } \angle AOB = 2x$$

$\therefore$  Angle subtended by an arc on its centre is twice the angle subtended on the circumference.

$$\Rightarrow 2x + y = 360^\circ$$

$$\Rightarrow 2y + y = 360^\circ \quad [\because x = y(\text{opposite angle})]$$

$$\Rightarrow 3y = 360^\circ$$

$$\Rightarrow y = 120^\circ$$

**62. Answer: c**

**Explanation:**

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

$$\Rightarrow (x + y + z)^2 = 133 + 2 \times 114 = 361$$

$$\Rightarrow x + y + z = 19$$

$$\Rightarrow x^3 + y^3 + z^3 - 3xyz = (x + y + z) \{(x + y + z)^2 - 3(xy + yz + zx)\}$$

$$\Rightarrow x^3 + y^3 + z^3 - 3 \times 216 = 19[19^2 - 3 \times 114]$$

$$\Rightarrow x^3 + y^3 + z^3 - 648 = 19 \times 19 = 361$$

$$\Rightarrow x^3 + y^3 + z^3 = 361 + 648 = 1009$$

**63. Answer: c**

**Explanation:**

Let the present ages of A and B be  $8x$ ,  $9x$ , respectively.

According to the question

$$\Rightarrow (8x + 9) / (9x + 9) = 19/21$$

$$\Rightarrow x = 6$$

Present age of B =  $9x = 9 \times 6 = 54$  years

$\therefore$  Present age of C =  $54 - 3 = 51$  years

---

**64. Answer: d**

**Explanation:**

Interest rate for 1 year = 14%

Interest rate for  $5/7$  years =  $14\% \times [5/7] = 10\%$

According to the question

$$\Rightarrow \text{Amount} = 10,000 \times (114/100) \times (114/100) \times (110/100) = 14,295.6$$

$$\Rightarrow \text{Interest} = 14,295.6 - 10,000 = 4295.6 \text{ (4296 Approx)}$$

---

**65. Answer: b**

**Explanation:**

Total production of type E cars in 2014 and type C cars in 2016 =  $53 + 77 = 130$

Total production of type B cars in 2014 and type D cars in 2013 =  $56 + 35 = 91$

$\therefore$  Required ratio =  $130 : 91 = 10 : 7$

---

66. Answer: b

Explanation:

Short trick :

$$\frac{\cos^2 \theta}{\cot^2 \theta - \cos^2 \theta}$$

Put  $\theta = 60^\circ$

$$\Rightarrow \frac{\frac{1}{4}}{\frac{1}{3} - \frac{1}{4}}$$

$$\Rightarrow 3$$

$$\cot 60^\circ + \operatorname{cosec} 60^\circ = 1/\sqrt{3} + 2/\sqrt{3} = \sqrt{3}$$

Detailed method :

$$\Rightarrow \frac{\cos^2 \theta}{\cos^2 \theta \left[ \frac{1}{\sin^2 \theta} - 1 \right]} = 3$$

$$\Rightarrow \frac{\sin^2 \theta}{1 - \sin^2 \theta} = 3$$

$$\Rightarrow (\sin^2 \theta / \cos^2 \theta) = 3$$

$$\Rightarrow \tan^2 \theta = 3$$

$$\Rightarrow \tan \theta = \sqrt{3} = \tan 60^\circ$$

$$\Rightarrow \theta = 60^\circ$$

$$\cot 60^\circ + \operatorname{cosec} 60^\circ$$

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

67. Answer: b

Explanation:

Speed of B = 60 km/h and Speed of A = 40 km/h

Distance between two station A and B = 800 km

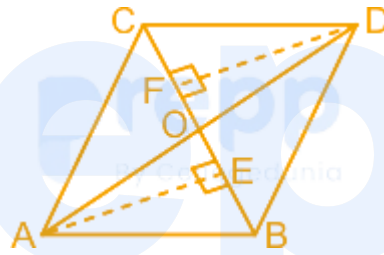
A and B's total speed =  $(40 + 60) = 100$  km/h

A and B will meet each other in =  $800/100 = 8$  hrs

A will covers the distance in 8 hrs =  $8 \times 40 = 320$  km/h

68. Answer: a

Explanation:



As we know,

In quadrilateral opposite sides are parallel and equal and its diagonals bisect each other.

