# WBCS

## Previous Year Paper

## Mains 2019 Paper 6

1. (i) 'kemp lamp tems' means 'speak the truth';
(ii) 'bis tim nak' means 'always seek knowledge';
(iii) 'tim tems sik' means 'knowledge is truth';
(iv) 'lik bis zap' means 'never seek violence';
Which letter code stands for 'always'?
(A) nak
(B) tim
(C) bis
(D) zap

2. In a certain code language, 'si po re' means 'book is thick', 'ti na re' means 'bag is heavy', 'ka si' means 'interesting book' and 'de ti' means 'that bag'. What should stand for 'that is interesting' in that code language?
(A) ka de re
(B) ti po ka
(C) ka re na
(D) de si re

3. If 'air' is called 'green', 'green' is called 'blue', 'blue' is called 'sky', 'sky' is called 'yellow', 'yellow' is called 'water' and 'water' is called 'pink', then what is the colour of clear sky?
(A) Blue
(B) Sky
(C) Yellow
(D) Pink

4. If in a certain language, CHARCOAL is coded as 45164913 and MORALE is coded as 296137, how is the word ALLOCHRE coded in that language?
(A) 13396875
(B) 16693985
(C) 13394567
(D) 19943785

5. If GOLD is coded as HOME, COME is coded as DONE, and CORD is coded as DOSE, how would you code SONS?
(A) TPOT
(B) TOOT
(C) TOOS
(D) TONT

6. Choose the word different from the rest.
(A) Tibia
(B) Cortex
(C) Cranium
(D) Cerebellum

7. Find the odd one.
(A) CALORIC
(B) DRUID
(C) ELOPE
(D) FRETFUL

**Choose out the odd one. (8 & 9)**

8. (A) Phi
(B) Gamma
(C) Peso
(D) Beta

9. (A) Autocracy
(B) Bureaucracy
(C) Diplomacy
(D) Theocracy

21. Find the next term in the series: BMO, EOQ, HQS, ?

(A) KSU
(B) LMN
(C) SOV
(D) SOW

22. Find out wrong term.

380, 188, 92, 48, 20, 8, 2

(A) 8
(B) 20
(C) 48
(D) 188

23. In the series 2, 6, 18, 54, ..., what will be the 8th term?

(A) 4370
(B) 4374
(C) 7443
(D) 7434

**Find the missing term in each of the following series: (24 & 25)**

24. $11\frac{1}{9}, 12\frac{1}{2}, 14\frac{2}{7}, 16\frac{2}{3}, ?$

(A) $8\frac{1}{3}$
(B) $19\frac{1}{2}$
(C) 20
(D) $22\frac{1}{3}$

25. 1, 6, 15, ?, 45, 66, 91

(A) 25
(B) 26
(C) 27
(D) 28

26. Select the lettered pair that has the same relationship as the original pair of words.

Intelligentsia : Elitist

(A) Commonality : Common class
(B) Gentry : Public
(C) Rabble : Plebeian
(D) Outer Shell : Sea Shell

27. Ecology is related to Environment in the same way as Histology is related to _____.

(A) Fossils
(B) History
(C) Tissues
(D) Hormones

28. Tectoniss : Building :: Taxidermy : ?

(A) Classification
(B) Conserving
(C) Stuffing
(D) Collecting

29. Pulp : Paper :: Hemp : ?

(A) Basket
(B) Yarn
(C) Rope
(D) Cotton

30. Which of the following will not be number of the series?

1, 8, 27, 64, 125, .....

(A) 256
(B) 512
(C) 729
(D) 1000

31. A bag contains 4 White shirts, 4 Black shirts and 6 Pink shirts. Two shirts are drawn randomly. What is the probability that at most one shirt is white?

(A) $\frac{72}{91}$

(B) $\frac{85}{91}$

(C) $\frac{62}{91}$

(D) $\frac{31}{91}$

**Direction (Question Nos. 32-36):** Study the following information and answer the questions given below:

There are seven friends T, U, V, W, X, Y and Z who work in seven different shops — Oswal, Max, Vmart, Reliance Fresh, Walmart, Easyday and Big Bazar, but not necessarily in the same order. Each of them likes a different colour — Black, Blue, Red, White, Orange, Green and Yellow —but not necessarily in the same order.

- V works in Oswal and he likes neither Red not Organge.
- X does not work in Vmart.
- Z works in Big Bazar and likes Green colour.
- W likes White and works in Max.
- The one who works in Easyday likes Blue colour.
- X and Y do not work in Reliance Fresh and neither of them likes Orange colours.
- U works in Walmart and likes Yellow colour.

32. X works in which of the following shops?

(A) Easyday

(B) Vmart

(C) Max

(D) Big Bazar

33. V likes which of the following colours?

(A) Black

(B) Red

(C) Blue

(D) Can't be determined

34. Which of the following combinations is true?

(A) Z-Big Bazar-Green

(B) V-Oswal-Black

(C) Y-Vmart-Red

(D) All are true

35. Who among the following likes Orange colour?

(A) Y

(B) X

(C) V

(D) T

36. Which of the following statements is true?

(A) T works in Reliance Fresh and likes Orange colour.

(B) X works in Vmart and likes Blue colour.

(C) V likes White colour & works in Oswal.

(D) None is true.

37. Amongst the following words, which will appear third in the dictionary?

(A) Immutable

(B) Immigrate

(C) Imperative

(D) Impassioned

38. 4, 10, ?, 82, 244, 730

(A) 26
(B) 28
(C) 40
(D) 48

39. $3\frac{2}{3} + 2\frac{3}{4} + 1\frac{1}{2} = ?$

(A) $8\frac{11}{12}$
(B) $10\frac{12}{13}$
(C) $7\frac{11}{12}$
(D) $9\frac{11}{13}$

40. $\frac{5}{8} \times 2\frac{3}{5} \div \frac{4}{9} = ?$

(A) $2\frac{13}{27}$
(B) $1\frac{11}{27}$
(C) $2\frac{23}{32}$
(D) $3\frac{21}{32}$

41. The position of the first and the fifth digits of the number 81943275 are interchanged. Similarly the position of the second and the sixth digits are interchanged and so on till the forth and the eight digits. Which of the following will be the third digit from the right end after the rearrangement?

