RAILWAY RPF/RPSF EXAM

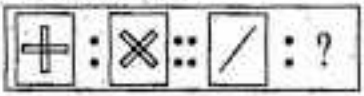
MODEL PRACTICE SET

RAILWAY RPF/RPSF CONSTABLE EXAM

GENERAL INTELLIGENCE & REASONING

1. Select the related figure from among four answers figures

Question figures



Answer figures

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

2. Select the related word to complete the analogy.
Hunger : Food : : Disease : ?
(1) Weakness (2) Medicine
(3) Sickness (4) Water

3. Select the related word to complete the analogy.
Thin : Thick : : Dwarf : ?
(1) Short (2) Tall
(3) Broad (4) Long

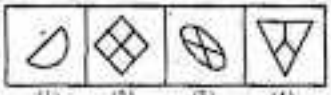
4. Select the related letter group to complete the analogy.
BDFH : JLNP : : RTVX : ?
(1) BDHF (2) BDFZ
(3) ZBDF (4) YZAB

5. Select the related number to complete the analogy.
400 : 20 : : 484 : ?
(1) 20 (2) 21
(3) 22 (4) 23

6. Select the related number to complete the analogy.
4 : 32 : : 7 : ?
(1) 98 (2) 343
(3) 88 (4) 49

7. Find the odd number from the given alternatives.
(1) 9.09 (2) $\frac{909}{100}$
(3) $9\frac{9}{100}$ (4) $\frac{909}{1000}$

8. Find the odd figure from the given alternatives.



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

9. Find the odd number pair from the given alternatives.
(1) 16 – 25 (2) 64 – 81
(3) 36 – 49 (4) 100 – 110

10. Find the odd letter group from the given alternatives.
(1) XV (2) ZW
(3) YV (4) WT

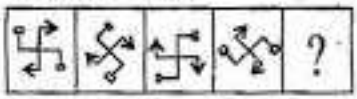
11. Find the odd letter group from the given alternatives.
(1) ADF (2) BEG
(3) LOQ (4) SUW

12. Find the odd letter group from the given alternatives.
(1) HDXW (2) BAQP
(3) SRVU (4) UTYX

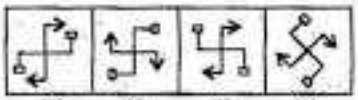
13. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?
w__xw__x__ax__a__wa__
(1) axawxa (2) aawaxx
(3) aawwxx (4) waawxx

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

Question figures



Answer figures



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

15. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.
AE, FJ, __?__, PT
(1) MN (2) UV
(3) KO (4) YZ

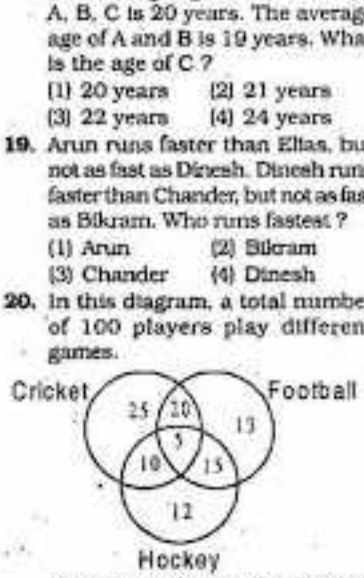
16. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.
BDF, HJL, NPR, __?__
(1) TRP (2) TVY
(3) TVX (4) UWX

17. A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.
9, 17, 31, 57, __?__, 205
(1) 102 (2) 104
(3) 107 (4) 109

18. The average age of three friends A, B, C is 20 years. The average age of A and B is 19 years. What is the age of C ?
(1) 20 years (2) 21 years
(3) 22 years (4) 24 years

19. Arun runs faster than Elias, but not as fast as Dinesh. Dinesh runs faster than Chander, but not as fast as Bikram. Who runs fastest ?
(1) Arun (2) Bikram
(3) Chander (4) Dinesh

20. In this diagram, a total number of 100 players play different games.



How many players play Football and Hockey but not Cricket ?
(1) 20 (2) 25
(3) 15 (4) 5

21. Ramu' mother said to Ramu, "My mother has a son whose son is Achyut". How is Achyut related to Ramu ?
(1) Uncle (2) Cousin
(3) Brother (4) Nephew

22. From the given alternatives select the word which can be formed

using the letters given in the word.
CIRCUMSCRIBE
(1) TRIBES (2) BARBER
(3) SCARE (4) CRUMBS

23. From the given alternatives select the word which **cannot** be formed using the letters to the given word.
COMMISSIONER
(1) MISSION (2) COMMON
(3) MISSILE (4) SIREN

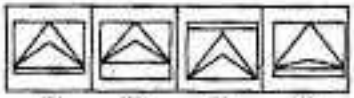
24. If A is coded as 2, B as 3 and so on, what is the code for FACE?
(1) 7246 (2) 6245
(3) 6357 (4) 7346

25. In a code TIGER is written as SHFDQ, how shall HORSE be written in that code?
(1) GNRQD (2) GNQRD
(3) GRNQD (4) GMQRD

26. Among the four answer figures, which one can be formed from the cut out pieces given below in the question figure?

Question figure

Answer figures

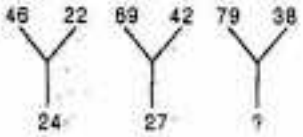


(1) (2) (3) (4)

27. Some equations are solved on the basis of some system. Using the same, solve the unsolved equation.
$4 \times 5 \times 6 = 645$
$5 \times 6 \times 7 = 756$
$6 \times 7 \times 8 = ?$
$8 \times 7 \times 9 = 987$
(1) 768 (2) 867
(3) 876 (4) 678

28. If '+' means ×, '–' means +, '×' means '÷' and '÷' means –, then $10 + 5 \times 10 \div 2 - 5$ has a value of
(1) 35 (2) 45
(3) 30 (4) 8