Go through the option (1)

In  $\triangle ADC$  and In  $\triangle ABD$

$\Rightarrow AC = DB$  (Opposite sides)

$\Rightarrow AD = AD$  (Common)

$\Rightarrow \angle ACD = \angle ABD$  (Opposite angles)

Now, we can say  $\triangle ACD \cong \triangle DBA$  not  $\triangle ADC \cong \triangle ABD$

69. Answer: d

Explanation:

$$x + y = 12 \text{ and } xy = 27$$

$$\text{Put } x = 9 \text{ and } y = 3$$

$$\Rightarrow x^3 - y^3$$

$$\Rightarrow 729 - 27 = 702$$

70. Answer: c

Explanation:

9 digit number  $32x4115y2$  is divided by 88, so we can say number also divisible by 11 and 8 both

The smallest possible value of  $y$  for which  $5y2$  is divisible by 8 will be 1 as  $512$  is divisible by 8.

If  $y = 1$ , then the possible value of  $x$  for which  $32x411512$  is divisible by 11 will be 8.

Now, putting  $y = 1$  and  $x = 8$

$$\Rightarrow 4x - y = 4 \times 8 - 1 = 31$$

71. Answer: b

Explanation:

Average of 12 numbers = 46

$$\Rightarrow \text{Sum of all 12 numbers} = 12 \times 46 = 552$$



Average of the first 4 numbers = 43

$\Rightarrow$  Sum of first 4 numbers =  $4 \times 43 = 172$

Average of the last five numbers = 49.4

$\therefore$  Sum of the last five numbers = 247

Let the 7<sup>th</sup> number be  $x$ .

$\therefore$  5<sup>th</sup> number will be =  $x + 4$

$\therefore$  6<sup>th</sup> number will be =  $x + 6$

Sum of 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> number =  $552 - 172 - 247 = 133$

According to the question

$\Rightarrow x + x + 4 + x + 6 = 133$

$\Rightarrow x = 41$

$\Rightarrow$  7<sup>th</sup> number = 41

$\Rightarrow$  5<sup>th</sup> number =  $x + 4 = 41 + 4 = 45$

$\therefore$  Average of 7<sup>th</sup> and 5<sup>th</sup> number =  $(41 + 45)/2 = 43$

---

## 72. Answer: b

### Explanation:

Suppose  $AB = 6$ ,  $BC = 8$  and  $AC = 7$

Point D bisect  $\angle A$ .

As we know

$\Rightarrow DC/BD = 7/6$

$$\Rightarrow (DC/BD) + 1 = (7/6) + 1$$

$$\Rightarrow (DC + BD)/BD = 13/6$$

$$\Rightarrow 8/BD = 13/6$$

$$\Rightarrow BD = 48/13 \text{ cm}$$

---

**73. Answer: b**

**Explanation:**

Let the cost of each article be  $50x$ .

SP of the first article =  $50x \times [114/100]$

SP of the second article =  $50x \times [86/100] = 43x$

Ratio of CP and SP of the first article =  $50x : 57x$

Ratio of CP and SP of the second article =  $50x : 43x$

Multiply by 43 in equation (1) and multiply by 57 in equation (2)

New ratio of CP and SP of the first article =  $2850x : 2451x$

New ratio of CP and SP of the second article =  $2150x : 2451x$

According to the question

$$\Rightarrow 2850x + 2150x = 624$$

$$\Rightarrow 5000x = 624$$

$$\Rightarrow 700x = [624/5000] \times 700 = 87.36$$

---

**74. Answer: d**

### Explanation:

Total production of type E cars in 2012 and 2013 =  $47 + 43 = 90$

total production of type A cars during the years 2012 to 2016 =  $54 + 58 + 60 + 63 + 55 = 290$

Average production of type A cars during the years 2012 to 2016 =  $290/5 = 58$

$\therefore$  Required percentage =  $[(90 - 58)/58] \times 100 = 55.2\%$  (Approx)