(A) 1
(B) 9
(C) 2
(D) 4

42. In a certain code 'BASKET' is written as '5 $ 3 % # 1' and 'TRIED' is written as '14 * # 2'. How is 'SKIRT' written in that code?

(A) 3 % * 41
(B) 3 * % 41
(C) 3 % # 41
(D) 3 # 4 % 1

43. The area of a triangle is equal to the area of a square whose side measures 75 meters. Find the side of the triangle whose corresponding altitude is 125 meters.

(A) 70 m
(B) 75 m
(C) 90 m
(D) 65 m

**Direction (Question Nos. 44-45):** Study the following information and answer the question:

There are five trees A, B, C, D and E. E is to the north-east of B, A is 15 m to the east of B, which is 40 m to the west of D. C is to the north-west of A and on the line of BE. A is 30 m to the south of E.

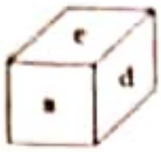
44. What is the distance between tree A and tree D?

(A) 16 m
(B) 25 m
(C) 35 m
(D) 30 m

45. In which direction is E with respect to D?

(A) North
(B) East
(C) North-West
(D) South-West

46. In a dice a, b, c and d are written on the adjacent faces, in a clockwise order and e and f at the top and bottom. When c is at the top, what will be at the bottom?




(A) a
(B) b
(C) c
(D) Data insufficient

47. Which of the following collections of letters will look the same in the mirror?

(A) OSMIHOM
(B) VHRTRVH
(C) HIMOSTA
(D) AOVIVOA

48. Count the number of triangles:

(A) 16
(B) 12
(C) 8
(D) 4

**Which is Implicit (Question Nos. 49-50):**

49. Statement : Smoking is injurious to health. — A warning printed on the cigarette packets.

Assumptions: (I) People read printed matter on a cigarette packet.
(II) People take careful note of a warning.
(III) Non-Smoking promotes health.
(IV) None of the above.

(A) None is Implicit.
(B) Only I and II are Implicit.
(C) All are Implicit.
(D) Only II and III are Implicit.

50. Statement : The Reserve Bank of India has directed the banks to refuse fresh loans to major defaulters.

Assumptions: (I) The banks may still give loans to the defaulters.
(II) The defaulters may repay the earlier loans to get fresh loans.
(III) The banks may recover the bad loans through such harsh measures.

(A) None is Implicit.
(B) Only I and II are Implicit.
(C) All are Implicit.
(D) Only II and III are Implicit.

51. Choose out the odd one.

(A) Pupil
(B) Iris
(C) Cornea
(D) Medulla

52. In a certain code, BREAKTHROUGH is written as EAOUHRBRGHKT. How is DISTRIBUTION written in that code?

(A) TISTBUONDIRI
(B) STTIBUONRIDI
(C) STTIBUDIONRI
(D) RISTTIBUDION

53. If 'ski rps tri' stands for 'nice Sunday morning', 'tel sti rps' stands for 'every Tuesday morning' and 'ski ptr qlm' stands for 'nice market place'; which word stands for 'Sunday'?

(A) ski
(B) rps
(C) tri
(D) qlm

54. A woman going with a boy is asked by another woman about the relationship between them. The woman replied, "My maternal uncle and the uncle of his maternal uncle is the same." How is the lady related with that boy?

(A) Grandmother and Grandson
(B) Mother and Son
(C) Aunt and Nephew
(D) None of the above

**Direction (Question Nos. 55-59):** Read the following information carefully and answer the questions given below it.

There are five men A, B, C, D and E and six women P, Q, R, S, T and U. A, B and R are advocates, C, D, P, Q and S are doctors and the rest are teachers. Some teams are to be selected from amongst these eleven persons subject to the following conditions:

A, P and U have to be together.
B can not go with D or R.
E and Q have to be together.
C and T have to be together.
D and P can not go together.
C can not go with Q.

55. If the team is to consist of two advocates, two doctors, two teachers and not more than three ladies, the members of the team are

(A) A, B, C, P, T, U
(B) A, C, P, R, T, U
(C) A, E, P, Q, R, T
(D) B, C, E, Q, R, T

56. If the team is to consist of one advocate, three doctors and one male teacher, the members of the team are:

(A) A, D, P, S, U
(B) C, D, R, S, T
(C) D, E, Q, R, S
(D) D, E, Q, R, T

57. If the team is to consist of one male advocate, one male doctor, one lady doctor and two teachers, the members of the team are

(A) A, C, P, T, U
(B) A, D, E, P, T
(C) A, D, E, P, U
(D) B, C, E, Q, U

58. If the team is to consist of one advocate, two doctors, three teachers and C may not go with T, the members of the team are

(A) A, E, P, Q, S, U
(B) A, E, P, Q, T, U
(C) B, E, Q, S, T, U
(D) E, Q, R, S, T, U

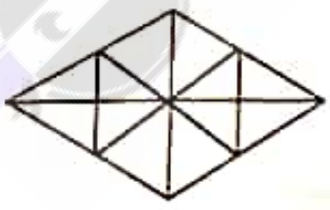
59. If the team is to consist of two male advocates, two lady doctors and one teacher, the members of the team are