29. Select the missing number from the given alternatives.



(1) 40 (2) 41
(3) 31 (4) 51

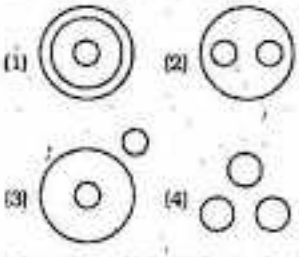
30. Mrs. Kiran starts from Gandhi Square, Kolkata, drives her car towards west 6 kms and turning to her right she drives 4 kms, then again turns the car to her right and moves 6 kms. How far is she from the starting point?
(1) 6 kms (2) 16 kms
(3) 4 kms (4) 8 kms

Directions (31 – 32) : A, B, C, D and E are five boys sitting in a circle. C is sitting immediately to the left of E. A is sitting between D and E.

31. Who is sitting to the immediate left hand side of C?
(1) E (2) A
(3) B (4) D

32. Who is sitting between B and A?
(1) C (2) E
(3) D (4) None

33. Which one of the following figures represents the relationship among Brinjal, Meat, Vegetables?



Directions (34 – 35) : In the following questions one/two statements are given followed by two conclusions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

34. Statements : Some phones are watches. All watches ar guns.
Conclusions :
I. All guns guns are watches.
II. Some guns ar Phones.
(1) Only I follows
(2) Only II follows
(3) Either I or II follows
(4) Neither I nor II follows

35. Statement : In schools, students learn as they are able to understand what is taught to them.
Conclusions :
I. Students's learning in schools, depends upon their ability to learn.
II. Students' learning in schools depends upon how they are taught.
(1) Only I follows
(2) Only II follows
(3) Both I and II follow
(4) Neither I nor II follows

ARITHMETIC

36. A man buys 12 articles for Rs. 12 and sells them at the rate of Rs. 1.25 per article. His gain percentage is :
(1) 20 (2) 25
(3) 15 (4) 18

37. The cost price of 15 articles is same as the selling price of 10 articles. The profit percent is :
(1) 30% (2) 40%
(3) 50% (4) 45%

38. By selling an article for Rs. 240 a man incurs a loss of 10%. At what price should he sell it so that he makes a profit of 20% ?
(1) Rs. 264 (2) Rs. 288
(3) Rs. 300 (4) Rs. 320

39. A house and a shop were sold for Rs. 1 lakh each. In this transaction, the house sale resulted into 20% loss whereas the shop sale into 20% profit. The entire transaction resulted in :
(1) no loss no gain
(2) gain of Rs. $\frac{1}{24}$ lakh
(3) loss of Rs. $\frac{1}{12}$ lakh
(4) loss of Rs. $\frac{1}{18}$ lakh

40. If $x = \frac{1}{3}y$ and $y = \frac{1}{2}z$ then $x : y : z$, is equal to :
(1) 3 : 2 : 1 (2) 1 : 2 : 6
(3) 1 : 3 : 6 (4) 2 : 4 : 6

41. Divide Rs. 1250 among A, B, C, so that A gets $\frac{2}{9}$ of B's share and C gets $\frac{3}{4}$ of A's share.
(1) Rs. 200, Rs. 800, Rs. 250
(2) Rs. 200, Rs. 900, Rs. 150
(3) Rs. 150, Rs. 800, Rs. 300
(4) Rs. 200, Rs. 900, Rs. 75

42. Between two consecutive years my incomes are in the ratio of 2 : 3 and expenses in the ratio

5 : 9. If my income in the second year is Rs. 45000 and my expenses in the first year is Rs. 25000 my total savings for the two years is :
(1) Nil (2) Rs. 15000
(3) Rs. 10000 (4) Rs. 5000

43. Of the three numbers whose average is 60, the first is one fourth of the sum of the others. The first number is :
(1) 30 (2) 36
(3) 42 (4) 45

44. The average of 11 numbers is 10.8. If the average of the first six be 10.4 and that of the last six is 11.5 then the middle (6th) number is :
(1) 10.3 (2) 12.6
(3) 13.5 (4) 15.5

45. The average age of 12 players of a team is 25 years. If the captain's age is included, the average age increases by 1 year. The age of the captain is :
(1) 25 yrs. (2) 38 yrs.
(3) 36 yrs. (4) 26 yrs.

46. If the volumes of two cubes are in the ratio 27:1, the ratio fo their edges is :
(1) 3 : 1 (2) 27:1
(3) 1:3 (4) 1:27

47. The sides of a rectangular plot are in the ratio 5:4 and its area is equal to 500 sq.m. The perimeter of the plot is :
(1) 80m. (2) 100m.
(3) 90m. (4) 95m.

48. The radius of a wheel is 21 cm. How many revolution will it make in travelling 924 metres ?
$\left(\text{use } \pi = \frac{22}{7}\right)$
(1) 7 (2) 11
(3) 200 (4) 700

49. The edges of a cuboid are in the ratio 1 : 2 : 3 and its surface area is 88cm². The volume of the cuboid is :
(1) 120 cm³ (2) 64 cm³
(3) 48 cm³ (4) 24 cm³

50. Find the length of the largest rod that can be placed in a room 16m long, 12m broad and $10\frac{2}{3}$ m. high.
(1) 23 m. (2) 68 m.
(3) $22\frac{2}{3}$ m. (4) $22\frac{1}{3}$ m.

