IBPS
CLERK PRELIMS MODEL PAPER

IBPS

3

ENGLISH LANGUAGE

Direction (1-5) : choose the words for each blank.

1. There are ___ opportunities to ___ farmers who are using less products with harmful chemicals.

   1) few, preparing   2) lot, backing   3) vast, funds

   4) limited, aid   5) highest, motivate.

2. Deep sea, microbes ___ carbon in the atmosphere and ___ nutri-ents.

   1) destroy, growth   2) release, discount   3) regulate, recycle

   4) finishing, recover   5) defend, relate.

3. There is a ___ of anxiety and mental health problems among the youth who need as much ___ as possible.

   1) nausea, thrilling   2) trend, cares   3) wave, support

   4) bouts, attention   5) concept, health

4. organisations ___ for the victims ___ the inhuman and unjust attitude of the government.

   1) fighting, applauded   2) lobbying, supported   3) working, condemned

   4) stand, opposed   5) trying, spoke.

5. The court ___ revenue authorities and PCB officials to ___ teams and visit pharma units.

   1) directed, form   2) announced, arrange   3) commanded, display

   4) ruled, make   5) told, carve.

Direction (6-10)

6. Winter is (1)/ the best (2)/ season to (3)/ explored the outdoors (4) / No error (5).

7. We are in the final stages (1) /of resolve the issue (2) / which has been pending (3) / for over two years (4) / No Error (5).

8. More than scoring points for (1) / choosing the colour, the Actress creating a flutter (2) / with the mini cap that she wore (3) / to match her dress (4) / No Error (5).

9. Exercise not only protects us from diseases (1) / like diabetes but also improvement of the efficient functioning (2) / of the heart, and boosts the release (3) / of neurotransmitters which are important chemicals in the body (4) / No Error (5).

10. Although many internet companies run by women (1) / deal with weddings and recipes, their male colleagues (2) / feel that women also managing other businesses (3) / well because of their good management skills (4) / No Error (5).

Direction (11-15) : Which of the following should replace the phrase given in bold in the following sentence.

11. Chinese army possesses highly sophisticated simulators on which their soldiers are training.

    1) which their soldiers training on
    2) on which their soldiers have trains
    3) which their soldiers do train
    4) None of these
    5) No correction required.

12. Maintaining global peace is our self made commitment to the word.

    1) self making commitment   2) self-made commitment
    3) an undisclose location   4) None of these
    5) No correction required.

13. The action taken by the goverment on road construction
    constants with other priorities like maintenance of old roads
    1) Have consisted   2) consisting   3) No correction required
    4) will consists   5) has to be consistent.

14. the changes in our infrastructure requiring significant investment
    from the private sector.
    1) No correction   2) will require   3) will requiring
    4) requires to   5) to required

15. The intricately carved figures of gods and goddesses on display
    are at most to the 18th or 19th century.
    1) mostly from   2) till most   3) No correction required
    4) upto most   5) mostly than

Direction (16-25) : find out the appropriate word in each blank.

The Government seems to be in right earnest to ensure
more 16 in governance. The prime minister's announcement that
his Government is 17 drafting legislation to 18 the citizen's right
to information is indeed welcome. Though the talk on the right to
information is not new. we may 19 the bill to be brought
early this time. The previous Goverment had set up a
high-level committee to 20 a draft bill. but nothing has been
heared about the matter since, 21 the committee did quite some
work. the issue, however, has come to such a pass that a
solution cannot be 22 further. sunlight is the best disinfectant,
a foreign judge once said, while 23 the unwarranted secrecy in
an administrative system. when those in authority know that
people have the right to ask questions and the government is

under the 24 to provide them with answers, as of authority, or of public finances, for personal or party ends is less likely to happen.