(A) A, B, P, Q, U
(B) A, B, P, U, S
(C) A, P, R, S, U
(D) B, E, Q, R, S

60. Choose group of letters different from others.

(A) DXCLQZ
(B) PFZUBM
(C) XGKNTY
(D) GJMQVX

61. Find the number of triangles



(A) 16
(B) 22
(C) 28
(D) 32

62. $\frac{4}{9}, \frac{9}{20}, ?, \frac{39}{86}$

(A) $\frac{17}{40}$
(B) $\frac{19}{42}$
(C) $\frac{20}{45}$
(D) $\frac{29}{53}$

63. Find the term which does not fit into the series given below:

G4T, J10R, M20P, P43N, S90L

(A) G4T
(B) J10R
(C) M20P
(D) P43N

64. Botany : Plants :: Entomology : ?

(A) Snakes
(B) Insects
(C) Birds
(D) Germs

65. Select the lettered pair that has the same relationship as the original pair of words:

Ogle : Observe

(A) Flaunt : Display
(B) Discern : Perceive
(C) Clamour : Despite
(D) Haggle : Outbid

66. Choose out the odd one.

(A) Radium

(B) Thorium

(C) Sodium

(D) Polonium

67. In a certain language, MIRACLE is coded as NKUEHRL, then how is GAMBLE coded in that language?

(A) JDOCMF

(B) CLEMNK

(C) HCPFQK

(D) AELGMN

68. In a certain code language, STRING is written as ₹ = • – 5 + and PRAISE as ? • @ – ₹ ×. How will the word GRAPES be written in that code language?

(A) + • @ × ? %

(B) + @ • ? × %

(C) + • @ ? × %

(D) None of the above

69. Pointing out to a Lady, Rajan said, "She is the daughter of the woman who is the mother of the husband of my mother." Who is the lady to Rajan?

(A) Aunt

(B) Granddaughter

(C) Daughter

(D) Sister-in-law

Read the information to answer the questions (Question Nos. 70-71):

Nine cricket fans are watching a match in a stadium. Seated in one row, they are J, K, L, M, N, O, P, Q and R. L is at the right of M and at third place at the right of N. K is at one end of the row. Q is seated adjacent to both O and P. O is at the third place at the left of K. J is right next to left of Q.

70. Who is at the other end of the row?

(A) J

(B) N

(C) P

(D) R

71. Who is sitting at the centre of the row?

(A) L

(B) J

(C) O

(D) Q

72. A rat runs 20' towards East and turns to right, runs 10' and turns to right, runs 9' and again turns to left, runs 5' and then turns to left, runs 12' and finally turns to left and runs 6'. Now which direction is the rat facing?

(A) East

(B) West

(C) North

(D) South

73. If + means ×, × means –, + means + and – means +, then which of the following gives the result of

175 – 25 + 5 + 20 × 3 + 10 ?

(A) 77

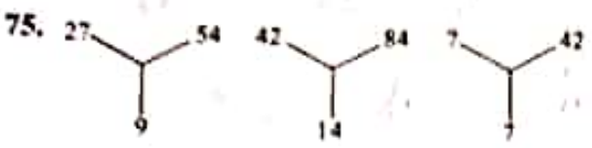
(B) 160

(C) 240

(D) 2370

74. In a group of cows and hens, the number of legs are 14 more than twice the number of heads. The number of cows is

(A) 5
(B) 7
(C) 10
(D) 12

75. 


(A) 12
(B) 21
(C) 24
(D) 35

**Give answers (Question Nos. 76-77):**

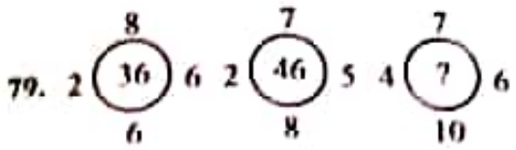
(A) Only conclusion I follows
(B) Only conclusion I and II follows
(C) Either conclusion I or II follows
(D) Both conclusions I and II follows

76. Statements : All men are married. Some men are educated.
Conclusions: I Some married are educated.
II Some educated are married.

77. Statements : Some papers are pens. Angle is a paper.
Conclusion : I Angle is not a pen.
II Angle is a pen.

78. If on a tough day you are the only person available to handle the customers, you should

(A) ask for additional help from the boss.
(B) take leave and go back home.
(C) just do your part of the work.
(D) try and work to the maximum of your ability to satisfy customers.

79. 


(A) 42
(B) 46
(C) 48
(D) 50

80. A waiter's income consists of his salary and tips. During one week his tips were $\frac{5}{4}$ of his salary. What fraction of his income came from tips?

(A) $\frac{4}{9}$
(B) $\frac{5}{4}$
(C) $\frac{5}{8}$
(D) $\frac{5}{9}$

81. Arrange the following in a logical order:
1. Shoulder 2. Wrist 3. Elbow 4. Plam 5. Finger

(A) 2, 4, 5, 3, 1
(B) 3, 1, 4, 2, 5
(C) 3, 4, 5, 2, 1
(D) 5, 4, 2, 3, 1

82. If P denotes +, Q denotes –, R denotes × and S denotes ÷, which of the following statements is correct?

(A) 36 R 4 S 8 Q 7 P 4 = 10
(B) 16 R 12 P 49 S 7 Q 9 = 200
(C) 32 S 8 R 9 = 160 Q 12 R 12
(D) 8 R 8 P 8 S 8 Q 8 = 57

83. Nitin ranks eighteenth in a class of 49 students. What is his rank from the last?

(A) 18

(B) 19

(C) 31

(D) 32

In each of these questions, jumbled letters of a meaningful word are given. You are to rearrange these letters and select from the given alternatives the world which is almost opposite in meaning to the rearranged word (Question Nos. 84-86):

