RAILWAY RPF/RPSF CONSTABLE EXAM

GENERAL INTELLIGENCE & REASONING

1. Select the related word from the given alternatives :
Carbon : Diamond : : Corundum : ?
(1) Garnet (2) Ruby
(3) Pukhraj (4) Pearl

2. Select the related word from the given alternatives :
Smoke : Pollution : : War : ?
(1) Victory (2) Peace
(3) Treaty
(4) Destruction

3. Select the related letters from the given alternatives :
BCQD : ERTG : : ANPC : ?
(1) DQSF (2) FSHU
(3) SHFU (4) DSQF

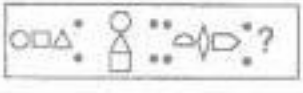
4. Select the related letters from the given alternatives :
AFKP : ZUPK : : BGLQ : ?
(1) YUQM (2) XURO
(3) YXWV (4) YTOJ

5. Select the related number from the given alternatives :
182 : ? : : 210 : 350
(1) 342 (2) 272
(3) 240 (4) 156

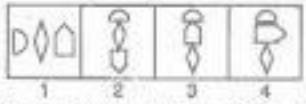
6. Select the related figure from the Answer Figures.
Question Figures

Answer Figures

7. Select the related figure from the Answer Figures.
Question Figures



Answer Figures



8. Select the one which is different from the other three responses :
(1) Mizoram (2) Sikkim
(3) Kohima (4) Manipur

9. Select the one which is different from the other three responses :
(1) Amoeba (2) Bacteria
(3) Germs (4) Microbes

10. Select the one which is different from the other three responses :
(1) IJCD (2) WYTS
(3) QRKL (4) PQMN

11. Select the one which is different from the other three responses :
(1) 81 : 243 (2) 16 : 64
(3) 64 : 192 (4) 25 : 75

12. Arrange the following words according to dictionary arrangement.
1. Epitaxy 2. Episode
3. Epigene 4. Epitome
5. Epilogue
(1) 1, 2, 3, 4, 5
(2) 3, 5, 2, 1, 4
(3) 5, 4, 2, 1, 3
(4) 3, 2, 5, 4, 1

13. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
— stt — tt — tts —
(1) tsst (2) sstt
(3) ttst (4) tsts

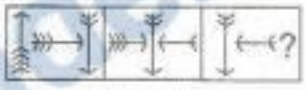
14. Number of letters skipped in between adjacent letters goes on increasing successively by one in the series. Identify the set following the above rule.
(1) AEIMQU (2) EHKNQT
(3) DINSXC (4) FHKOTZ

Directions (15-16) : Find the missing number from the given responses.

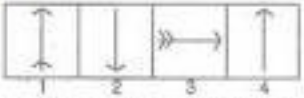
15. $\frac{2}{3}, \frac{4}{7}, \ldots\ldots, \frac{11}{21}, \frac{16}{31}$
(1) $\frac{6}{11}$ (2) $\frac{5}{9}$
(3) $\frac{9}{17}$ (4) $\frac{7}{13}$

16. 25, 50, 30, 45, 35, 40, ?
(1) 30 (2) 35
(3) 40 (4) 45

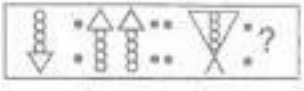
17. Find the missing figure in the series from the given answer figures.
Question Figures



Answer Figures



18. Select the related figures from the answer figures.
Question Figures



Answer Figures

19. If '+' stands for division, '÷' stands for multiplication, '×' stands for subtraction and '−' stands for addition, which one of the following is correct?
(1) 18 ÷ 6 − 7 + 5 × 2 = 20
(2) 18 ÷ 6 + 7 × 5 − 2 = 18
(3) 18 × 6 + 7 + 5 − 2 = 16
(4) 18 + 6 × 7 + 5 − 2 = 22

20. If '−' stands for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equations is correct?
(1) 18 + 3 × 2 + 6 − 6 = 10
(2) 18 − 3 + 2 × 8 + 6 = 14

(3) 18 – 3 ÷ 2 × 8 + 6 = 17
(4) 18 × 3 + 2 ÷ 8 – 6 = 15

21. If NOIDA is written as SINIP, how MEERUT can be written in that code?
(1) QIIVYX (2) RJJWZV
(3) RJJWZY (4) RIIVYX

22. In a certain code FORGET is written as DPPHCU, how would DOCTOR be written in that code?
(1) BPAUMS (2) BPAUPS
(3) EMDRPP (4) BPARPP

23. In a certain code DECEMBER is written as ERMBCEDE. In that code which word will be written as ERMBVENO ?
(1) SEPTEMBER
(2) AUGUST
(3) NOVEMBER
(4) OCTOBER

24. If RED is coded as 6720, then how GREEN would be coded?
(1) 9207716 (2) 1677190
(3) 1677209 (4) 16717209

25. If 9th of the month falls on the day preceding Sunday, on what day will 1st of the month fall?
(1) Friday
(2) Saturday
(3) Sunday
(4) Monday

26. Average marks obtained by 9 students in one row of a class is 45. One student with 35 marks exchanges his seat with a student securing 46 marks. What is the average marks of these 9 students of this row?
(1) 56.4 (2) 46.4
(3) 47.6 (4) 45.6

27. Kamu walks 5 kms straight from her house towards west then turns right and walks 3 kms. There-after she takes left turn and walks 2 km. Further, she turns left and walks 3 km. Finally, she turns right and walks 3 kms. In what direction she is now from her house?
(1) West (2) North
(3) South (4) East

Directions : In the following question a statement is followed by four inferences. Select the one which is most appropriate.