1) strictness 2) rudeness 3) leniency 4) Economy 5) transparency .16

2) personally 2) busy 3) not 4) reluctantly 5) absolutely . 17

1) Presumption 2) absolve 3) curb 4) question 5) establish .18

1) Expect 2) wait 3) try 4) frustrate 5) appeal .19

1) level 2) regard 3) prepare 4) enact 5) unearth .20

1) even 2) as 3) because 4) untill 5) though .21

1) found 2) expected 3) delayed 4) looked 5) longed .22

1) nurturing 2) criticising 3) demanding 4) appreciating 5) upholding .23

1) protection 2) Affect 3) substance 4) obligation 5) property .24

1) misuse 2) governance 3) dishonour 4) curbing 5) breach .25

Direction (25-30) : Read the following passage & Answer.

There was a girls who sang beautiful at the temple every morning. The music master used to happily recall "one day when i went into the woods to pluck flowers, found this baby under a pipal tree." He picked her up carefully, raised her lovingly as if she was his daughter and taught her to sing before she spoke her first word.

The music master grew old and didn't see too well. The girl tended to him caringly. many people including young men travelled from far and wide to hear her sing. This made the music master's heart quake with fear. "you will choose one of them as your husband. What is to become of me?"

The girld replied, "I shall not be apart from you." But on a full moon tg'night during the harvest festival, the master's chief disciple touched his feet reverently and said "master grant me your permission for your daughter has agreed to marry me." the master's tears followed freely. "she has chosen well. Go and fetch her, let me hear you sing the first of many melodies that you will sing together." The two began to sing in harmony. But the song was interrupted by the arrival of the royal messenger. "your daughter is very fortunate the king has sent or her". the messenger said at the place the queen summo -ned the girl to her and said, "I place upon you the honour of making sure my daughter is never unhappy at her husband's home." There wasn't a single tear in the girl's eyes but she thought of the master and her heart was heavy.

That very night the princess began her journey to kambhoj. The princess's royal chariot led the procession and the girl's palanquin followed close behind carrying trunks of steel silks, Jewellary and precious stones. it was covered with a velvet sheet and had soldiers on both sides.

As the procession passed, the master and his disciple kumarsen stood still by the wayside. A collective sigh escaped the crowd gathered there wishing that the princess wouldn't feel homesick in her faraway home.

26. What was the girl's reaction to leaving home?

1) She was honoured to be serving the princess.

2) Sadness at leaving the master.

3) She entrusted the task of looking after the music master to kumarsen.

4) She was thrilled to be living in luxury

5) None.

27. What task was entrusted to the girl by the queen?

1) Seeing that her daughter reached kambhoj safely.

2) Entertaining the princess on her journey to kambhoj.

3) Protecting the princess and reporting to the queen if she was unhappy.

4) Ensuring the princess happiness.

5) None.

28. Why was the master afraid?

1) He felt the princess would treat the young girl unkindly

2) He would be all alone after the girl's marriage.

3) The girl may not be able to adapt to her new home.

4) He was slowly going blind.

5) None.

29. Same meaning of fortunate?

1) Rich 2) liked 3) Happy 4) Successfully 5) lucky

30. Opposite meaning of Collective?

1) Alone 2) separately 3) united 4) partial 5) single

English Answers

1. 4) 2. 3) 3. 4) 4. 3) 5. 1)
6. 4) 7. 2) 8. 4) 9. 2)
10. 3) 11. 4) 12. 5) 13. 5) 14. 2)
15. 1) 16. 5) 17. 2) 18. 5) 19. 1)
20. 3) 21. 5) 22. 3) 23. 2) 24. 4)
25. 1) 26. 2) 27. 4) 28. 2) 29. 5)
30. 1)

Reasoning

Direction (31-35) : study the conclusion based on given statements and Answer.

1) only conclusion I true

2) only conclusion II true

3) Both I and II are true

4) Either I or II true.

5) Neither I or II true.

31. $S \geq T = U \leq D$; $N < U$

   I) $N \leq S$ II) $D > S$

32. $G = R \geq F = T < S \leq N$

   I) $T \leq G$ II) $N > F$

33. $S \geq T = U \leq D$; $N < U$

   I) $D > N$ II) $D = N$

34. $Z < O \geq U = P > R$

   I) $P < Z$ II) $O > R$

35. $P \geq R > S = T \leq U < L$

    I) $L > R$ II) $T < P$

Direction (36-40): solve the conclusions logically from the given statements.