84. YPCUIAT

(A) Surplus

(B) Scarcity

(C) Presence

(D) Richness

85. SAYMTNE

(A) Hostility

(B) Acquittal

(C) Immunity

(D) Punishment

86. MRPBLOE

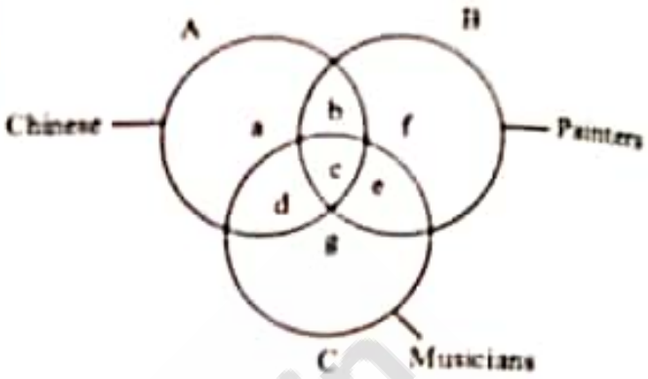
(A) Reply

(B) Solution

(C) Answer

(D) Resolution

Directions (Question Nos. 87-90):
Choose the letter of the region which correctly represents the statement.




87. Chinese who are Painters but not Musicians—

(A) b

(B) c

(C) d

(D) g

88. Painters who are neither Chinese nor Musicians—

(A) b

(B) c

(C) f

(D) g

89. Chinese who are Musicians but not Painters—

(A) d

(B) c

(C) b

(D) a

90. Chinese who are Painters as well as Musicians—

(A) a
(B) b
(C) c
(D) d

91. Which of the following words will come second in the English dictionary?

(A) Magical
(B) Magnify
(C) Magnetic
(D) Maternal

92. Kailash walks 3 km to East and turns South and walks 4 km. Again turns West and walks 6 km. How far is he from the starting point?

(A) 7 km
(B) 5 km
(C) 6 km
(D) 3 km

93. I am facing south. I turn right and walk 20 m. Then I turn right again and walk 10 m. Then I turn left and walk 10 m and then turning right walk 20 m. Then I turn right again and walk 60 m. In which direction am I from the starting point?

(A) North
(B) North-West
(C) East
(D) North-East

94. Alka is older than Mala, Gopal is older than Mala but younger than Alka. Kapil is younger than Ram and Mala. Mala is older than Ram.

Whose age is between Gopal and Ram?

(A) Mala
(B) Kapil
(C) Alka
(D) None of the above

95. A, P, R, X, S and Z are sitting in a row. S and Z are in the centre, and A and P are at the ends. R is sitting on the left of A. Then who is sitting on the right of P?

(A) A
(B) S
(C) X
(D) Z

96. Six students A, B, C, D, E and F are sitting in the field. A and B are from Delhi while the rest are from Bangalore. D and F are tall while others are short. A, C and D are girls while others are boys. Who is the tall girl from Bangalore?

(A) C
(B) D
(C) E
(D) F

97. Ravi and Kunal are good in Hockey and Volleyball. Sachin and Ravi are good in Hockey and Baseball. Gaurav and Kunal are good in Cricket and Volleyball.

Sachin, Gaurav and Michael are good in football and Baseball. Who is good in Hockey, Cricket and Volleyball?

(A) Sachin
(B) Kunal
(C) Ravi
(D) Gaurav

98. A is the brother of B, B is the daughter of C and D is the father of A, then how is C related to D?

(A) Husband
(B) Wife
(C) Granddaughter
(D) Grandfather

99. Given that

(i) A is the mother of B
(ii) C is the son of A
(iii) D is the brother of E
(iv) E is the daughter of B

The grandmother of D is

(A) A
(B) B
(C) C
(D) E

100. Introducing Reena, Monika said, "She is the only daughter of my father's only daughter". How is Monika related of Reena?

(A) Aunt
(B) Niece
(C) Cousin
(D) None of the above

101. A weaver cooperative society takes a loan of ₹ 15,000 for buying a power loom. After 5 years, the society has to repay ₹ 22,125 for recovering the loan. Find the rate of simple interest per annum.

(A) $9\frac{1}{2}$ % p.a.
(B) $8\frac{1}{2}$ % p.a.
(C) $5\frac{1}{3}$ % p.a.
(D) $6\frac{1}{2}$ % p.a.

102. At the same rate of simple interest per annum, if a principal becomes the amount of ₹ 7100 in 7 years and of ₹ 6200 in 4 years, let us determine the principal amount.

(A) ₹ 4000
(B) ₹ 7000
(C) ₹ 6000
(D) ₹ 5000

103. Let us calculate the number of years for which the interest of ₹ 600 at the rate of simple interest of 8% per annum will be ₹ 168.

(A) $5\frac{1}{2}$
(B) $4\frac{1}{2}$
(C) $3\frac{1}{2}$
(D) $2\frac{1}{2}$

104. Sita deposited some money in a bank at the rate of simple interest of 5·25% per annum. After 2 years, she has got ₹ 840 as interest. Let us write by calculating, the money she has deposited into the bank.

(A) ₹ 8000
(B) ₹ 10,000
(C) ₹ 12,000
(D) ₹ 9000

105. Ten copies of the book can be bought for a certain sum of money payable at the end of 2 years. 12 copies of the same book can be bought for the same sum in ready cash. What is the rate of interest per annum?

(A) 12%
(B) 15%
(C) 10%
(D) 8%

106. A certain sum amounts to ₹ 17,200 at 12% simple interest per annum in a period in which ₹ 22,080 amounts to ₹ 37,536 at 14% simple interest per annum. Find the sum.