28. Statement : In the university examination most of the candidates write in Hindi medium.

Inferences :
(1) All the candidates who appear in this examination write answers in Hindi.
(2) In this examination no candidate writes answers other than in Hindi.
(3) Mostly candidates with Hindi medium appear in this examination.
(4) Some candidates of this examination write in Hindi.

Directions (29-30) : *In the following questions a word is followed by 4 other words, one of which cannot be formed by using the letters of the given word. Find this word.*

29. PROSPECTIVE
(1) PEPTIC (2) PEPPER
(3) VECTOR (4) RESET

30. APPROXIMATELY
(1) APEX
(2) APPRISE
(3) APPROXIMATE
(4) APRIL

Directions : *Which of the answer figures is exactly the mirror image of the given figure when the mirror is held at PQ?*

31. Question Figure

Answer Figures

32. Amit travelled 15 kms. eastward, then turned left and travelled 5 kms, then turned left and travelled 15 kms. How far was Amit from the starting point?
(1) 30 kms. (2) 35 kms.
(3) 15 kms. (4) 5 kms.

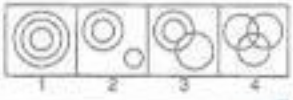
33. At 12.30 the hour hand of a clock faces North and the minute hand faces South. At 2.45 the minute hand will be in which direction?
(1) North-West
(2) West
(3) South-East
(4) East

34. The trend results are shown at the end of each column. Find out the figure against the missing number.

9	8	7
6	7	6
5	4	?
270	224	336

(1) 9 (2) 6
(3) 7 (4) 5

35. Which figure represents Rhombus, Quadrilaterals, Polygons?



ARITHMETIC

36. The breadth of a rectangular hall is three-fourths of its length. If the area of the floor is 768 sq. m. then the difference between the length and breadth of the hall is :
(1) 8 metres (2) 12 metres
(3) 24 metres (4) 32 metres

37. A and B can do a work in 12 days, B and C in 15 days, C and A in 20 days. If A, B and C work together, they will complete the work in :
(1) 5 days (2) $7\frac{5}{6}$ days
(3) 10 days (4) $15\frac{2}{3}$ days

38. A is thrice as good a workman as B and therefore, able to finish a job in 60 days less than B. Working together they will do it in :
(1) 20 days (2) $22\frac{1}{2}$ days
(3) 25 days (4) 30 days

39. Two pipes A and B can fill a tank in 20 minutes and 30 minutes respectively. If both pipes are opened together, the time taken to fill the tank is :
(1) 50 minutes
(2) 12 minutes
(3) 25 minutes
(4) 15 minutes

40. If a man walks 20 km at 5 km per hr, he will be late by 40 minutes. If he walks at 8 km per hr, how early from the fixed time will he reach?

(1) 15 minutes (2) 25 minutes

(3) 50 minutes (4) $1\frac{1}{2}$ hours

41. Simplify : $1+\cfrac{1}{1+\cfrac{2}{2+\cfrac{3}{1+\cfrac{4}{5}}}}$

(1) $1\frac{11}{17}$ (2) $1\frac{5}{7}$

(3) $1\frac{6}{17}$ (4) $1\frac{11}{17}$

42. By how much does $\sqrt{12}+\sqrt{18}$ exceed $\sqrt{3}+\sqrt{2}$?

(1) $2\left(\sqrt{3}-\sqrt{2}\right)$

(2) $2\left(\sqrt{3}-\sqrt{2}\right)$

(3) $\sqrt{3}+2\sqrt{2}$

(4) $\sqrt{2}-4\sqrt{3}$

43. The value of $\sqrt{5+2\sqrt{6}}-\dfrac{1}{\sqrt{5+2\sqrt{6}}}$ is :

(1) $2\sqrt{2}$ (2) $2\sqrt{3}$

(3) $1+\sqrt{5}$ (4) $\sqrt{5}-1$

44. The value of $(243)^{0.16}\times(243)^{0.04}$ is equal to :

(1) 0.16 (2) 3

(3) $\frac{1}{3}$ (4) 0.04

45. $\sqrt{\frac{0.49}{0.25}}+\sqrt{\frac{0.81}{0.36}}$ is equal to :

(1) $7\frac{9}{10}$ (2) $2\frac{9}{10}$

(3) $\frac{9}{10}$ (4) $9\frac{9}{10}$

46. Which of the following fractions is the smallest?

$\frac{7}{6}, \frac{7}{9}, \frac{4}{5}, \frac{5}{7}$

(1) $\frac{7}{6}$ (2) $\frac{7}{9}$

(3) $\frac{4}{5}$ (4) $\frac{5}{7}$

47. The square root of a positive number less than 100 lies between :

(1) 0 and 1000

(2) 0 and 10 (3) -10 and 10

(4) -100 and 100

48. The LCM of two numbers is 864 and their HCF is 144. If one of the numbers is 288, the other number is :

(1) 576 (2) 1296

(3) 432 (4) 144

49. A boy was asked to multiply a certain number by 50. He multiplied it by 30 and got his answer less than the correct one by 400. The number to be multiplied was :

(1) 10 (2) 20

(3) 30 (4) 40

50. 0.6 of a number is equal to 0.08 of another number. The ratio of the numbers will be :

(1) 3 : 4 (2) 4 : 3

(3) 2 : 15 (4) 2 : 9

51. A boys was asked to find the value of $\frac{3}{8}$ of a sum of money. Instead of multiplying the sum by $\frac{3}{8}$ he divided it by $\frac{3}{8}$ and then his answer exceeded by Rs. 55. Find the correct answer ?