### 75. Answer: b

### Explanation:

$$\Rightarrow \frac{c}{1+\sin x} = \frac{2\sin x}{1+\sin x+\cos x}$$

Put  $x = 90^\circ$ , then  $\sin 90^\circ = 1$  and  $\cos 90^\circ = 0$

$$\Rightarrow C/2 = 2/2$$

$$\Rightarrow C = 2$$

Go through the options (2)

$$\Rightarrow 1 + \sin x - \cos x$$

$$\Rightarrow 1 + 1 - 0$$

$$\Rightarrow 2 \text{ (Satisfied)}$$

### 76. Answer: a

### Explanation:

In the given sentence, the implied meaning is that the Head has been so busy that he or she hasn't been able to go through the files.

The construction '**too busy to +action**' means that a person is so busy that they are not able to perform a certain action.

For example: *Ever since she started her new job, she has been **too busy to call her mother**.*

**Option 1** represents the correct form of this construction and is therefore, the correct answer.

---

### 77. Answer: a

#### Explanation:

The correct preposition to be used here should be 'in'. This is because it is the only preposition that accurately refers to a **duration of time** i.e. during the earlier wars.

'At' refers to a specific time, while 'on' refers to a specific day.

'Into' refers to a form of movement, and hence cannot be correct.

Hence, **option 1 is correct**.

---

### 78. Answer: b

#### Explanation:

Here are the meanings of the given words:

- **Bound** – extremely likely to happen
- **Confined** – limited
- **Belonged** – was in the right place or a suitable place
- **Attained** – reached or succeeded in getting something

The context around the given blank is about how the civilian population would not participate in wars and therefore, casualties would only be limited to the armies.

Out of these given options, the only word to fit this context is ' **confined** '.

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

---

## 79. Answer: c

### Explanation:

The first sentence of a passage must introduce the topic of the passage and stand independent in meaning.

This is only true for sentence B, hence **B is the first sentence**.

Out of the other three sentences, **only sentence A can logically follow B** since the 'celebrate it' mentioned in the sentence clearly refers to the Lunar New Year.

Out of the remaining two sentences, **C must follow D** since it mentions the words 'others'. The 'others' being referred to here can only be understood after we read the part about 'performers' in D.

Hence, the correct order of the sentences is **BADC**.

Therefore, **option 3 is correct**.

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## 80. Answer: c

### Explanation:

Firstly, the given passive sentence is in the present tense, which means its active sentence must also be in the same tense.

Therefore, option 4 is incorrect.

Now, the given passive sentence is in its imperative form, which is used to issue a command or instruction.

This sense of command is not conveyed by the 'you are requested' construction in option 1. Therefore, it is also incorrect.

Option 2 attempts to convert the sentence into passive by following this pattern:

*Let + object + be + past participle*

However, it uses 'been' instead of 'be' and is therefore also incorrect.

The correct option is therefore, **option 3**. Also, it makes use of the modal 'should' which is used to express obligation or instruction.

---

## 81. Answer: b

### Explanation:

The given passive sentence is in the simple future tense. Its active form must also be in the same tense, therefore options 1 and 4 are incorrect.

In option 3, the subject and object of the sentence have switched places. The passive form of the sentence will be:

*The children of this park are being painted by the wall.*

Not only is it a nonsensical sentence, but it is also not the passive sentence provided above.

Therefore, option 2 is correct.

---

## 82. Answer: a

### Explanation:

Let us look at the meanings of the given options:

- Contemporaries – people living or existing at the same period in time

- Colleagues – people with whom we work in a profession
- Cosmopolitans – people who have lived in or travelled to many countries
- Compatriots – fellow citizens of a country

As we can see, out of these, only option 1 'contemporaries' has a meaning similar to the given group of words.

Therefore, **option 1** is correct.

---

### 83. Answer: a

#### Explanation:

The word 'dubious' means 'not be relied upon'.

Out of the given words, only 'fishy' is the closest in meaning to the given word. It means 'arousing feelings of doubt or suspicion'.

The other words – 'loyal', 'certain' and 'steady' – all have positive connotations and convey the meaning of 'able to be relied upon'. Hence they are all antonyms of the given word.

Therefore, option 1 is the correct answer.