(A) ₹ 11,250
(B) ₹ 12,750
(C) ₹ 12,250
(D) ₹ 10,750

**107.** A sum amounts to ₹ 1180 in 3 years and to ₹ 1300 in 5 years. Find the rate of interest.

(A) 5%
(B) 6%
(C) 4%
(D) 8%

**108.** A sum of amounts will be doubled in $7\frac{1}{2}$ years. What is the rate per cent?

(A) $15\frac{2}{3}$
(B) $16\frac{3}{2}$
(C) $16\frac{2}{3}$
(D) $15\frac{3}{2}$

**109.** A sum of money double itself in 8 years at some rate of interest. In how many years would it treble itself?

(A) 16 years
(B) 12 years
(C) 15 years
(D) 14 years

**110.** There is 25% profit if an article is sold at ₹ 150. At what per cent should the selling price be increased so that there will be 30% profit?

(A) 2·5
(B) 4
(C) 5
(D) 10

**111.** Paban incurred 10% loss by selling lemon at ₹ 18 per dozen. At what price should he sell each dozen of lemon to make a profit of 10%?

(A) ₹ 20
(B) ₹ 22
(C) ₹ 24
(D) ₹ 30

**112.** A shoemaker sold two pairs of shoes at the same price. In the first pair he makes a profit of 20% and in the other pair he makes a loss of 20%. What is his percentage of profit or loss in the whole business?

(A) 3% loss
(B) 8% profit
(C) 5% profit
(D) 4% loss

**113.** A milkman mixed water with 60 litres of pure milk and sold the mixture at the cost price thereby made a profit of 25%. Find the quantity of water in the mixture.

(A) 12 litres
(B) 15 litres
(C) 10 litres
(D) 14 litres

**114.** In what ratio should the Assam tea at ₹ 40 per kg and Darjeeling tea at ₹ 65 per kg be mixed and sold at ₹ 60 per kg to make an overall profit of 25%?

(A) 1 : 2
(B) 2 : 1
(C) 3 : 2
(D) 2 : 3

**115.** A businessman sold an article at a loss of 15%. Had he sold the article at ₹ 100 more he would have gained 10%. At what price did he sell the article?

(A) ₹ 350
(B) ₹ 340
(C) ₹ 360
(D) ₹ 330

**116.** A hawker purchases some mangoes at the rate of 9 mangoes for ₹ 5 and sells them at ₹ 8 per dozen. What will be his profit or loss percentage?

(A) 20% loss
(B) 25% profit
(C) 25% loss
(D) 20% profit

117. A businessman purchased 35 kg of pulse at ₹ 525 and sold each kg at the rate ₹ 18. What is his per cent of profit or loss at this?

(A) 20% loss
(B) 20% profit
(C) 25% profit
(D) 25% loss

118. Selling a radio at ₹ 363·75 there was a loss of 3% of a radio seller. At what price should he sell the radio to make a profit of 10%?

(A) ₹ 400·50
(B) ₹ 410·50
(C) ₹ 412·50
(D) ₹ 420·50

119. A fruit seller purchased banana at ₹ 30 per dozen and sold each pair at ₹ 7. What is the percentage profit or loss at this?

(A) 20% profit
(B) 20% loss
(C) 40% profit
(D) 40% loss

120. A retailer getting a discount of 20% on the marked price sells an article at the marked price. Percentage of profit of the retailer is

(A) 10
(B) 20
(C) 25
(D) 30

121. There is a loss of 11% if an article is sold at ₹ 178. At what price should it be sold to make a profit of 11%?

(A) ₹ 200
(B) ₹ 220
(C) ₹ 222
(D) ₹ 226

122. A businessman blends Assam tea costing ₹ 70 per kg with Darjeeling tea costing ₹ 110 per kg in the ratio 3 : 1. What should be the selling price per kg of the new mixture to have a profit of 12½% for him?

(A) ₹ 100 per kg
(B) ₹ 90 per kg
(C) ₹ 110 per kg
(D) ₹ 80 per kg

123. A trader sold a bicycle at a profit of 10%. Had he bought the bicycle at 10% less price and sold it at a price ₹ 12 more, he would have gained 25%. What is the cost price of the bicycle?

(A) ₹ 500
(B) ₹ 480
(C) ₹ 460
(D) ₹ 450

124. A book seller allowing 12% discount on the marked price of a book made a profit of 10%. What will be his percentage of profit if he sells the book at the marked price?

(A) 25%
(B) 30%
(C) 20%
(D) 22%

125. The ratio of the manufacturing cost of two sharies is 2 : 5. If the first shari is sold at 15% profit and the second shari is sold at 18% profit then the manufacturer makes a total profit of ₹ 396. Find the cost of manufacture of each shari.

(A) ₹ 500
(B) ₹ 590
(C) ₹ 690
(D) ₹ 660

126. The ratio of bus and train fares from Burdwan to a certain place is 3 : 4. If the train fare increases by 20% and bus fare by 10% then what will be the new ratio of bus and train fares?

(A) 12 : 13
(B) 11 : 16
(C) 12 : 15
(D) 16 : 15

127. When the price of rice increases 12½%, a man can get 250 gm less rice for ₹ 18. Find the present cost of rice per kg.

(A) ₹ 8
(B) ₹ 7
(C) ₹ 9
(D) ₹ 7·50

128. Of four numbers, the second number is 20% more than the first, the third is 10% less than the second and the fourth number is 50% more than the third. If the fourth number is 405, find all the numbers.

(A) 300, 405, 250, 270
(B) 300, 270, 405, 250
(C) 275, 290, 310, 380
(D) 250, 300, 270, 405

129. The expenses for rice, fish and oil of a family are as 12 : 17 : 3. The prices of these articles are increased by 20%, 30% and 50% respectively. By what per cent the expenses for these articles of the family will be increased?

(A) $27\frac{1}{8}\%$
(B) $27\frac{1}{7}\%$
(C) $28\frac{1}{8}\%$
(D) $29\frac{1}{8}\%$

130. In a certain examination, a candidate answered 25 questions and two-fifth of the rest of the total number of questions and he found that thus he has answered only 60% of the total number of questions. How many questions did he answer?