(1) Rs. 9 (2) Rs. 24

(3) Rs. 64 (4) Rs. 1,320

52. The sum of three consecutive odd natural numbers each divisible by 3 is 72. What is the largest among them?

(1) 21 (2) 24

(3) 27 (4) 36

53. The least number which when divided by 4, 6, 8, 12 and 16 leaves a remainder of 2 in each case is :

(1) 46 (2) 48

(3) 50 (4) 56

54. The product of the LCM and HCF of two numbers is 24. The difference of the two numbers is 2. Find the numbers ?

(1) 8 and 6 (2) 8 and 10

(3) 2 and 4 (4) 6 and 4

55. In a class $\frac{3}{5}$ of the students are girls and rest are boys. If $\frac{2}{9}$ of the girls and $\frac{1}{4}$ of the boys are absent. What part of the total number of students are present?

(1) $\frac{23}{30}$ (2) $\frac{23}{36}$

(3) $\frac{18}{49}$ (4) $\frac{17}{25}$

56. The maximum number of students among whom 1001 pens and 910 pencils can be distributed in such a way that each student gets same number of pens and same number of pencils, is :

(1) 91 (2) 910

(3) 1001 (4) 1911

57. A person who spends $66\frac{2}{3}\%$ of his income is able to save Rs. 1,200 per month. His monthly expenses (in Rs) is :

(1) 1,200 (2) 2,400

(3) 3,000 (4) 3,200

58. If 80% of A = 50% of B and B = x% of A, then the value of x is :

(1) 400 (2) 300

(3) 160 (4) 150

59. In a town, the population was 8000. In one year, male population increased by 10% and female population increased by 8% but the total population increased by 9%. The number of males in the town was :

(1) 4000 (2) 4500

(3) 5000 (4) 6000

60. In a school 70% of the students are girls. The number of boys are 510. Then the total number of students in the school is :

(1) 850 (2) 1700

(3) 1830 (4) 1900

61. A tradesman marks his goods 10% above his cost price. If he allows his customers 10% discount on the marked price, how much profit or loss does he make, if any?

(1) 1% gain

(2) 1%loss

(3) 5% gain

(4) No gain, no loss

62. A sum of money doubles itself at compound interest in 16 years. In how many years it will become eight times?

(1) 30 (2) 45
(3) 50 (4) 60

63. Compound interest (compounded annually) on a certain sum of money for 2 years at 4% per annum is Rs. 102. The simple interest on the same sum for the same rate and for the same period will be :
(1) Rs. 99 (2) Rs. 101
(3) Rs. 100 (4) Rs. 98

64. Oranges are bought at 7 for Rs. 3. At what rate per hundred must they be sold to gain 33⅓?
(1) Rs. 56 (2) Rs. 60
(3) Rs. 58 (4) Rs. 57

65. The cost price of 36 books is equal to the selling price of 30 books. The gain is :
(1) 20% (2) $16\frac{4}{6}\%$
(3) 18% (4) $82\frac{2}{6}\%$

66. A man wanted to sell an article with 20% profit: but he actually sold at 20% loss for Rs. 480. At what price he wanted to sell it to earn the profit?
(1) Rs. 720 (2) Rs. 840
(3) Rs. 600 (4) Rs. 750

67. A person sells two machines at Rs. 396 each. On one he gains 10% and on the other he loses 10%. His profit or loss in the whole transaction is :
(1) no gain no loss
(2) 1% loss
(3) 1% profit (4) 8% profit

68. If a : b = 7 : 9 and b : c = 10 : 7, then what is a : c?
(1) 5 : 3 (2) 3 : 5
(3) 7 : 21 (4) 7 : 15

69. A and B have money in the ratio 2 : 1. If A gives Rs. 2 to B, the money will be in the ratio 1 : 1. What were the initial amounts they had?
(1) Rs. 12 and Rs. 6
(2) Rs. 16 and Rs. 8
(3) Rs. 8 and Rs. 4
(4) Rs. 6 and Rs. 3

70. If diagonal of a cube is 12 cm, then its volume in cubic cm is :
(1) 8 (2) 12
(3) 24 (4) $\sqrt[3]{2}$

GENERAL AWARENESS

71. A substance which readily forms colloidal solution in contact with water is called
(1) Extrinsic colloid
(2) Associated colloid
(3) Hydrophobic colloid
(4) Hydrophilic colloid