51. A solid metallic cone of height 10 cm, radius of base 20 cm is melted to make spherical balls each of 4 cm. diameter. How many such balls can be made ?
(1) 25 (2) 75
(3) 50 (4) 125

52. A and B can do a piece of work in 72 days. B and C can do it in 120 days, A and C can do it in 90 days. In how many days all the three together can do the work ?
(1) 80 days (2) 100 days
(3) 60 days (4) 150 days

53. Three taps A, B and C can fill a tank in 12, 15 and 20 hours respectively. If A is open all the time and B and C are open for one hour each alternatively, the tank will be full in :
(1) 6 hours (2) $6\frac{2}{3}$ hours
(3) 7 hours (4) $7\frac{1}{2}$ hours

54. A can do a piece of work in 12 days and B can do it in 18 days. They work together for 2 days and then A leaves. How long will B take to finish the remaining work ?
(1) 6 days (2) 8 days
(3) 10 days (4) 13 days

55. A train is travelling at the rate of 45km/hr. How many seconds, it will take to cover a distance of $\frac{4}{5}$ km.
(1) 36 (2) 64
(3) 90 (4) 120

56. A train 100m long is running at the speed of 30 km/hr. The time (in second) in which it will pass a man standing near the railway line is :
(1) 10 (2) 11
(3) 12 (4) 15

57. An aeroplane covers a certain distance at a speed of 240 km. per hour in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours, it must travel at a speed of :
(1) 300 km./hr.
(2) 360 km./hr.
(3) 600 km./hr.
(4) 720 km./hr.

58. Simplify : $1+\cfrac{2}{1+\cfrac{3}{1+\cfrac{4}{5}}}$
(1) $\frac{7}{4}$ (2) $\frac{4}{7}$
(3) $\frac{7}{5}$ (4) $\frac{3}{7}$

59. Simplification of
$$\frac{(3.4567)^2-(3.4533)^2}{0.0034}$$
yields the result :
(1) 6.91 (2) 7
(3) 6.81 (4) 7.1

60. Evaluate :
$$\frac{-(4-6)^2-(-2)+|-6|}{18-9+3\times5}$$
(1) $\frac{3}{8}$ (2) $\frac{4}{7}$
(3) $\frac{8}{3}$ (4) $\frac{7}{4}$

61. The value of $(256)^{0.16} \times (256)^{0.09}$ is :
(1) 256.25 (2) 64
(3) 16 (4) 4

62. Simplify :
$$\frac{0.05\times0.05\times0.05-0.04\times0.04\times0.04}{0.05\times0.05+0.002+0.04\times0.04}$$
(1) 1 (2) 0.1
(3) 0.01 (4) 0.001

63. Simplify : $\dfrac{\frac{5}{3}\times\frac{7}{51}\text{ of }\frac{17}{5}-\frac{1}{3}}{\frac{2}{9}\times\frac{5}{7}\text{ of }\frac{28}{5}-\frac{2}{3}}$
(1) $\frac{1}{2}$ (2) 4
(3) 2 (4) $\frac{1}{4}$

64. If $\sqrt{x}+\sqrt{441}=0.02$ then value of x is :
(1) 1.64 (2) 2.64
(3) 1.764 (4) 0.1764

65. $2\sqrt[3]{32}-3\sqrt[3]{4}+\sqrt[3]{500}$ is equal to :
(1) $4\sqrt[3]{6}$ (2) $3\sqrt{24}$
(3) $6\sqrt[3]{4}$ (4) 916

66. The square root of :

$$\frac{(0.75)^3}{1-0.75}+\left[0.75\div(0.75)^2+1\right]$$

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

67. Find the value of

$$\sqrt{4+\sqrt{44+\sqrt{10000}}}$$

(1) 12 (2) 8
(3) 4 (4) –4

68. The printed price of an article is Rs. 900 but the retailer gets a discount of 40%. He sells the article for Rs. 900 Retailer's gain per cent is :
(1) 40 (2) 60
(3) $66\frac{2}{3}$ (3) $68\frac{1}{3}$

69. What sum of money must be given at simple interest for six months at 4% per annum in order to earn Rs. 150 interest ?
(1) Rs. 5000 (2) Rs. 7500
(3) Rs. 10000 (4) Rs. 15000

70. A sum of Rs. 10,000 is lent partly at 8% and remaining at 10% per annum. If the yearly interest on the average is 9.2%, the two parts are :
(1) Rs. 4000, Rs. 6000
(2) Rs. 4500, Rs. 5500
(3) Rs. 5000, Rs. 5000
(4) Rs. 5500, Rs. 4500

GENERAL AWARENESS

71. Which one of the following projects was not announced by the Union Railway Minister Ms. Mamta Banerjee in the Railway Budget 2011-12, presented on February 25, 2011 ?
(1) Laying of 40 new lines
(2) Gauge Conversio of 1,017 km
(3) Trebling of 1125 km of track
(4) Electrification of 1,000 km of track

72. Which among the following is not a work of Rabindranath Tagore ?
(1) Chitra
(2) Kapala Kundala
(3) The Court Dancer
(4) Chithrangada

73. Clove, the commonly-used spice, is obtained from the
(1) Fruit (2) Stem
(3) Root (4) Flower bud

74. Which amongst the following States/UT has not identified tribal community ?
(1) Chhattisgarh
(2) Haryana
(3) Maharashtra
(4) Karnataka

75. From where did India introduce cultivation of tobacco/tapioca/pineapple?
(1) Pacific Islands
(2) Africa (3) South America
(4) China

76. What is colour of light related to?
(1) Amplitude (2) Frequency
(3) Quality (4) Velocity

77. What principle/law explains the working of the hydraulic brakes in automobiles ?
(1) Bernoulli's law
(2) Poiseulle's principle
(3) Pascal's law
(4) Archimedes' principle

78. What did the Hunter Commission appointed by the Viceroy probe?
(1) Bardoli Satayagraha
(2) Khilafat Agitation
(3) Jallianwala Bagh tragedy
(4) Chauri Chaura incident

79. Who among the following were contemporaries of Kanishka ?
(1) Kamban, Banabhatta, Asvagosha
(2) Nagarjuna, Asvagosha, Vasumitra
(3) Asvagosha, Kalidasa, Banabhatta
(4) Kalidasa, Kamban, Vasumitra