(A) 45
(B) 40
(C) 55
(D) 65

131. A man saves 20% of his income. If his expenses be increased by 35%, by what per cent his income is to be raised so that he can save 10% of his income?

(A) 20%
(B) 30%
(C) 25%
(D) 22%

132. A mixture of milk and water contains 12½% of water. How much water should be added to 200 gallons of such mixture so that the new mixture may contain 37½% of water?

(A) 70 gallons
(B) 100 gallons
(C) 60 gallons
(D) 80 gallons

133. One litre of spirit which contains 10% of water is added to 3 litres of spirit containing 7% of water and to this mixture half a litre is added. Find the percentage of water in the final mixture.

(A) 15%
(B) 18%
(C) 20%
(D) 22%

**134.** A certain kind of brass is composed of copper, zinc, lead and tin; the ratio of copper to zinc is 1 : 2 of zinc to lead is 3 : 5 and of lead to tin is 7 : 8. Find the quantity of each metal in 213 gm brass.

(A) 21 gm, 42 gm, 70 gm, 80 gm
(B) 20 gm, 40 gm, 70 gm, 80 gm
(C) 20 gm, 40 gm, 70 gm, 90 gm
(D) 22 gm, 40 gm, 60 gm, 80 gm

**135.** If 25 men can weave 120 metres of cloth in a day, how many metres of cloth will be woven by 35 men in a day?

(A) 170 metres
(B) 168 metres
(C) 190 metres
(D) 180 metres

**136.** 12 men can do a piece of work in 30 days. How many extra men should be engaged to do the work in 20 days?

(A) 8 men
(B) 6 men
(C) 10 men
(D) 15 men

**137.** A man and a boy can do a piece of work in 36 days. If the man works alone for the last 10 days, it is completed in 40 days. How long would the boy take to do it alone?

(A) 85 days
(B) 100 days
(C) 80 days
(D) 90 days

**138.** *A* and *B* together can do a piece of work in 25 days. If *B* works alone for the last 10 days, it is completed in 30 days. In how many days *A* alone can do it?

(A) 50 days
(B) 60 days
(C) 40 days
(D) 55 days

**139.** 1200 boys and 600 girls are examined in a test. 42% of the boys and 30% of the girls passed. Find the percentage of those who failed.

(A) 62%
(B) 70%
(C) 53%
(D) 80%

**140.** If 50 men do a piece of work in 12 days working 8 hours a day. How many hours a day would 60 men have to work in order to do another piece of work twice as great in 16 days?

(A) 10 hours a day
(B) 12 hours a day
(C) 8 hours a day
(D) 6 hours a day

**141.** A contractor undertook to finish a road 12 km long in 350 days. But after employing 45 men for 200 days he found that only 4 km of the road had been built. How many additional men must be engaged to finish the work in the given time?

(A) 70 men
(B) 80 men
(C) 75 men
(D) 85 men

142. A laboratory has to pay ₹ 67·50 for 30 days as gas-bill if it uses 35 gas burners for 6 hours a day. Find the amount to be paid if it uses 30 gas burners for 18 days working 7 hours a day

(A) ₹ 40·50
(B) ₹ 42·50
(C) ₹ 44·50
(D) ₹ 50·50

143. The cost of printing a magazine of 540 pages with 30 lines on each page and 15 words in each line is ₹ 7200. Find the cost of printing a magazine of 450 pages with 35 lines on each page and 18 words in each line.

(A) ₹ 9000
(B) ₹ 9400
(C) ₹ 8200
(D) ₹ 8400

144. If $a$, $b$, $c$ and $x$ be the 1st, 2nd, 3rd and the 4th proportions respectively, then the value of $x$ will be one of the following:

(A) $\frac{ab}{c}$
(B) $\frac{ac}{b}$
(C) $\frac{bc}{a}$
(D) $\frac{a}{bc}$

145. The number $\sqrt{7}$

(A) lies between 1 and 2.
(B) lies between 2 and 3.
(C) lies between 3 and 4.
(D) lies between 6 and 7.

146. $\sqrt{300} - \sqrt{45} + \sqrt{125} - \sqrt{108} - \sqrt{20} - \sqrt{48} = ?$

(A) 5
(B) 0
(C) 7
(D) 3

147. If the ratio of cost price and selling price is 25 : 26, then what is the percentage of profit?

(A) 4%
(B) 6%
(C) 8%
(D) 5%

148. There is some loss if an article is sold at ₹ 120. There is same amount of profit if the article is sold of ₹ 140. What is the cost price of the article?

(A) ₹ 120
(B) ₹ 150
(C) ₹ 130
(D) ₹ 160

149. A man sold a stove for ₹ 423 and incurred a loss of 6%. At what price should it be sold so as to earn a profit of 8%?

(A) ₹ 480
(B) ₹ 490
(C) ₹ 460
(D) ₹ 486

150. A man sold an article at a gain of 5%. Had he sold it for ₹ 240 more, he would have gained 8%. Find the cost price of the article.

(A) ₹ 7000
(B) ₹ 9000
(C) ₹ 8000
(D) ₹ 10,000

151. If 36 bighas of land may be irrigated in 16 days by a well-pump working 15 hours a day. How many days will it take to irrigate 42 bighas of land by the pump working 10 hours a day?

(A) 30
(B) 28
(C) 25
(D) 32

152. $M$ and $N$ can finish a work in 15 and 20 days respectively. If they do the work together, find the ratio of their income.

(A) 3 : 4
(B) 2 : 3
(C) 4 : 3
(D) 3 : 2

153. In a joint business the capitals of $P$, $Q$ and $R$ are in the ratio $\frac{1}{4}:\frac{1}{3}:\frac{1}{2}$. At the end of the year they make a profit of ₹ 3900. Find how much of the profit $C$ will get.