72. An astronaut in outer space will observe sky as
(1) white (2) black
(3) blue (4) red

73. Which one of the following lenses should be used to correct the defect of astigmatism ?
(1) Cylindrical lens
(2) Concave lens
(3) Convex lens
(4) Bifocal lens

74. Electron was discovered by
(1) Ernest Rutherford
(2) Max Planck
(3) Joseph Thomson
(4) Albert Einstein

75. The first thermionic valve was invented by
(1) Thomas Edison
(2) Richardson
(3) J.A. Fleming
(4) Lee De Forest

76. The science dealing with the study of teeth is
(1) Odontology
(2) Ornithology
(3) Phenology
(4) Cosmology

77. When formaldehyde and potassium hydroxide are heated, we get
(1) Acetylene
(2) Methyl alcohol
(3) Methane
(4) Ethyl formate

78. The enzyme in whose presence glucose and fructose are converted into alcohol is
(1) Diastase (2) Maltase
(3) Invertase (4) Zymase

79. Which of the following acids is manufactured using sawdust ?
(1) Oxalic acid
(2) Citric acid
(3) Acetic acid
(4) Butyric acid

80. The study of visceral organs is
(1) Angiology
(2) Arthrology
(3) Anthrology
(4) Splanchnology

81. Whose achievements are recorded in the Allahabad Pillar inscription ?
(1) Chandra Gupta Maurya
(2) Samudra Gupta
(3) Vikramaditya
(4) Skand Gupta

82. Sardar Vallabhbhai Patel was equated with
(1) Mazzini (2) Cavour
(3) Garibaldi (4) Bismarck

83. Which of the following was not ordered by Alauddin Khalji to control black-marketing and hoarding ?
(1) Land revenue should be collected in kind
(2) Cultivators should sell the harvested crops on the field only
(3) Merchants should sell all commodities in the open
(4) More privileges should be given to Khuts and Muqaddams

84. The branch of biology dealing with the study of cells is known as
(1) Cytology
(2) Histology
(3) Psychology
(4) Physiology

85. The study of extinct animals is called
(1) Herpetology (2) Ornithology
(3) Geology (4) Palaeontology

86. The medical term used for the sleeplessness is
(1) Somnambulism
(2) Insomnia
(3) Hallucination
(4) Nyctinuria

87. The causative agent of Tuberculosis is
(1) Mycobacterium
(2) Aspergillus
(3) Rhabdovirus
(4) HIV

88. The enzyme that is present in the saliva of man is
(1) Pepsin (2) Renin
(3) Amylase (4) Trypsin

89. Blood cancer is otherwise called as
(1) Anaemia (2) Polycythemia
(3) Leucopenia (4) Leukaemia

90. For which community were seats reserved by the Morley-Minto reforms ?
(1) Jews (2) Muslims
(3) Christians (4) Sikhs

91. Who among the following won the Vyas Samman for 2010 on March 10, 2011 ?
(1) Shashi Kumar
(2) Gautam Sharma
(3) Vishwanath Prasad Tiwari
(4) Giriraj Kishore

92. What does ECS in banking transactions stand for ?
(1) Excess Credit Supervisor
(2) Extra Cash Status
(3) Exchange Clearing Standard
(4) Electronic Clearing Service

93. Which of the following statements is correct ?
(1) Lava and magma both have gas
(2) Neither the lava nor the magma has gas
(3) Magma has gas while lava has no gas
(4) Lava has gas while magma has no gas

94. Which one of the following is the example of sedimentary rocks ?
(1) Loess (2) Basalt
(3) Granite (4) Gabbro

95. Mica is found in which one of the following pairs of rocks ?
(1) Slate- Sandstone
(2) Schist- Gneiss
(3) Limestone- Sandstone
(4) Shale- Limestone

96. The Mohorovicic (Moho) Discontinuity separates
(1) Outer core and Mantle
(2) Inner and Outer core
(3) Sima and Nife
(4) Crust and Mantle

97. Who among the following was adjudged the richest person in the world by Forbes in March 2011 ?
(1) Bill Gates
(2) Carlos Slim Helu
(3) Warren Buffet
(4) Bernard Arnault

98. "The national income consists of a collection of goods and services reduced to common basis by being measured in terms of money."— Who says this ?
(1) Samuelson (2) Kuznets
(3) Hicks (4) Pigou

99. Which of the following teams won the ICC Cricket World Cup 2011 on April 2, 2011 ?
(1) Sri Lanka
(2) India
(3) Pakistan
(4) Australia

100. Capital : Output Ratio of a measures
(1) its per unit cost of production
(2) the amount of capital invested per unit of output
(3) the ratio of capital depreciation to quantity of output
(4) the ratio of working capital employed to quantity of output

101. The writs for the enforcement of Fundamental Rights are issued by
(1) The Parliament
(2) The President
(3) The Supreme Court
(4) The Election Commission

102. Which of the following is a feature to both the Indian Federation and the American Federation ?
(1) A single citizenship
(2) Dual judiciary
(3) Three Lists in the Constitution
(4) A Federal Supreme Court to interpret the Constitution

103. Which one of the following items is not included in the current account of India's Balance of Payments ?
(1) Short-term commercial borrowings
(2) Non-monetary gold movements
(3) Investment income
(4) Transfer payments