---

### 84. Answer: c

#### Explanation:

The word 'entice' means 'to persuade someone to do something by offering them something pleasant'.

Here are the meanings of the given options:

- Enrage – to make someone angry
- Entail – to make something necessary

- Entrap – to lure or trick someone into doing something
- Ensnare – to happen immediately after an event

As we can see, the word 'entrap' is the closest in meaning to the given word.

Therefore, option 3 is the correct answer.

---

## 85. Answer: d

### Explanation:

The underlined segment is an example of a sentence tag, which are short interrogative segments added at the end of sentences and used for emphasis.

Here are some rules that they follow:

- The sentence tag takes the same tense and modal as the first part of the sentence.
- If the verb in the first part of a sentence is positive, the verb in the sentence tag will be negative. If the verb in the first part of a sentence is negative, the verb in the sentence tag will be positive.

The verb in the first part of the given sentence is negative, therefore the sentence tag should be positive.

Also, since the first part of the sentence takes the modal **won't** ( *will not* ), the sentence tag will take the modal **will** (positive form of won't).

The correct form of the sentence will be: *You won't tell the secret, will you?*

Hence, **option 4** is correct.

---

## 86. Answer: a

### Explanation:



The idiom 'couch potato' means 'a person who is lazy and watches a lot of television'.

As we can see, option 1 conveys this meaning perfectly.

Therefore, **option 1** is correct.

---

## 87. Answer: b

### Explanation:

The given blank requires a word that conveys the meaning that the 'damage' took place **as a result** of the war, as understood by the words 'by this war'.

Out of the given words, the word '**cause**' means 'to make something happen'. This fits perfectly in the context of this sentence as it implies that the war made the damage happen.

While the word 'construct' might also seem like the correct answer, it is used to refer to the action of building or making something, not causing an event to happen.

Hence, **option 2** is correct.

---

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## 88. Answer: d

### Explanation:

We use relative pronouns such as 'who', 'which', 'that' etc. to join two clauses, based on the subject from the first clause that is being referred to in the second clause.

In the given sentence, the subject from the first clause is 'the cobbler'. Since the subject is a person, the relative pronoun we will use to join the two given clauses should be 'who', not 'which'.

The correct version of the given sentence will be: *I know the cobbler **who** mends the shoes outside the gate of our colony.*

Hence, we can see that the part of the sentence which has the error is in **option 4**.

---

## 89. Answer: b

### Explanation:

Let us look at the meaning of the given sentence. We can see that the sentence wants to convey that the artist has continued painting the wall **over a period of one week**.

The usage of the word 'since' is incorrect here because it is used to refer to the specific starting point of an action.

For example: *I have been waiting for him **since** 5 o'clock.*

(The action of waiting started at 5 o'clock and has been continuing till the present time).

The correct version of the sentence will be: *The street artist Satish Munjal has been painting this wall **for** the past one week.*

'For' is the preposition used to refer to the period it has taken since the starting point of an action till the present time.

Therefore, the part of the sentence in **option 2** has the error.

---

## 90. Answer: a

### Explanation:

Let us look at the meanings of the given options:

- Disparity – a great difference

- Unlikeliness – the improbability of an outcome
- Equivalence – the condition of being equal
- Disagreement – lack of approval

We understand from the given sentence that there is a difference in pay received by men and women.

Therefore, the word 'disparity' best fits the context of the blank.

Hence, **option 1** is correct.

---

## 91. Answer: d

### Explanation:

The idiom 'to lead someone by the nose' means 'to control or influence someone completely'.

For example:

*It saddens me to see Sonya's mother **lead her** completely **by the nose**.*

Out of the given options, option 4 conveys this meaning perfectly.

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

---

## 92. Answer: c

### Explanation:

In the given context of the blank, we need a relative pronoun that **refers to and helps describe the noun 'war'**, which is a thing.

Hence, 'who' and 'whom' do not make sense here since they are used to refer to people.

'What' is not a relative pronoun.

Hence, the correct answer is **option 3** i.e. **which**.