(A) ₹ 2000
(B) ₹ 1500
(C) ₹ 1200
(D) ₹ 1800

154. In a joint business the capitals of $A$ and $B$ are in the ratio 3 : 4 and the capitals of $B$ and $C$ are in the ratio 6 : 5. If $A$ gets a profit of ₹ 450, find the profit of $C$.

(A) ₹ 400
(B) ₹ 500
(C) ₹ 600
(D) ₹ 450

155. In a joint business $X$ invests ₹ 6000 for 9 months and $Y$ invests ₹ 8000 in some months. They get ₹ 1800 and ₹ 1600 as profit. In the business, the investment of $Y$ was for

(A) 4 months
(B) 5 months
(C) 6 months
(D) 8 months

156. In a partnership business the total profit of $A$ and $B$ is ₹ 2000. If the capital of $A$ is ₹ 6000 and profit is ₹ 1200, then the capital of $B$ is

(A) ₹ 4000
(B) ₹ 5000
(C) ₹ 4500
(D) ₹ 3000

157. Mr. $X$ invests ₹ 600 for 5 months and $Y$ invests ₹ 500 for 9 months in a business. The part of the profit will be distributed among them in the ratio

(A) 3 : 2
(B) 4 : 3
(C) 6 : 5
(D) 2 : 3

158. $X$, $Y$ and $Z$ start a business with ₹ 7200. After 1 year $X$, $Y$ and $Z$ get ₹ 60, ₹ 90 and ₹ 120 as profit. $Z$ invests an amount

(A) ₹ 1800
(B) ₹ 2400
(C) ₹ 2700
(D) ₹ 3200

**159.** $X$ and $Y$ jointly start a business with ₹ 1200 and ₹ 800. At the end of the year $Y$ gets ₹ 120 as profit. As a part of profit $X$ will get

(A) ₹ 200
(B) ₹ 180
(C) ₹ 175
(D) ₹ 150

**160.** At the starting of the year $X$ and $Y$ jointly start a business with ₹ 24,000 and ₹ 30,000. After 5 months $A$ invests ₹ 12,000 more in the business. At the end of the year if the profit in the business is ₹ 14,030, find the part of the profit of each of them.

(A) ₹ 8130, ₹ 5900
(B) ₹ 9130, ₹ 4900
(C) ₹ 7130, ₹ 6900
(D) ₹ 6130, ₹ 7900

**161.** Three friends $P$, $Q$ and $R$ started a business with the capitals ₹ 15,000, ₹ 10,000 and ₹ 25,000. But at the end of the year, they suffer a loss of ₹ 25,000. How much each will have to pay for the loss?

(A) ₹ 500, ₹ 750 and ₹ 1000
(B) ₹ 750, ₹ 500 and ₹ 1250
(C) ₹ 500, ₹ 750 and ₹ 1150
(D) ₹ 1000, ₹ 500 and ₹ 700

**162.** Two friends start a business with the capitals ₹ 16,000 and ₹ 24,000. They make a profit of ₹ 3375 in a year. How much each friend will get as a part of the profit?

(A) ₹ 1350, ₹ 2025
(B) ₹ 1525, ₹ 2225
(C) ₹ 1025, ₹ 1850
(D) ₹ 1250, ₹ 2225

**163.** $A$ invested ₹ 6000 for 5 months and $B$ ₹ 5000 for $x$ months in a business. If the profit of $A$ and $B$ be equal, find the value of $x$.

(A) 10 months
(B) 8 months
(C) 6 months
(D) 7 months

**164.** If the rate of increase in population is $r\%$ per year, the population after $n$ years is $p$; let us find the population that was $n$ years before.

(A) $p\left(1+\frac{r}{100}\right)^{n}$

(B) $p\left(1+\frac{r}{100}\right)^{2n}$

(C) $p\left(1+\frac{r}{100}\right)^{-n}$

(D) $p\left(1+\frac{r}{100}\right)^{-2n}$

**165.** Determine the principal amount that at the rate of 5% compound interest per annum become ₹ 615 after two years.

(A) ₹ 6000
(B) ₹ 8000
(C) ₹ 5000
(D) ₹ 9000

**166.** If a sum of money doubles itself at the fix rate of compound interest per annum in $n$ yea find in how many years it will become four tim

(A) $3n$
(B) $n^2$
(C) $2n$
(D) $3n^2$

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167. Find the rate of compound interest per annum, so that the amount on ₹ 400 for 2 years becomes ₹ 441.

(A) 6
(B) 7
(C) 5
(D) 9

168. A person deposited ₹ 100 in a bank and got the amount ₹ 121 for two years, the rate of compound interest per annum is

(A) 10%
(B) 20%
(C) 5%
(D) $10\frac{1}{2}\%$

169. Present price of a machine is ₹ $2p$ and if price of the machine decreases by $2r\%$ in each year, the price of machine after $2n$ years will be

(A) ₹ $p\left(1-\frac{r}{100}\right)^n$
(B) ₹ $2p\left(1-\frac{r}{50}\right)^n$
(C) ₹ $p\left(1-\frac{r}{50}\right)^{2n}$
(D) ₹ $2p\left(1-\frac{r}{50}\right)^{2n}$

170. 10 men can do a piece of work in 18 days. In how many days 12 men can do it?

(A) 12 days
(B) 15 days
(C) 10 days
(D) 16 days

171. The ratio of the principal and the amount (principal along with interest) in 1 year is 8 : 9, the rate of simple interest per annum is

(A) $11\frac{1}{2}\%$
(B) $12\frac{1}{2}\%$
(C) $10\frac{1}{2}\%$
(D) $13\frac{1}{2}\%$

172. Write the number of years in which the amount becomes twice of the principal having the rate of simple interest $6\frac{1}{4}\%$ per annum.