80. Which of the following non-members of Parliament has the right to address it ?
(1) Attorney-General of India
(2) Solicitor-General of India
(3) Chief Justice of India
(4) Chief Election Commissioner

81. Match the artists with their art form.

Artist	Art form
(a) Jatin Das	1. Sitar
(b) Parveen Sultana	2. Painting
(c) Pradosh Dasgupta	3. Hindustani music (Vocal)
(d) Ustad Vilayat Khan	4. Sculpture

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

82. Which one of the following river flows through a rift valley ?
(1) Godavari (2) Narmada
(3) Krishna (4) Mahanadi

83. Union Finance Minister Pranab Mukherjee presented the Budget 2011-12 onFebruary 28, 2011. Which of the following is not a key features of this Budget ?
(1) Gross Tax receipts are estimated at Rs. 9,32,440 crore
(2) Exemption limit for general category of individual taxpayers was not enhanced
(3) Total expenditure proposed at Rs. 12,57,729 crore
(4) Rate of Minimum Alternative Tax increased to 18.5 per cent

84. What are the blood corpuscles that help to build up resistance against diseases ?
(1) Leucocytes
(2) Monocytes
(3) Neutrophils
(4) Lymphoctyes

85. Which is the gland that holds the body's thermostat?
(1) Pineal (2) Pituitary
(3) Thyroid
(4) Hypothalamus

86. Rajya Sabha enjoys more powers than the Lok Sabha in the case of —
(1) Money Bills
(2) Non-money bills
(3) Setting up of new All-India Services
(4) Amendment of the Cons-titution

87. What is the most commonly used substance in fluorescent tubes?
(1) Sodium oxide and argon
(2) Sodium vapour and neon
(3) Mercury vapour and argon
(4) Mercury oxide and neon

88. Who among the following music composers was deaf ?
(1) Beethovan LV
(2) Bach JS
(3) Richard Strauss
(4) Johannes Brahms

89. Which is the largest tiger reserve in India ?
(1) Nagarjuna (2) Manas
(3) Pench (4) Corbett

90. Which of the following Mahatma Gandhi series of currency notes issued by the RBI has "ecology" depicted on it?
(1) Rs. 500 (2) Rs. 100
(3) Rs. 50 (4) Rs. 5

91. Which country/countries started privatisation of State-owned enterprises as a major State Policy?
(1) U.K. under Mrs. Margaret Thatcher

(2) Russia in the C.I.S.
(3) Mexico/Argentina/Brazil
(4) Italy/France/Malaysia

92. India and Iran, on February 3, 2011, arrived at a settlement and agree to use euro to pay for Iranian crude oil through ___-based Europäisch-Iranische Handelsbank AG.
(1) Munich (2) Bonn
(3) Hamburg (4) Berlin

93. Who were made the permanent members of the U.N. Security-Council ?
(1) One representative from each continent
(2) Five major powers of the Allied Forces in the Second World War
(3) Five members elected by the U.N. General Assembly at the initial Constitution
(4) Funding members of the U.N.

94. Which of the following writs/orders of the High Court/Supreme Court is sought to get an order of an authority quashed ?
(1) Mandamus (2) Certiorari
(3) Quo Warranto
(4) Habeas Corpus

95. Which is the earliest Engineering Educational Institution in India ?
(1) Birla Institute of Technology & Science, Pilani
(2) I.I.T., Kharagpur
(3) Roorkee Engineering College. (I.I.T. Roorkee)
(4) BHU (IT), Varanasi

96. Who was associated with the creation of Pentium Chip ?
(1) Arun Netravalli
(2) Sabeer Bhatia
(3) C. Kumar Patel
(4) Vinod Dham

97. Which amongst the following States does not cultivate wheat?
(1) Karnataka (2) Maharashtra
(3) West Bengal (4) Tamil Nadu

98. The Assam State derives its name from that of a tribe that conquered the region. Where did the tribesmen come from ?
(1) Tibet (2) Mongolia
(3) Burma (now Myanmar)
(4) Siam (now Thailand)

99. Which is the Agency the Government has engaged to grade the standardise various agricultural products ?
(1) Food Corporation of India
(2) Directorate of Marketing and Inspection
(3) Bureau of Indian Standards
(4) Central Statistical Organisation

100. What is the purpose of the India Brand Equity Fund ?
(1) To promote in-bound tourism.
(2) To make 'Made in India' a label of quality.
(3) To organise trade fairs.
(4) To provide venture capital to IT sector.

101. Who is considered the father of Sahatara (Sitar) ?
(1) Mian Tansen (2) Baiju Bawara
(3) Amir Khusro
(4) Bade Ghulam Ali Khan

102. Which authority recommends the principles governing the grants-in-aid of the revenues of the States out of the Consolidated Fund of India ?
(1) Public Accounts Committee
(2) Union Ministry of Finance
(3) Finance Commission
(4) Inter-State Council

103. At the annual meeting of the World Economic Forum in Davos, in January 2011, key WTO member countries agreed on concluding a multilateral trade deal in 2011 under the ___ Round.
(1) Vienna (2) Brussels
(3) Lisbon (4) Doha

104. Who developed Ballistic Missile ?
(1) Wernher Von Braun
(2) J. Robert Oppenheimer
(3) Edward Taylor
(4) Samuel Cohen

105. Match the rivers flowing through the cities below :

City	River
(a) Rotterdan	1. Seine
(b) Paris	2. Potomac
(c) Budapest	3. Rhine
(d) Washington	4. Danube

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

106. Former women's World number one ___ of Belgium in January 2011, retired for the second time, citing a recurrent elbow problem.
(1) Sanja Ant
(2) Lea Antonopils
(3) Justine Henin
(4) Greta Urn

107. What is the chromosome number in a human ovum ?
(1) 24 (2) 46
(3) 48 (4) None of these

108. Hashish is obtained from a plant. From which part of the plant is it obtained ?
(1) Leaves
(2) Stem
(3) Exudate from leaves and female inflorescences.
(4) Exudate from stem and male inflorescences.