104. Engel's Law states the relationship between
(1) quantity demanded and price of a commodity
(2) quantity demanded and price of substitutes
(3) quantity demanded and tastes of the consumers
(4) quantity demanded and income of the consumers

105. Which of the following is not a tool of legislative control over administration in India?
(1) Dissolution of House
(2) Resolutions
(3) Questions
(4) No Confidence Motion

106. Evaluate the following statements :
(I) The legal interpretation of equality is chiefly influenced by equality before law and equal protection of law
(II) Equality before law means rule of law
(1) I is correct but II is incorrect
(2) II is correct but I is incorrect
(3) Both are correct
(4) Both are incorrect

107. A writ issued by the Supreme Court compelling a quasi-judicial/public authority to perform its mandatory duty is
(1) Quo warranto
(2) Mandamus
(3) Certiorari
(4) Prohibition

108. In Gandhian Socialism
(1) State is required
(2) State is not required
(3) State is sometimes required and sometimes not required
(4) State is neither required nor not required

109. With which of the following books is Hobbes associated ?
(1) Lectures on Jurisprudence
(2) Social Contract
(3) Republic
(4) Leviathan

110. In which year were the Indian states reorganised on the linguistic basis ?
(1) 1947 (2) 1951
(3) 1956 (4) 1966

111. The book 'Truth, Love and A Little Malice' is written by
(1) Tarun Tejpal
(2) Vikram Seth
(3) Khushwant Singh
(4) Nirad C. Chaudhuri

112. WLL stands for
(1) Walking Land Line
(2) Walking Loop Line
(3) Wireless Land Line
(4) Wireless in Local Loop

113. Legendary Hollywood actress Elizabeth Taylor passed away on March 23, 2011. She had won

two Academy awards one in 1960 and the other in the year
(1) 1966 (2) 1968
(3) 1970 (4) 1972

114. The Ad Line 'Connecting People' is linked with
(1) Sony Ericsson
(2) Nokia
(3) Motorola (4) Airtel

115. Match the personalities mentioned below with the activity they are associated with :
Personalities
1. Rod Laver
2. Chanda Kochar
3. Birju Maharaj
4. Bala Murlikrishnan
Field of Activity
a. Kathak Dancing
b. Music
c. Lawn Tennis
d. Banking

	1	2	3	4
(1)	c	d	a	b
(2)	a	c	b	d
(3)	b	a	d	c
(4)	d	b	c	a

116. The central bank of Bangladesh on March 2, 2011 sacked Muhammad Yunus as Managing Director of Grameen Bank. When did he won the Nobel Peace Prize alongwith Grameen Bank ?
(1) 2004 (2) 2005
(3) 2006 (4) 2007

117. ISRO is abbreviation for
(1) Indian Scientific Research Organisation
(2) International Space Research Organisation
(3) International Sales Research Organisation
(4) Indian Space Research Organisation

118. Match the following political leaders of India with their respective political parties :

1. Sharad Pawar		a. CPI
2. Sharad Yadav		b. BSP
3. Mayawati		c. JD(U)
4. A.B. Bardhan		d. NCP

	1	2	3	4
(1)	c	d	b	a
(2)	d	c	b	a
(3)	d	c	a	b
(4)	b	a	c	d

119. Which among the following countries would host the 2012 Olympic Games ?
(1) India
(2) South Korea
(3) Greece
(4) London

120. Superconductors are those elements
(1) Whose conductivity is intermediate between metals and insulators
(2) Whose resistance falls almost to zero at very low temperatures
(3) which turn into insulators at very low temperatures
(4) which conduct electricity only at super-high temperatures

ANSWERS

1. (2)	**2.** (4)	**3.** (1)	**4.** (4)
5. (1)	**6.** (3)	**7.** (4)	**8.** (3)
9. (1)	**10.** (2)	**11.** (2)	**12.** (2)
13. (1)	**14.** (4)	**15.** (4)	**16.** (3)
17. (4)	**18.** (3)	**19.** (2)	**20.** (2)
21. (3)	**22.** (1)	**23.** (3)	**24.** (3)
25. (1)	**26.** (2)	**27.** (1)	**28.** (4)
29. (2)	**30.** (2)	**31.** (2)	**32.** (4)
33. (2)	**34.** (2)	**35.** (1)	**36.** (1)
37. (3)	**38.** (2)	**39.** (2)	**40.** (3)
41. (1)	**42.** (3)	**43.** (1)	**44.** (2)
45. (2)	**46.** (4)	**47.** (3)	**48.** (3)
49. (2)	**50.** (3)	**51.** (2)	**52.** (3)
53. (3)	**54.** (4)	**55.** (1)	**56.** (1)
57. (2)	**58.** (3)	**59.** (1)	**60.** (2)
61. (2)	**62.** (2)	**63.** (3)	**64.** (4)
65. (1)	**66.** (1)	**67.** (2)	**68.** (1)
69. (3)	**70.** (4)	**71.** (4)	**72.** (2)
73. (1)	**74.** (3)	**75.** (3)	**76.** (1)
77. (4)	**78.** (4)	**79.** (1)	**80.** (1)
81. (2)	**82.** (4)	**83.** (4)	**84.** (1)
85. (4)	**86.** (2)	**87.** (1)	**88.** (3)
89. (4)	**90.** (2)	**91.** (3)	**92.** (4)
93. (2)	**94.** (1)	**95.** (2)	**96.** (4)
97. (2)	**98.** (2)	**99.** (2)	**100.** (2)
101. (3)	**102.** (4)	**103.** (1)	**104.** (4)
105. (1)	**106.** (3)	**107.** (2)	**108.** (2)
109. (1)	**110.** (3)	**111.** (3)	**112.** (4)
113. (1)	**114.** (2)	**115.** (1)	**116.** (3)
117. (4)	**118.** (2)	**119.** (4)	**120.** (2)

EXPLANATIONS

1.(2) Diamond is a transparent precious stone of pure carbon. Similarly, corundum is equivalent to Ruby.