(A) 15
(B) 12
(C) 18
(D) 16

173. Calculate the principal whose monthly interest is ₹ 1 having the rate of simple interest of 5% per annum.

(A) ₹ 300
(B) ₹ 120
(C) ₹ 240
(D) ₹ 480

174. If a principal becomes twice of its amount in 10 years, the rate of simple interest per annum is

(A) 5%
(B) 10%
(C) 15%
(D) 20%

183. *A* and *B* are partners sharing profits in the ratio of 5 : 4. They admit *C* for $\frac{1}{9}$ th share, which he acquires from *A*. Find out the new profit sharing ratio.

(A) 3 : 3 : 1
(B) 2 : 2 : 1
(C) 4 : 4 : 1
(D) 5 : 5 : 2

184. *X* and *Y* are partners in a firm sharing profits in the ratio of 3 : 2. They admit *R* as a new partner from 1st April, 2019. *X* gives $\frac{1}{3}$ rd of his share while *Y* gives $\frac{1}{10}$ th from his share. Calculate the sacrificing ratio.

(A) 3 : 2
(B) 2 : 1
(C) 2 : 3
(D) 1 : 2

185. *P* and *Q* are partners sharing profits in the ratio of 3 : 2. *P* surrenders $\frac{1}{6}$ th of his share and *Q* surrenders $\frac{1}{4}$ th of his share in favour of *R*, a new partner. What is the sacrificing ratio?

(A) 3 : 2
(B) 2 : 3
(C) 1 : 1
(D) 3 : 1

186. *S* and *T* are partners sharing profits in the ratio of 3 : 2. *W* admitted as a partner. The new profit sharing ratio of *S*, *T* and *W* is 4 : 3 : 2. Find out the sacrificing ratio.

(A) 3 : 5
(B) 7 : 3
(C) 5 : 3
(D) 3 : 7

187. *P* and *Q* were partners sharing profits in the ratio of 3 : 2. They admit *R* and *S* as new partners. *P* surrenders $\frac{1}{3}$ rd of his share in favour of *R* and *Q* surrenders $\frac{1}{4}$ th of his share in favour of *S*. Calculate the new profit sharing ratio of *P*, *Q*, *R* and *S*.

(A) 4 : 3 : 2 : 1
(B) 5 : 4 : 3 : 2
(C) 4 : 4 : 3 : 2
(D) 4 : 4 : 3 : 1

188. *A* and *B* are partners sharing profits in the ratio of 7 : 5. They agree to admit *C*, their manager into partnership, who is to get $\frac{1}{6}$ th share in profits. He acquires his share $\frac{1}{24}$ th from *A* and $\frac{1}{8}$ th from *B*. Calculate the new profit sharing ratio.

(A) 13 : 11 : 9
(B) 13 : 7 : 4
(C) 13 : 11 : 7
(D) 13 : 11 : 5

189. *A*, *B* and *C* are partners in a firm sharing profits in the ratio of 4 : 3 : 2. They admit *D* as a new partner. *A*, *B* and *C* each surrendered $\frac{1}{3}$ rd of their shares in favour of *D*. Calculate the new profit sharing ratio of *A*, *B*, *C* and *D*.

(A) 8 : 6 : 4 : 9
(B) 8 : 6 : 5 : 4
(C) 8 : 7 : 6 : 9
(D) 8 : 6 : 7 : 9

**190.** $A$ and $B$ are in partnership sharing profits and losses in the ratio of 3 : 2. They admit $C$ as a new partner. Calculate the new profit sharing ratio if $C$ purchases $\frac{1}{10}$ th share from $A$.

(A) 5 : 4 : 3
(B) 4 : 3 : 2
(C) 3 : 2 : 1
(D) 5 : 4 : 1

**191.** $A$ and $B$ are partners in a firm sharing profits and losses in the ratio of 5 : 3. They admit $C$ as a partner for $\frac{1}{4}$ th share in the profits of the firm. Calculate the new profit sharing ratio of $A$, $B$ and $C$ if $C$ acquires his share $\frac{1}{5}$ th from $A$ and $\frac{1}{20}$ th from B.

(A) 17 : 15 : 13
(B) 17 : 13 : 10
(C) 17 : 13 : 11
(D) 17 : 15 : 10

**192.** $3\sqrt{3}-4\left(\sqrt{7}+\sqrt{3}\right)+\sqrt{112}+\sqrt{3}=?$

(A) 5
(B) 3
(C) 7
(D) 0

**193.** What least number must be added to 8275 to make the sum a perfect square?

(A) 4
(B) 8
(C) 5
(D) 6

**194.** What least number must substructed from 732 to make the remainder a perfect square?

(A) 3
(B) 4
(C) 5
(D) 6

**195.** By what number must 192 be multiplied so that the product may be a perfect square?

(A) 5
(B) 4
(C) 3
(D) 2

**196.** By what least number must 1260 be divided to make the quotient a perfect square?

(A) 35
(B) 30
(C) 40
(D) 45

**197.** The boys of a school can be arranged in 15, 18 or 24 equal rows and also into a solid square. Find the least number of boys in the school.

(A) 3800
(B) 4000
(C) 3600
(D) 3000

**198.** $P$'s age is $\frac{3}{4}$ of $Q$'s and $R$'s age is $1\frac{1}{2}$ of $Q$'s age. If the age of $R$ is 30 years, find the age of $P$.

(A) 10 years
(B) 12 years
(C) 15 years
(D) 18 years

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**199.** The ratio of two numbers is 3 : 4 and their L.C.M. is 180. Find the numbers.

(A) 45, 60
(B) 40, 25
(C) 50, 30
(D) 30, 60

**200.** The ratio of two numbers is 5 : 8 and their differences is 69. Find the numbers.

(A) 120, 131
(B) 150, 163
(C) 115, 184
(D) 118, 173