36. statements:
    1) only conclusion I follows   2) only conclusion II follows.

    3) Both I and II follows.   4) either I or II follows

    5) Neither I or II follows.

36. statements: some bulbs are lights
    some lights are fans.

Conclusion: I) some fans are definitely not bulbs

    II All bulbs are fans.

37. statements: some cards are papers   All papers are books

    No book is novel

Conclusion: I) some cards are books

    II) No novel is card.

38. statements: some doors are windows   No window is cabinet

Conclusion: I) No cabinet is door

    II) some cabinets are doors.

39. statements: All keys are locks   some locks are irons

Conclusion: I) All keys are irons

    II) some irons are definitely not keys.

840: statements: All canals are rivers. All rivers are seas.

      I) All canals seas.

      II) All ~~rivers~~ are seas.
          canals

Direction (41-45): Read the following and Answer:

Seven boxes - A, B, C, D, E, F and G are kept one above the other, but not necessarily in the same order. each box has arrived from a different city viz - Delhi, mumbai, kota, Jammu, chennai, shillong and Bhopal but not necessarily in the same order.

only three boxes are kept between A and the box from shillong. only one box is placed between the box from Jammu and G. The box from Jammu is kept above G. The box from Jammu is placed below A. G is neither from shillong nor delhi. The box from Bhopal is kept immediately below the box from mumbai. The box from mumbai is kept at one of the positions below the box from shillong. there are only four boxes between the box from chennai and B. more than one box is placed between F and the box from delhi. Box F is not from ~~delhi~~ Jammu. As many boxes are kept between C and F as between the boxes from kota and Bhopal. C is placed above E.

41. what is the position of C in the given stack of boxes?

1) second from the bottom   2) Third from the bottom.

3) Fifth from the top   4) second from the top

5) Third from the top.

42. which of the following boxes is kept immediately above the box from shillong ?

1) The box from jammu 2) The box from Bhopal 3) F

4) The box from kota 5) C

43. which of the following boxes is from delhi ?

1) F 2) D 3) A 4) C 5) B

44. Four of the following five are alike in certain way. which does not belong to the group ?

1) B - Bhopal 2) D - kota 3) c - shillong 4) A - Jammu

5) F - mumbai

45. How many boxes are kept between F and the box from Bhopal ?

1) Two 2) one 3) Three 4) more than three 5) None

Direction (46-50) : Read the information and Answer.

Eight people viz. A, B, C, D, E, F, G and H are sitting in a straight line facing the north, but not necessarily in the same order also all of them are related to each other in one way or the other.

G sits at one of the extreme ends of the line. only three people sit between G and G's father D. only two people sit between G's father and G's brother C. G's brother not immediate neighbour of G. G has only one sibling. G's wife is an immediate neighbour of G. G's only son sits to the immediate left of G's father. only two people sit between G's son and G's daughter F. G's mother is an immediate neighbour of her husband. G's sister-in-law is an immediate neighbour of her husband. H is a male. A is not the wife of C or D. B is the mother in law of A.

46. who sit's between F and F's mother in law ?

1) only F's sister in law   2) only F's father in law

3) only F   4) Both- F's father in law and H.   5) Both B and E.

47. How is c related to H ?

1) Brother in law   2) uncle   3) Nephew   4) Brother   5) Grandfather

48. How many people sit between G and his mother ?

1) None   2) one   3) more than three   4) Three   5) Two

49. which of the following is true about A ?

1) A sits to the immediate right of G.

2) only three people sit between A and A's father in law.

3) None of the give is true

4) A is wife of G.

5) H is an immediate neighbour of A.

50. How is B related to E ?

1) Grand daughter   2) Grandmother   3) Aunt   4) sister   5) mother

Direction (51-55) : Study the information and Answer.