2.(4) Smoke leads to pollution. Similarly, War leads to destruction.

3.(1) 2 15 17 4 → 6 18 20 7
B O Q D → F R T G
+3 +3 +3 +3

Similarly,

1 14 16 3 → 4 17 19 6
A N P C → D Q S F
+3 +3 +3 +3

4.(4) The given pair is of opposite letters.
Series of opposite letters

A	B	C	D	E	F	G	H	I	J	K	L	M
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Z	Y	X	W	V	U	T	S	R	Q	P	O	N

Now
A F K P
↓ ↓ ↓ ↓
Z U P K
Similarly,
B G L Q
↓ ↓ ↓ ↓
Y T O J

5.(1) $182 = (13)^2 + 13$ and
$(18)^2 + 18 = \boxed{342}$
$210 = (14)^2 + 14$ and
$380 = (19)^2 + 19$

6.(3) From first figure to second figure to the left of sign (:), one side is added to both the geometrical figures.

7.(4) From first figure to second figure to the left of sign (:), the left design is placed above the right design while the middle design is placed at the bottom position.

8.(3) Except Kohima all others are States of Union of India. Kohima is the capital of State of Nagaland.

9.(1) Except amoeba all others are multicellular organisms. Amoeba is a tiny living creature consisting of a single cell.

10.(2) $I \xrightarrow{+1} J$ and $C \xrightarrow{+1} D$

$Q \xrightarrow{+1} R$ and $K \xrightarrow{+1} L$

$P \xrightarrow{+1} Q$ and $M \xrightarrow{+1} N$

But,

$W \xrightarrow{+2} Y$ and $T \xrightarrow{-1} S$

11.(2) The second number is three times the first number except in the case of option (2).

$81 \times 3 = 243$

$64 \times 3 = 192$

$25 \times 3 = 75$

But, $16 \times 4 = 64$

12.(2) The given words would appear in the following order in a dictionary :

(3) Epigene

↓

(5) Epilogue

↓

(2) Episode

↓

(1) Epitaxy

↓

(4) Epitome

13.(1) $\boxed{1}$ st / t $\boxed{2}$ t / t $\boxed{3}$ t / t s $\boxed{1}$

14.(4) **Option (1)**

$A \xrightarrow{+4} E \xrightarrow{+4} I \xrightarrow{+4} M$.....

Option (2)

$E \xrightarrow{+3} H \xrightarrow{+3} K \xrightarrow{+3} N$.....

Option (3)

$D \xrightarrow{+5} I \xrightarrow{+5} N \xrightarrow{+5} S$.....

Option (4)

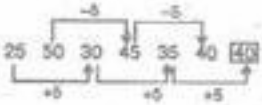
$F \xrightarrow{+2} H \xrightarrow{+3} K \xrightarrow{+4}$

$O \xrightarrow{+5} T \xrightarrow{+5} Z$.....

15.(4) Add 2, 3, 4, 5 ..... respectively to numerators and add 4, 6, 8, 10.... respectively to the denominators. Thus,

$\frac{2+2}{3+4} \Rightarrow \frac{4+3}{7+6} \Rightarrow \boxed{\frac{7}{13}}$

16.(3) The given number series is based on the following pattern :



17.(4) From left to right the number of arrows goes on decreasing by one in each figure.

18.(3) From first figure to second figure the lower design is inverted and moves to the top and then it duplicates.

19.(2) $\boxed{\begin{array}{l} + \to +;\ + \to \times \\ \times \to -;\ - \to + \end{array}}$

Option (1)

$18 \div 6 - 7 + 5 \times 2 = 20$

After conversion

$18 \times 6 + 7 \div 5 - 2 = 20$

or, $108 \div \frac{7}{5} - 2 \neq 20$

Option (2)

$18 + 6 \div 7 \times 5 - 2 = 18$

After conversion

$18 \div 6 \times 7 - 5 + 2 = 18$

or, $3 \times 7 - 5 + 2 = 18$

or, $21 - 5 + 2 = 18$

or, $23 - 5 = 18$

or, $18 = 18$

20.(2) $\boxed{\begin{array}{l} - \to +;\ + \to \times \\ + \to -;\ \times \to + \end{array}}$

Option (1)

$18 \div 3 \times 2 + 8 - 6 = 10$

After conversion

$18 - 3 \div 2 \times 8 + 6 = 10$

or, $18 - 3 \div 2 \times \frac{8}{6} = 10$

or, $18 - 3 \div \frac{8}{3} \neq 10$

Option (2)