We can see how it helps bring the sentence together: "*The war **which** began in 1914 was a total war...*"

---

### 93. Answer: c

#### Explanation:

The correct answer is CBDA

#### ★ Key Points

- The first sentence should stand independently in meaning and introduce the topic of the passage. Only sentence C fulfills this criteria. It introduces the main theme of the passage. **Therefore, sentence C is the first sentence.**
- Sentence A cannot follow sentence C logically since it deals with a different topic altogether.
- Out of the other two, it is clear that sentence B comes before sentence D since it introduces the topic of 'forest products' that is further expanded on in D. **Therefore, sentence B is the second sentence and sentence D is the third sentence.**
- **Finally, sentence A is the last sentence** . It also logically follows sentence D because it mentions the 'production of news print' which obviously comes from the mention of 'pulp and paper' from sentence D.
- Therefore, the correct order of sentences is **CBDA**.

Thus, the sentences when arranged will appear in the following manner: *A large part of Canada is covered with coniferous trees. Forest products, therefore, have been important export items of Canada for more than a century. Pulp and paper are their two most important forest products. In fact, Canada accounts for nearly one-third of the world's production of news print.*

94. Answer: c

**Explanation:**

The correct word to fit the context here is ' **generally** ' which is used to mean 'in most cases or situations'.

This fits the context of the passage since the meaning being conveyed is that **in most cases of earlier wars** , civilian populations were not involved in them.

The other words do not fit this context. Here are their meanings:

- **Chiefly** – more than for any other reason
- **Broadly** – widely and openly
- **Finally** – after a long time

Hence, **option 3 is correct.**

---

95. Answer: a

**Explanation:**

All of the options given here are spelt correctly, except option 1.

The correct spelling of the word is: **meagre**. It means 'lacking in quality or quantity'.

Here are the meanings of the other options:

- **Measure** – to figure out the size, amount or degree of something
  - **Meadow** – open field or grassland
  - **Matter** – a physical substance OR a subject or situation under consideration
- 

96. Answer: b

### Explanation:

The word 'finite' means 'limited in size or extent'.

The words 'limited' and 'bound' mean the same thing as 'finite' and are therefore synonyms of the given word. 'Finished' means 'completed' or 'accomplished' and does not have a meaning opposite to 'finite'.

The word 'endless', however, is directly in contrast to the given word.

Therefore, option 2 is the right answer.

---

### 97. Answer: a

#### Explanation:

All of the options given here are spelt correctly, except **option 1**.

The correct spelling of the word is: **renaissance**. It means 'a revival of or a renewed interest in something'.

Here are the meanings of the other options:

- Rendezvous – a meeting at an agreed time and place
- Remuneration – money paid for a work or service
- Remonstrate – to complain or make a forceful protest

---

### 98. Answer: b

#### Explanation:

Let us look at the meanings of the given options:

- **Prophet** – a person regarded as a divine teacher or messenger from God

- **Fatalist** – a person who believes that no matter what he or she does, the outcome will be the same
- **Seer** – a person who can see the future
- **Fanatic** – a person who is extremely interested in something

As we can see, out of these, only option 2 '**fatalist**' has a meaning similar to the given group of words.

Therefore, option 2 is correct.

---

**99. Answer: b**

**Explanation:**

The word 'reprimand' means 'to severely or formally criticise someone or their actions'.

Here are the meanings of the given options:

- Blame – to feel or say that someone is responsible for doing something wrong
- Compliment – to praise someone
- Reproach – express disapproval in someone's actions
- Apprehend – to arrest someone for a crime

As we can see, the word 'compliment' is directly in contrast to the given word. In fact, the other options have meanings similar to the given word.

Therefore, option 2 is the right answer.

---

**100. Answer: d**

**Explanation:**

Here are the meanings of the given options:

- **Truce** – an agreement to stop fighting or arguing for a period of time
- **Agreement** – a situation in which people share the same opinion
- **Contest** – an event in which people compete for supremacy in a sport or other activity
- **Conflict** – an active disagreement between people with opposing opinions

We can understand from the context of the sentence that there must have been some form of negative sentiment i.e. disagreement between the Catholics and Protestants. This is because the word in blank is then contrasted with 'coming together' which is a positive sentiment.

The only word that fits this context is '**conflict**'.

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

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