'telephone lines are busy' is written as 'vk Jd ba ef'

'draw to parallel lines' is written as 'qn vk hi om'

'busy people never draw' is written as 'ta ba su hi'

'two lines are intersecting' is written as 'ml om Jd vk'

51. What is the code for 'people' in the given code language ?

1) Either su or ta   2) None   3) qn   4) either ml or Jd   5) vk

52. what will be the code for 'draw parallel' in the given code language?

1) qn hi   2) Jd ml   3) hi om   4) None   5) ml qn

53. What is code for telephone in the given code language ?

1) qn   2) vk   3) None   4) ml   5) ef

54. What is the Code 'ba' stand for ?

   1) lines   2) Two   3) parallel   4) are   5) busy

55. what may the possible code for 'lines intersecting together'
in the given code language?

   1) ml cz hi   2) cz ml vk   3) vk en cz   4) ml vk et   5) Jd om cz

Direction (56-60) : Read the information and Answer.

Twelve people are sitting in two parallel rows containing
six people each. in such a way that there is equal distance betw
-een adjacent persons in row-1- A, B, C, D, E and F are seated
and all of them are facing south. in row-2- P, Q, R, S, T and U
are seated and all of them are facing North. therefore in the
given seating arrangment each member seated in a row faces
another member of the row (Note: None of the information given is
necessarily in the same order.)

   D sits fourth to the right of B. only two people sit
between the one who faces D and T. T faces an immediate
neighbour of F. E sits second to the left of A. Neither A nor F
sit at an extreme end of the row. The one who faces E sits
third to right of U. only three people sit between U and P. R is
neither an immediate neighbour of U nor T. Q sits third to the left
of R.

56. what is the position of Q with respect to P?

   1) second to the left   2) fourth to the left

   3) Third to the right   4) second to the right   5) Fourth to the right.

57. who among the following is facing S?

   1) B   2) E   3) A   4) F   5) D

58. who among the following is facing c ?

1) Q 2) R 3) T 4) U 5) P

59. Which of the following statements is true as per the given arran-gement ?

1) only one person sit between U and T.

2) F sits to the immediate left of E.

3) s faces one of the immediate neighbours of F.

4) None

5) D is an immediate neighbour of B.

60. Four of the given five are alike in a certain way based on the given arrangement. which doesnot belong to that group ?

1) c 2) F 3) D 4) U 5) R

Direction (61 - 62): Read and Answer the questions.

S is the father of c. S is the son of D. D is the wife of B. B is the brother of L. L is married to E.

61. if E is the mother of T, then how is B related to T ?

1) uncle 2) can't determined 3) Father 4) Brother 5) Niece

62. How is c related to D ?

1) can't determined 2) Daughter 3) Nephew

4) Grand mother 5) son

63. How many meaningful english words can be formed with the letters 'ETN' using all the letters but each letter only once in each word ?

1) more than three 2) one 3) Three 4) None 5) TWO

Direction (64-65): Study the information and answer.

Point A is 3 km north of point B. Point C is 6 km east of point B. Point D is 2 km south of point C. Point F is 3 km west of point D. Point F is 5 km north of point E. Point G is 3 km west of point C.

64. Which of the following points if joined will form a perfect square?

1) EBCD   2) FGCD   3) AFCB   4) AFGB   5) DBFC
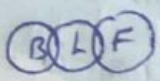
65. How far and in which direction is point F from point A?

1) 4 km west   2) 2 km east   3) 3 km west   4) 4 km east
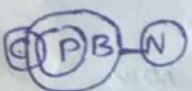
5) 3 km east.