$18 - 3 \div 2 \times 8 \div 6 = 14$

After conversion

$18 \div 3 \times 2 + 8 - 6 = 14$

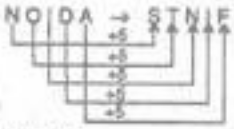
or, $6 \times 2 + 8 - 6 = 14$

or, $12 + 8 - 6 = 14$

or, $20 - 6 = 14$

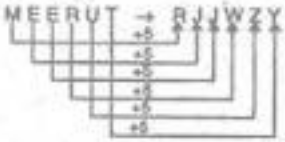
or, $14 = 4$

21.(3) N O I D A → S T N I F



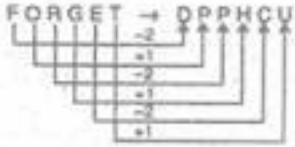
Similarly,

M E E R U T → R J J W Z Y



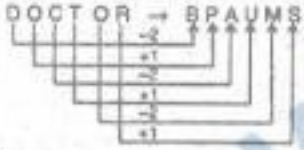
22.(1)

F O R G E T → D P P H C U



Similarly,

D O C T O R → B P A U M S



23. (3)

1	2	3	4		5	6	7	8
D	E	C	E		M	B	E	R

↓

7	8	5	6		3	4	1	2
E	R	M	B		C	E	D	E

Similarly,

7	8	5	6		3	4	1	2
E	R	M	B		V	E	N	O

↓

1	2	3	4		5	6	7	8
N	O	V	E		M	B	E	R

Trick : From the jumbled letters only the word NOVEMBER can be formed considering the given options.

24. (3) R → 18

E → 5

D → 4

Add 2 to the position number of each alphabet and then write the sum so obtained in reverse order.

R E D ⇒ 6 7 20

Similarly,

G	R	E	E	N
↓	↓	↓	↓	↓
7	18	5	5	14
+	+	+	+	+
2	2	2	2	2
↓	↓	↓	↓	↓
9	20	7	7	16

G R E E N ⇒ 16 7 7 20 9

25.(1) According to question,

9th → Saturday

Therefore, 9 - 7

= 2nd → Saturday

∴ 1st → Friday

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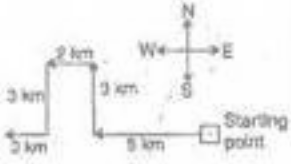
26.(2) Total marks = 9 × 45 = 405
According to question,
405 − 35 + 48 = 418

$\therefore$ Average marks $= \frac{418}{9} = 46.4$

27.(1)



It is clear from the diagram that Kamu is to the west of her house.

28.(4) If most of the candidates write in Hindi medium, then some candidates certainly write in Hindi Medium.

29.(2) In the given word there are only two Ps while in the word PEPPER there are three Ps.

30.(2) There is no letter 'S' in the keyword.

31.(2)

32.(4)

It is clear from the diagram that Amit was 5 km away from the starting point.

33.(2)

It is clear from the diagram that minute hand will be in west direction.

34.(2) The lowest number in each column is product of other three numbers.

1st column
9 × 6 × 5 = 270

2nd column
8 × 7 × 4 = 224

3rd column
7 × 8 × ? = 336

$\therefore ? = \frac{336}{56} = \boxed{6}$

35.(1)

All rhombus are quadril-aterals.
All quadrilaterals are poly-gons.

36. (1) Let the length of rectangular hall = x m

$\therefore$ Breadth $= \frac{3}{4} \times x$ m

we know that
Area of rectangular
= Length × Breadth

$= x \times \frac{3}{4} x$ sq.m. $= \frac{3}{4} x^2$ m^2

$\therefore$ According to question,

$\frac{3}{4} x^2 = 768$

$\therefore x^2 = \frac{768 \times 4}{3}$

or, $x = \sqrt{\frac{768 \times 4}{3}} = 32$m

$\therefore$ Length = 32cm and
Breadth = 24m
$\therefore$ Required difference
= 32 − 24 = 8m

37. (3) According to question,
A and B can do a work in 12 days

$\therefore$ (A + B)'s one days's work $= \frac{1}{12}$

Similarly,

(B + C)'s one day's work $= \frac{1}{15}$

and (C + A) one day's work $= \frac{1}{20}$

$\therefore$ 2 (A + B + C)'s one day's work

$= \frac{1}{12} + \frac{1}{15} + \frac{1}{20}$

$= \frac{10 + 8 + 6}{120} = \frac{1}{5}$

(A + B + C)'s one days's work $= \frac{1}{10}$

$\therefore$ A, B and C together can finish the whole work in 10 days.

38. (2) Let A can finish the whole work in x days.

$\therefore$ B can finish the same work in 3x days.
According to question,
3x − x = 60
$\therefore$ x = 30 days
$\therefore$ A can finish the work in 30 days and B can finish the same work in 90 days.
$\therefore$ (A + B)'s one day's work

$= \frac{1}{30} + \frac{1}{90} = \frac{4}{90}$

$\therefore$ (A + B)'s can finish the complete work in $= \frac{90}{4} = 22\frac{1}{2}$ days.