109. Which State in India is the leading producer of Sulphur?
(1) Assam (2) Maharashtra
(3) Punjab (4) Tamil Nadu

110. Apple Macintoshes (Macs) and PCs use different ___ to process data and different operating systems.
(1) Languages
(2) Methods (3) CPUs
(4) storage devices

111. Which from the following towns is not on the "Golden Quadrilateral" being created for the roads-infrastructure of the country?
(1) Ajmer (2) Ahmedabad
(3) Jabalpur (4) Gaya

112. Who invented the video-tape?
(1) Richard James
(2) Charles Ginsberg
(3) P.T. Farnsworth
(4) Georges de Mestral

113. Who is the author of the book "Courts and their Judgements"?
(1) Mr. Justice V.R. Krishna Iyer
(2) Arun Shourie
(3) F.S. Nariman
(4) Ram Jethmalani

114. What is an organisation's introductory web page called?
(1) Portal (2) Vortal
(3) Homepage
(4) Web site

115. Which organ of the body never rests ?
(1) Eyes (2) Pancreas
(3) Liver (4) Heart

116. Snakes and vultures are eating rats in a field. If wild dogs are let into the field, what will be the immediate result ?
(1) Decrease in the number of snakes

(2) Decrease in the number of vultures
(3) Decrease in the number of rats
(4) Increase in the number of snakes.

117. Who is competent to dissolve the Rajya Sabha ?
(1) The Chairman, Rajya Sabha
(2) The President
(3) The Joint-session of Parliament
(4) None

118. Point out which from the following is not a right enumerated in the Constitution of India but has been articulated by the Supreme Court to be a Fundamental Right.
(1) Right to privacy
(2) Equality before law
(3) Abolition of untoucha-bility
(4) Right to form associa-tions or unions

119. Which one of the following is the greatest circle ?
(1) Arctic Circle
(2) Equator
(3) Tropic of Cancer
(4) Tropic of Capricorn

120. Where was the first Cotton Mill in India established ?
(1) Surat
(2) Bombay (now Mumbai)
(3) Ahmedabad
(4) Coimbatore

ANSWERS

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

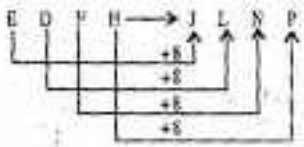
EXPLANATIONS

1. (3) From first figure to second figure the design rotates through 45°anticlockwise.

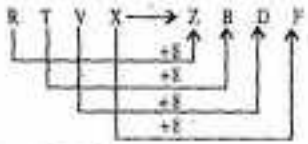
2. (2) Hunger is quenched with food. Similarly, Disease is warded off with medicine.

3. (2) Thin and Thick are antonymous to each other. Similarly, Dwarf and Tall are antonymous to each other.

4. (3)



Similarly,



5. (3) $\sqrt{400} = 20$
Similarly,
$\sqrt{484} = 22$

6. (1) $4 \times 4 \times 2 = 32$
Similarly,
$7 \times 7 \times 2 = 98$

7. (4)

$$\frac{909}{100} = 9.09,\ 9.\dot{9} = \frac{9}{100} = \frac{909}{100} = 9.09$$

$$\frac{909}{1000} = 0.909$$

8. (1) In all other figures, the design has been divided into four parts.

9. (4) $16 - 25 \Rightarrow (4)^2 - (5)^2$
$64 - 81 \Rightarrow (8)^2 - (9)^2$
$36 - 49 \Rightarrow (6)^2 - (7)^2$
$100 - 110 = (10)^2 - (10.48)^2$

10. (1)

$X \xrightarrow{-2} V$; $Z \xrightarrow{-3} W$;
$Y \xrightarrow{-3} V$; $W \xrightarrow{-3} T$;

11. (4) $A \xrightarrow{+3} D \xrightarrow{+2} F$
$B \xrightarrow{+2} E \xrightarrow{+2} G$
$L \xrightarrow{+3} O \xrightarrow{+2} Q$
$S \xrightarrow{+2} U \xrightarrow{+2} W$

12. (1) $H \xrightarrow{+1} I$; $X \xrightarrow{-1} W$
$B \xrightarrow{-1} A$; $Q \xrightarrow{-1} P$
$S \xrightarrow{-1} R$; $V \xrightarrow{-1} U$
$U \xrightarrow{-1} T$; $Y \xrightarrow{-1} X$

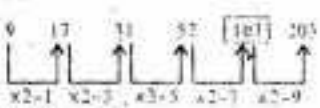
13. (3)
W[6]x / u[7]x / [10]o x / [8]n[8]V u [6]x

14. (3) In each subsequent figure the design rotates through 45° clockwise.

15. (3)
$A \xrightarrow{+5} F \xrightarrow{+5} K \xrightarrow{+5} P$
$E \xrightarrow{+5} J \xrightarrow{+5} O \xrightarrow{+5} T$

16. (3) $S \xrightarrow{+5} U \xrightarrow{+5} X \xrightarrow{+5} [illegible]$
$O \xrightarrow{+5} J \xrightarrow{+5} P \xrightarrow{+5} [illegible]$
$F \xrightarrow{+5} K \xrightarrow{+5} P \xrightarrow{+5} X$

17. (3)



18. (3) Age of C
$= (3 \times 20) - (2 \times 19)$
$= 60 - 38 = 22$ years

19. (2)
Bikram > Dinesh > Arun > Elias
Chander

20. (3) The number of players who play Football and Hockey = 15

21. (2) Achyut is nephew of Ramu's mother.
Therefore, Achyut is cousin of Ramu.