Reasoning Answers

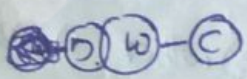31.   5)   32.   3)   33. 1)   34. 2)   35. 2)
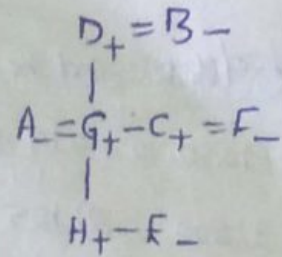
36.   5)   (B) (L) (F)

37.   1)   (G) (P) (B) (N)

38.   4)   (●) (D) (W) (C)

39.   5)   (K) (4) (I)

40.   3)   (C) (R) (S)

Direction (41-45)   7 – A – chennai
                           6 – C – Jammu
                           5 – D – delhi
                           4 – G – kota
                           3 – E – shillong
                           2 – B – mumbai
                           1 – F – bhopal.

41. 4)   42. 4)   43. 2)   44. 3)   45. 2)

Direction (46-50):

C	F	H	D	B	E	A	G
1	2	3	4	5	6	7	8

brother sister   son   father mom daughter wife
         in
         law

$$D_+ = B_-$$
$$|$$
$$A_- = G_+ - C_+ = F_-$$
$$|$$
$$H_+ - E_-$$

46. 4)   47. 2)   48. 5)   49. 4)   50. 2)

Direction (51-55) :—
⎯⎯ * ⎯⎯

lines → vk   draw → hg
are → Jd   parallel → qn
busy → ba   two → om
telephone → ef   people / never → tx / su
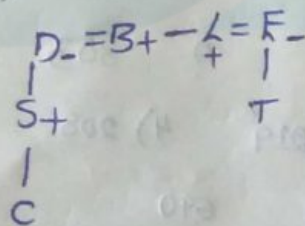   intersecting → ml

51. 1)   52. 1)   53. 5)   54. 5)   55. 2)

Direction (56-60):

D	A	F	E	B	C
1	2	3	4	5	6
U	S	Q	T	P	R
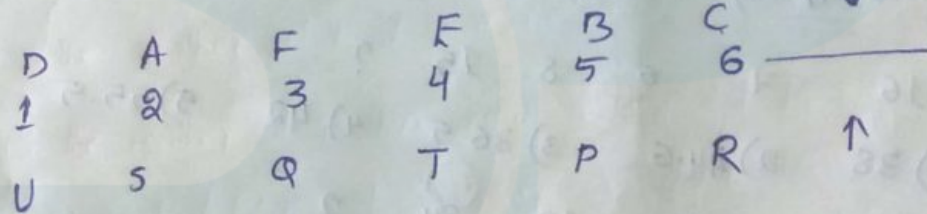
56. 1)   57. 3)   58. 2)   59. 3)   60. 2)

Direction (61-62)

$$D_- = B_+ - L_+ = F_-$$
$$|$$ $$|$$
$$S_+$$ $$T$$
$$|$$
$$C$$
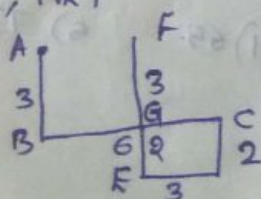
61. 1)   62. 1)

63. 5) ⇒ TEN., NET

§ Direction (64-65)

64. 4)   65. 5)

Numerical Ability

Direction (66-70): find the Approximate value.

66. $(1280.14 + 519.85) \div 11.99 = ?$

  1) 200   2) 125   3) 100   4) 250   5) 150

67. $600.16 \times \sqrt{?} + 60.05 \times \sqrt{63} = 2280$

  1) 121   2) 9   3) 81   4) 49   5) 85

68. $59.99\% \text{ of } 500.18 + 60.97 = ?^2$

  1) 7   2) 9   3) 11   4) 19   5) 21

69. $156.12 \div 2.01 + 209.96 \div 4.99 = ?$

  1) 180   2) 120   3) 200   4) 240   5) 150

70. $42.08 \times 2.99 \div 62.87 = ?$

  1) 2   2) 3   3) 4   4) 8   5) 1

Direction (71-75) : what will come in place of (?)

71.   16   7   6   8   15   ?

  1) 38   2) 44.6   3) 36.5   4) 42   5) 55.5

72.   8   8   11   19   34   ?