39. (2) Required time $= \frac{1}{\frac{1}{20} + \frac{1}{30}}$

$= \frac{20 \times 30}{50} = 12$ minutes

40. (3) Time taken to cover 20 km at the speed of 5km/hr = 4 hours.
$\therefore$ Fixed time = 4 hours − 40 minutes
= 3 hour 20 minutes
Time taken to cover 20 km at the speed of 8 km/hr

$= \frac{20}{8} = 2$ hours 30 minutes

$\therefore$ Required time = 3 hours 20 minutes − 2 hours 30 minutes = 50 minutes

41. (1) $? = 1 + \cfrac{1}{1 + \cfrac{2}{2 + \cfrac{3}{1 + \cfrac{4}{5}}}}$

$$=1+\cfrac{1}{1+\cfrac{2}{2+\cfrac{3\times5}{5+4}}}$$

$$=1+\cfrac{1}{1+\cfrac{2}{2+\cfrac{5}{3}}}$$

$$=1+\cfrac{1}{1+\cfrac{2\times3}{6+5}}=1+\frac{1\times11}{11+6}$$

$$=1+\frac{11}{17}=1\frac{11}{17}$$

42. (3) $\left(\sqrt{12}+\sqrt{18}\right)-\left(\sqrt{3}+\sqrt{2}\right)$

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

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

43. (1) $7=\sqrt{5+2\sqrt{6}}-\dfrac{1}{\sqrt{5+2\sqrt{6}}}$

$$=\frac{\left(\sqrt{5+2\sqrt{6}}\right)^2-1}{\sqrt{5+2\sqrt{6}}}$$

$$=\frac{5+2\sqrt{6}-1}{\sqrt{5+2\sqrt{6}}}$$

$$=\frac{4+2\sqrt{6}}{\sqrt{5+2\sqrt{6}}}=2\sqrt{2}$$

44. (2) $(243)^{0.15}\times(243)^{0.04}$

$=(243)^{0.15+0.04}$

$=(243)^{0.2}=(243)^{1/5}$

$=(3^5)^{1/5}=3$

45. (2) $\sqrt{\dfrac{0.49}{0.25}}+\sqrt{\dfrac{0.81}{0.36}}=\dfrac{0.7}{0.5}+\dfrac{0.9}{0.6}$

$$=\frac{42+45}{30}=\frac{87}{30}=\frac{29}{10}=2\frac{9}{10}$$

46. (4) $\dfrac{7}{6}=1.166$

$\dfrac{7}{9}=0.777$

$\dfrac{4}{5}=0.8$ and $\dfrac{5}{7}=0.714$

Therefore, the smallest number is $\dfrac{5}{7}$

47. (3) Since the numbers between – 10 and 10 will be single digit and the numbers below 100 will be either one digit or two digit. We know that the square root of one or two digit number is always single digit number. Therefore, required answer is option (3).

48. (3) Required number

$$=\frac{864\times144}{288}=432$$

49. (2) Let required number be x

∴ According to question,

$50x-30x=400$

$20x=400$

$\therefore x=20$

50. (3) Let the numbers are x and y

∴ According to question,

$x\times0.6=y\times0.08$

$\therefore x:y=\dfrac{0.08}{0.6}$

$\therefore 2:15$

51. (2) Let amount be Rx.x

∴ According to question,

$\dfrac{8}{3}x-\dfrac{3}{8}x=55$

or, x = Rs. 24

52. (3) According to question,

$21+24+27=72$

Therefore, largest number is 27.

53. (3) L.C.M. of 4, 6, 8, 12 and 16 = 48

∴ Required number

$=48+2=50$

54. (4) From options,

The product of 6 and 4 = 24

and the difference = 6 – 4 = 2

55. (1) Let the total number of students in a class be x

∴ According to question,

Number of girls $=\dfrac{3}{5}x$

and number of boys $=x-\dfrac{3x}{5}$

$=\dfrac{2}{5}x$

Number of girls which are absent

$=\dfrac{3}{5}\times\dfrac{2}{9}x=\dfrac{6x}{45}$

and number of boys which are absent

$=\dfrac{2}{5}\times\dfrac{1}{4}\times x=\dfrac{1}{10}\times x$

∴ Total number of students which are present

$=x-\dfrac{6x}{45}-\dfrac{x}{10}$

$=\dfrac{(90-12-9)x}{90}$

$=\dfrac{69x}{90}=\dfrac{23x}{30}$

Therefore, the $\dfrac{23}{30}$ part of the students are present in the class.

56. (1) The H.C.F of 1001 and 910 = 91

57. (2) Saving $=100\%-66\dfrac{2}{3}\%$

$=33\dfrac{1}{3}\%$

$\because 33\dfrac{1}{3}\%=$ Rs.1200

$\therefore 100\%=\dfrac{1200}{100}\times3\times100$

= Rs. 3600

∴ Expenses = 3600 – 1200

= Rs. 2400

58. (3) According to question,

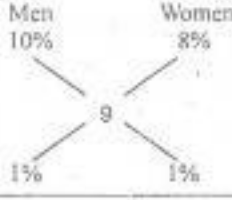
$A\times\dfrac{80}{100}=B\times\dfrac{50}{100}$

$\therefore B=\dfrac{A\times80}{50}=1.6A$

∴ B = 160% of A

∴ x = 160

59. (1) **By Alligation Rule**



Men 10% Women 8%

9

1% 1%

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