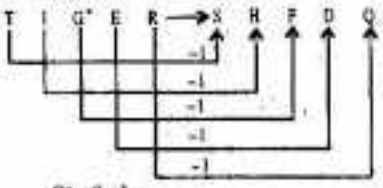
22. (4) There is no 'T' letter in the keyword.
There is no 'A' letter in the keyword.

23. (3) There is no 'L' letter in the keyword.

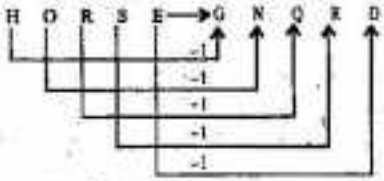
24. (1)

F	A	C	E
↓	↓	↓	↓
7	2	4	6

25. (2)

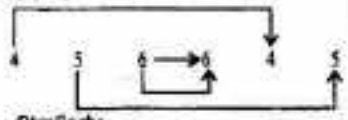


Similarly,

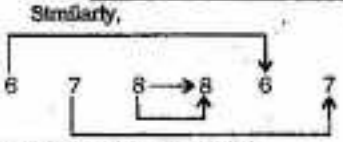


26. (2)

27. (2)



Similarly,



28. (4) $10 + 5 \times 10 \div 2 - 5$

$\Rightarrow ? = 10 \times 5 \div 10 - 2 + 5$

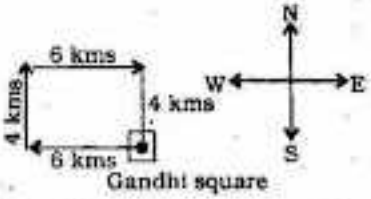
$\Rightarrow ? = 5 - 2 + 5 = 8$

29. (2) $24 + 22 = 46$

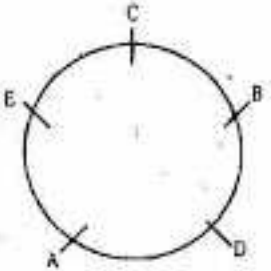
$27 + 42 = 69$

$\therefore ? = 79 - 38 = 41$

30. (3)



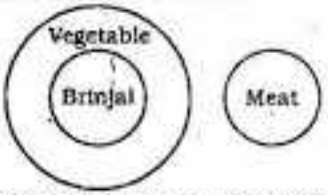
(31 – 32) : Sitting Arrangement



31. (3) B is to the immediate left hand side of C.

32. (3) D is sitting between B and A.

33. (3) Brinjal is a Vegetable but Meat is different from the both.



34. (2) First Premise is Particular Affirmative (I-type).
Second Premise is Universal Affirmative (A-type).

Some phones are watches.

All watches are guns.

I + A ⇒ I-type of Conclusion "Some phones are guns".
Conclusion II is Converse of this Conclusion.

35. (3) Clearly both the Conclusions follow.

36. (2) Total Profit = 15 – 12
= Rs. 3%

$\%\ \text{gain} = \frac{3}{12} \times 100 = 25\%$

37. (3) Suppose the C.P. of each article is Re. 1
Then C.P. of 10 articles
= Rs. 10
S.P. of 10 articles = Rs. 15
∴ Profit = Rs. 5

$\%\ \text{profit} = \frac{5 \times 100}{10} = 50\%$

38. (4) 90% of C.P. = Rs. 240
= First S.P.
New S.P. = 120% of C.P.

$= \text{Rs. } 240 \times \frac{100}{90} \times \frac{120}{100}$

= Rs. 320

39. (3) 80 S.P. then 100 C.P.
100000 S.P. then

$\frac{100000 \times 100}{80} = 125000$

120 S.P. ⇒ 100 C.P.

$100000\ \text{S.P.} \Rightarrow \frac{100000 \times 100}{120}$

$= \frac{250000}{3}$

$\text{C.P.} = 125000 + \frac{250000}{3}$

$= \frac{375000 + 250000}{3}$

$= \frac{625000}{3} = 208333.333$

S.P. = 200000
Loss = 8333.33

$= \frac{1}{2}$ lakh

40. (2) $x = \frac{1}{3}y$ ...(i)

$y = 3x$ ...(ii)

$y = \frac{z}{2}$ ....(iii)

From (i), (ii) and (iii)
$x : y : z = 1 : 2 : 6$

41. (4) $A = B \times \frac{2}{9} = \frac{2B}{9}$

$C = \frac{3A}{4}$

$A = \frac{4}{3}C$

∴ Ratio of A : B : C = 4 : 18 : 3

$\text{Share of A} = \frac{4}{20} \times 1250 = \text{Rs. } 200$

$\text{Share of B} = \frac{18}{25} \times 1250 = \text{Rs. } 900$

$\text{Share of C} = \frac{3}{25} \times 1250 = \text{Rs. } 75$

42. (4) Income in the second year
= Rs. 45000
Income in the first year
= Rs. 30000
Expense in the first year
= Rs. 25000
Expense in the second year,
= Rs. 45000
∴ Total saving
= 75000 – 70000 = Rs. 5000

43. (2) $x + y + z = 180$

$x = \frac{1}{4}(y + z)$

$4x = y + z$

$5x = 180, \therefore x = 36$

44. (2) 6th number = $[6 \times 10.4 + 6 \times 11.5 - 11 \times 10.8]$
$= [62.4 + 69.0 - 118.8]$
$= 131.4 - 118.8 = 12.6$

45. (2) Total age of 12 players
$= 12 \times 25 = 300$
Total age including captain
$= 13 \times 26 = 338$
$\therefore$ Age of the captain
$= 338 - 300 = 38$ years

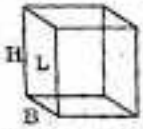
46. (1) Volume of cube = $(\text{Side})^3$
$\therefore$ Ratio of volume = 27 : 1
$\therefore$ Ratio of the edges = 3 : 1