  1) 49   2) 58   3) 51   4) 62   5) 73

73.   18   37   75   132   ?   303

  1) 239   2) 242   3) 219   4) 208   5) 227

74.   786   786   ?   753   690

  1) 779   2) 783   3) 771   4) 765   5) 780

75.   11   14.6   21.8   32.6   47   ?

  1) 71   2) 69   3) 63   4) 65   5) 73

Direction (76-80): solve the equations and Answer.

1) $x > y$ 2) $x < y$ 3) $x \geq y$ 4) $x \leq y$ 5) can't be establish

76. I. $x^2 - 14x - 15 = 0$ II. $y^2 - 35y + 306 = 0$

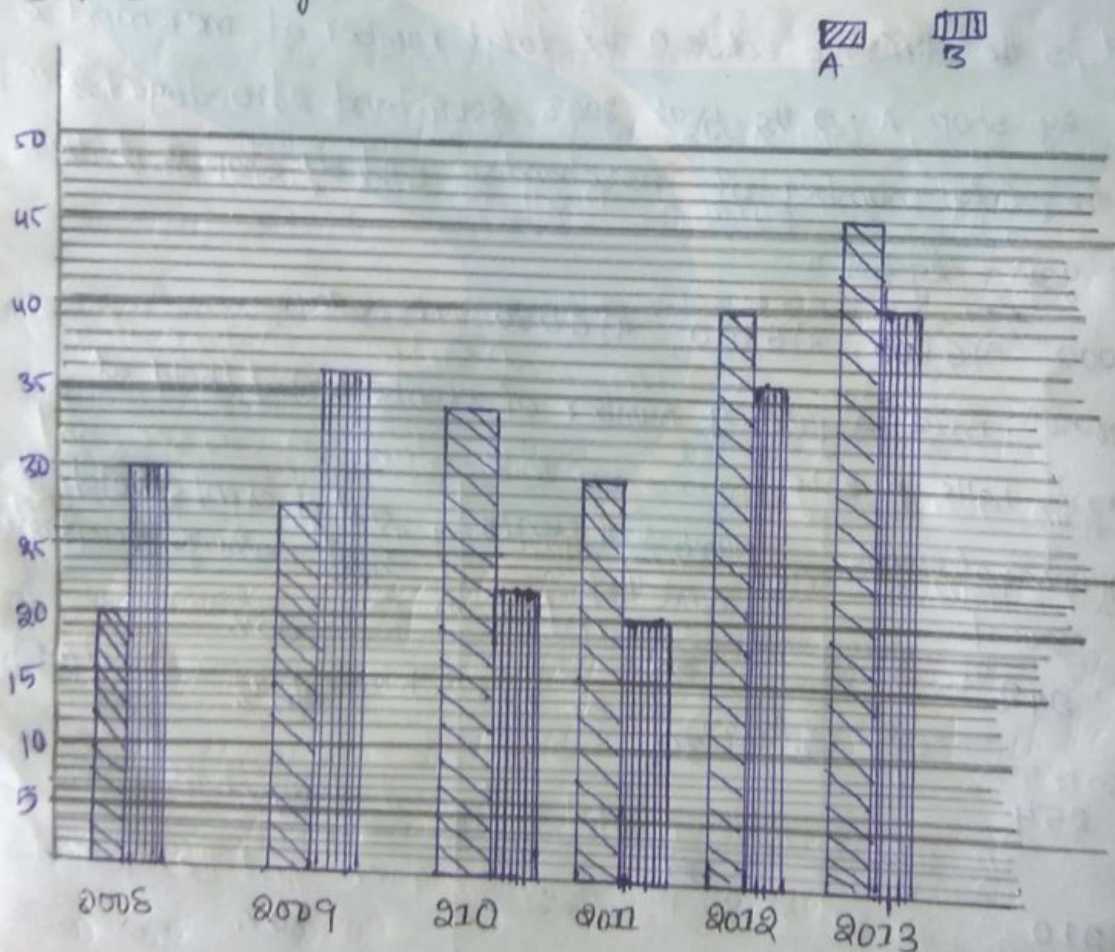77. I. $12x^2 + 29x + 5 = 0$ II. $4y^2 + 17y + 15 = 0$

78. I. $x^2 + 12x + 32 = 0$ II. $y^2 + 17y + 60 = 0$

79. I. $3x^2 + 23x + 14 = 0$ II. $3y^2 + 07y + 4 = 0$

80. I. $2x^2 - 15x + 28 = 0$ II. $4y^2 - 21y + 27 = 0$

Direction (81-85): study the following graph carefully and Answer.