47. (3) Area of rectangle = L × B
$\therefore 5x \times 4x = 500$ sq.m.
or, $2x^2 = 500$ sq.m.
$\therefore x^2 = \frac{500}{20} = 25$
$\therefore x = 5$
$\therefore L = 5 \times 5 = 25$ m
$B = 5 \times 4 = 20$ m
$\therefore$ Perimeter = 2 (L + B)m
$= 2(25 + 20) = 2 \times 45 = 90$ m

48. (4) Circumference of wheel = $2\pi r$
$= 2 \times \frac{22}{7} \times 21$ cm = 132 cm
$\therefore$ No. of revolution
$= \frac{92400}{132} = 700$

49. (3) Surface area of cuboid
$= 2 \times (L \times B + B \times H + H \times L)$
$= 2(3x \times 2x + 2x \times x + x \times 3x)$
$= 2(6x^2 + 2x^2 + 3x^2)$
$= 2(11x)^2$
$88 = 22x^2$
$x = \sqrt{4} = 2$
$\therefore$ L = 6 cm, B = 4 cm, H = 2 cm
$\therefore$ Volume of cuboid = L × b × H
$= 6 \times 4 \times 2$ cm^3
$= 48$ cm^3

50. (3)



Length of the largest rod
$= \sqrt{L^2 + B^2 + H^2}$
$= \sqrt{16^2 + 12^2 + \left(\frac{32}{3}\right)^2}$
$= \sqrt{256 + 144 + \frac{1029}{9}}$
$= \sqrt{400 + \frac{1029}{9}}$
$= \sqrt{\frac{3600 + 1029}{9}}$
$= \sqrt{\frac{4629}{9}} = 22\frac{2}{5}$ metres

51. (4)

L = the radius of the cone
H = height of the cone
Volume of cone $= \frac{1}{3}\pi L^2 H$
Let n be the no. of spherical balls then volume of the balls = volume of the cone
$n \times \frac{2}{3}\pi R^3 = \frac{1}{3}\pi L^2 h$
$n \times 4\pi R^3 = L^2 H$
$\therefore n = \frac{L^2 H}{4r^3}$
$= \frac{(20)^2 \times 10}{4 \times 2^3} = \frac{400 \times 10}{4 \times 8} = 125$

52. (3) A + B – 72 days 1 work
$\therefore$ A + B in 1 day $\frac{1}{72}$ work
Similarly,
B + C in 1 day $\frac{1}{120}$ work
and A + C in 1 day $\frac{1}{90}$ work
$\therefore$ 2 (A + B + C) 1 day
$\frac{1}{72} + \frac{1}{120} + \frac{1}{90}$
A + B + C in 1 day
$\frac{1}{2}\left(\frac{1}{72} + \frac{1}{120} + \frac{1}{90}\right)$
$= \frac{1}{20}\left(\frac{10 + 6 + 8}{720}\right)$
$= \frac{1}{2} \times \frac{24}{720} = \frac{1}{60}$ work
A + B + C $1\frac{1}{60}$ work 1 day
A + B + C = 1 work = 60 days

53. (3) A takes 12 hrs. to fill 1 tank
$\therefore$ A takes 1 hr. to fill $\frac{1}{12}$ tank
B takes 15 hrs. to fill 1 tank
B takes 1 hrs. to fill $\frac{1}{15}$ tank
C takes 20 hrs. to fill 1 tank
C takes 1 hr. to fill $\frac{1}{20}$ tank

$$\underset{1\text{ hr.}}{\frac{\frac{1}{12}+\frac{1}{15}}{}} + \underset{2\text{nd hr.}}{\frac{\frac{1}{20}+\frac{1}{12}}{}} + \underset{3\text{rd hr.}}{\frac{\frac{1}{15}+\frac{1}{12}}{}} +$$

$$\underset{4\text{th hrs.}}{\frac{\frac{1}{20}+\frac{1}{12}}{}} + \underset{5\text{th hrs.}}{\frac{\frac{1}{15}+\frac{1}{12}}{}} + \underset{6\text{th hrs.}}{\frac{\frac{1}{20}+\frac{1}{12}}{}} + \underset{7\text{th hrs.}}{\frac{\frac{1}{15}+\frac{1}{12}}{}}$$

$$= \frac{5+4+3+5+4+3+5+4+5+3+5+4+5}{60}$$

$= \frac{60}{60} = 1 = 7$ hrs.

54. (4) $\because$ A in 12 days can do 1 work
$\therefore$ A in 1 day can do $\frac{1}{12}$ work
A in 2 days can do $\frac{2}{12} = \frac{1}{6}$ work
B in 18 days can do 1 work
$\therefore$ B in 1 day can do $\frac{1}{18}$ work
B in 2 days can do $\frac{1}{9}$ work
$\therefore$ Total work in two days
$= \frac{1}{6} + \frac{1}{9} = \frac{3+2}{18} = \frac{5}{18}$ work
Hence, the remaining work
$= 1 - \frac{5}{18} = \frac{13}{18}$ work
$\because$ B 1 work in 18 days
$\therefore$ B $\frac{13}{18}$ work $\frac{13}{18} \times 18$
= 13 days

55. (2) 45 km. in 1 hour
1 km in $\frac{1}{45}$ hour
$\frac{4}{5}$ km in $\frac{4}{5} \times \frac{1}{45}$ hours
$= \frac{4}{5} \times \frac{1}{45} \times 60 \times 60 = 64$ seconds