The number of merchandies (in thousands) sold by shop A and shop B in a city.

A   B

50
45
40
35
30
25
20
15
10
5

2008   2009   210   2011   2012   2013

81. What is the respective ratio between the number of merchandise sold by both the shops (A & B) together in 2010 and number of merchandise sold by shops (A & B) in the year 2012?

1) 16 : 19   2) 22 : 27   3) 14 : 17   4) 22 : 31   5) 14 : 19

82. The total number of merchandise sold by shops A in the year 2008 and 2009 together is by what percent less than the total number of merchandise sold by shop B in the years 2012 and 2013 together? (Rounded off upto two digits after decimal)

1) 38.82　2) 36.84　3) 36.89　4) 38.88　5) 34.84

83. What is the percentage decrease in the number of merchandise sold by shop B from the year 2009 to the year 2010?

1) 36　2) 39　3) 44　4) 38　5) 42

84. What is the average number of merchandise sold by shop A in the years 2010, 2011, 2012 and 2013 together?

1) 37,500　2) 37,510　3) 37,525　4) 35,510　5) 35,515

85. What is the difference between the total number of merchandise sold by shop A in the year 2008, 2009 and 2010 together and the total number of merchandise sold by shop B in the same years together?

1) 6,000　2) 6,200　3) 6,010　4) 6,050　5) 6,100.

Direction(86-90): Data Regarding number of events booked/held at 5 different halls in 2016.

Halls	Number of events Booked	Number of events Cancelled	out of events held % of marriage receptions
A	242	32	60%
B	254	30	75%
C	210	35	80%
D	280	55	80%
E	265	25	85%

Note: number of events held = number of events booked - no of events cancelled

86. At Hall B in 2018, if number of events held were $1\frac{1}{8}$ times that in 2016 and number of events cancelled increased by 26% over that in 2016, how many events were booked?

1) 278   2) 282   3) 288   4) 284   5) 288.

87. What was the difference between total number of events held at Halls A and F together and those cancelled at the same hall together?

1) 403   2) 393   3) 398   4) 388   5) 383

88. Number of events that were not marriage receptions at Hall F was what percent less than number of events that were not marriage receptions at Hall A?

1) $57\frac{1}{7}$ 2) $48\frac{1}{7}$ 3) $42\frac{6}{7}$ 4) $52\frac{2}{7}$ 5) $66\frac{2}{3}$

89. What was the respective ratio between number of events held at Hall C and those held at Hall D?

1) 7:9   2) 3:5   3) 2:3   4) 5:7   5) 3:4

90. What was the Average number of marriage receptions held at Halls A, B and D?

1) 152   2) 156   3) 162   4) 158   5) 148.

91. The Average salary of officers is 450/- & that of non-officers is 80/-. But Average salary of entire staff is 150/-. if no. of officers in that office is 14. then find out the number of non-officers in the office.

1) 55   2) 60   3) 65   4) 70   5) 80

92. The population of town is 45000. 5/9 th. of them are males and rest of them females. 40% of the males are married. What is the percentage of married females?

1) 60%   2) 40%   3) 50%   4) 45%   5) None of these.

93. A and B started a bussiness with new initial investment in the ratio 5 : 7. if after one years their profit were in the ratio 1 : 2 and the period for A's investment was 7 months. B was invested the money for ?

1) 6 month   2) 3 months   3) 4 months   4) 10months   5) 5 months

94. 56 ml mixture contains milk and water in the ratio 5:3. How much more water is to be added then the milk and water ratio becomes 3:5 ?