56. (3) Required time

$$= \frac{100}{30 \times 1000} \text{ hr.}$$

$$= \frac{100 \times 60 \times 60}{30 \times 1000} = 12 \text{ seconds}$$

57. (4) Let the required speed is x km/hr

$$\therefore 240 \times 5 = \frac{5}{3} \times x$$

$$\therefore x = 720 \text{ km/hr.}$$

58. (1) $? = 1 + \frac{2}{1 + \frac{3 \times 5}{9}} = 1 + \frac{2}{1 + \frac{5}{3}}$

$$= 1 + \frac{2}{\frac{8}{3}} = 1 + \frac{2 \times 3}{8} = \frac{7}{4}$$

59. (1)

$$? = \frac{(3.4567 + 3.4533)(3.4567 - 3.4533)}{0.0034}$$

$$= \frac{6.9100 \times 0.0034}{0.0034} = 6.91$$

60. (3) $? = \frac{(-2)^2 + 6 + 6}{18 - 15}$

$$= \frac{-4 + 12}{3} = \frac{8}{3}$$

61. (4) $(256)^{16/100} \times (256)^{9/100}$

$$= (256)^{25/100} = (256)^{1/4}$$

$$= (4)^{4 \times \frac{1}{4}} = 4$$

62. (3) Using the formula

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

$$? = \frac{0.05 \times 0.05 \times 0.05 - 0.04 \times 0.04 \times 0.04}{0.05 \times 0.05 + 0.02 + 0.04 \times 0.04}$$

$$= \frac{(0.05)^3 - (0.04)^3}{(0.05)^2 + 0.05 \times 0.4 + (0.04)^2}$$

$$= 0.05 - 0.04 = 0.01$$

63. (3) $? = \frac{\frac{7}{9} - \frac{1}{3}}{\frac{8}{9} - \frac{2}{3}}$

$$\frac{\frac{7-3}{9}}{\frac{8-6}{9}} = \frac{\frac{4}{9}}{\frac{2}{9}} = \frac{4}{9} \times \frac{9}{2} = 2$$

64. (4) $\sqrt{x} + \sqrt{441} = 0.02$

$$\frac{\sqrt{x}}{\sqrt{441}} = \frac{2}{100}$$

$$\sqrt{x} = \frac{2 \times 21}{100}$$

$$x = \left(\frac{42}{100}\right)^2$$

$$= \frac{1764}{10000} = 0.1764$$

65. (3)

$$? = 2\sqrt[3]{8 \times 4} - 3\sqrt[3]{4} + \sqrt[3]{125 \times 4}$$

$$? = 2 \times 2\sqrt[3]{4} - 3\sqrt[3]{4} + 5\sqrt[3]{4}$$

$$= 6\sqrt[3]{4}$$

66. (3)

$$? = \frac{0.75 \times 0.75 \times 0.75}{0.25} + (0.75 + 0.5625 + 1)$$

$$= 1.6875 + 2.3125$$

$$= \sqrt{4} = 2$$

67. (3) $? = \sqrt{4 + \sqrt{44 + 100}}$

$$= \sqrt{4 + \sqrt{144}}$$

$$= \sqrt{4 + 12} = \sqrt{164}$$

68. (3) Printed price = Rs. 900

On 40% discount

$$= 900 - \frac{900 \times 40}{100} = 900 - 360$$

C.P. = 540

S.P. = 900

Profit = 900 − 500 = 360

$$\text{Gain \%} = \frac{360 \times 100}{540}$$

$$= \frac{200}{3} = 66\frac{2}{3}\%$$

69. (2) $P = \frac{150 \times 100}{4} \times \frac{2}{1}$

= Rs. 7500

70. (1) Let x is for 8%

then 10000 − x is for 10%

Accordingly,

$$\frac{10000 \times 9.2 \times t}{100} = \frac{x \times 8 \times t}{100}$$

$$= \frac{(10000 - x) \times 10 \times t}{100}$$

$$\frac{92000t}{100} = \frac{18xt}{100} + \frac{(10000 - x)10t}{100}$$

$$92000t = 8xt + (10000 - x)\,10t$$

$$92000t = 8x + 100000 - 10x$$

$$2x = 8000$$

$$x = 4000$$

∴ First part = Rs. 4000

Second part = Rs. 6000

71. (3) Trebling of 1125 km of track

72. (2) Kapala Kundala

73. (4) Flower bud

74. (3) Maharashtra

75. (1) Pacific Islands

76. (1) Angiitude

77. (3) Pascal's Law

78. (3) Jallianwala Bagh tragedy

79. (2) Nagarjuna, Asvagosha, Vasumitra

80. (1) Attorney-General of India

81. (2)

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

82. (1) Godavari

83. (2) Exemption limit for general category of individual taxpayers was not enhanced

84. (1) Leucocytes **85.** (3) Thyroid

86. (4) Amendment of the Constitution

87. (3) Mercury vapour and argon

88. (1) Beethovan LV.

89. (4) Corbett **90.** (4) Rs. 5

91. (1) U.K. under Mrs. Margaret Thatcher

92. (3) Hamburg

93. (2) Five major powers of the Allied Forces in the Second World War

94. (3) Quo Warranto

95. (3) Roorkee Engineering College, (I.I.T. Roorkee)

96. (2) Saheer Bhatta

97. (4) Tamil Nadu **98.** (1) Tibet

99. (2) Directorate of Marketing and Inspection

100. (2) To make 'Made in India' a label of quality.

101. (3) Amir Khusro

102. (1) Public Accounts Committee

103. (4) Doha

104. (1) Wernher Von Braun

105. (3)

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

106. (3) Justine Henin

107. (2) 46

108. (4) Exudate from stem and male inflorescences.

109. (2) Maharashtra

110. (3) CPUs **111.** (4) Gaya

112. (2) Charles Ginsberg

113. (2) Arun Shourie

114. (4) Web site **115.** (4) Heart

116. (3) Decrease in the number of rats

117. (4) None

118. (1) Right to privacy

119. (1) Arctic Circle

120. (2) Bombay (now Mumbai)