1) 84   2) 86   3) 88   4) 90   5) None of these

95. A man going from A to B with 30 kmph speed, return from B to A with speed 20 kmph. in all he takes 5 hrs. What is the distance between A & B ?

1) 50 km   2) 60 km   3) 70 km   4) 80 km   5) None of these

96. A train 150 m long passes a mile store in 15 sec. and another train of same length travelling in opposite direction in 8 sec. The speed of the second train is ?

1) 60 kmph   2) 88 kmph   3) 77 kmph   4) none   5) 99 kmph

97. A man can row 6 kmph in still water. it takes him twice as long to row up as to row down the river. find the rate of the stream.

1) 1 kmph   2) 3 kmph   3) 2 kmph   4) 4 kmph   5) 3.5 kmph

98. Rahul invested RS 16,800/. in scheme A for 4 years. Scheme A offers simple interest @ 8 pcpa. for the first two years and compound interest @ 10 p.c.p.a for next two years. what will be total interest earned by Rahul after 4 years from scheme A?

1) 6,336/-   2) 6,092/-   3) 6,216/-   4) 6,448/-   5) 5,912/-

99. A can do a piece of work in 42 days. A started the work after 6 days B joined & they together complete the remaining work in 9 days. in How many days B alone can do the work?

1) 14   2) 13   3) 12   4) 15   5) None of these

100. the respective ratio of areas of two circular fields. A and B is 64:81. if the diameter of circular field A is 56 m, what is the diameter of circular field B? (in M)

1) 63   2) 65   3) 58   4) 60   5) None of these.

Answers

66. 5) $\Rightarrow \dfrac{1280+580}{12} = 150$

67. 3) $\Rightarrow 600 \times \sqrt{7} + 60 \times 8 = 2280 \Rightarrow \sqrt{7} = 3 \Rightarrow 7 \cong 9$.

68. 5) $\Rightarrow \dfrac{60 \times 500}{100} + 61 = 7^2 \Rightarrow 7^2 = 361 \Rightarrow 7 \cong 19$

69. 2) $\Rightarrow \dfrac{156}{2} + \dfrac{210}{5} \rightarrow 7 = 120$

70. 1) $\Rightarrow \dfrac{42 \times 3}{63} = 7 \Rightarrow 2$

71. 3) $\Rightarrow \times 0.5-1, \times 1-1, \times 1.5-1, \times 2-1, \times 2.5-1$

72. 3) $\Rightarrow \underset{1-1}{0}, \underset{2^2-1}{3}, \underset{3^2-1}{8}, \underset{4^2-1}{15}, \underset{5^2-1}{24}$

73. 4) $\Rightarrow \times 2+1, \times 2+1, \times 2+1, \times 2+1$

74. 1) ⇒ 1^3-1, 2^3-1, 3^3-1, 4^3-1

75. 4) ⇒ 3.6, 7.2, 10.8, 14.4, 18
   $\underbrace{\quad}_{\times 2} \quad \times 3 \quad \times 4 \quad \times 5$

76. 4) ⇒ 15   30 6 $15 < 12$
      $\overset{\wedge}{-15\ 1}$ $\overset{\wedge}{17\ 18}$ $15 < 18$
                                    $-1 < 17$
                                    $-1 < 18$

77. 3) ⇒ 60   60 $-15 / 12$ $-5/4 > -3$
      $\overset{\wedge}{15\ 4}$ $\overset{\wedge}{12\ 5}$ $-5/4 > -3$ $-5/4 = -5/4$
      $\dfrac{15}{12}\ \dfrac{4}{12}$ $\dfrac{12}{4}\ \dfrac{5}{4}$ $-4 > -12$ $-1/3 > -3$
                                    $-4 > 5$ $-1/3 > -5/4$

78. 5) ⇒ 32   60 $-8 > -12$
      $\overset{\wedge}{8\ 4}$ $\overset{\wedge}{12\ 5}$ $-8 < -5$
                                    $-4 > -12$
                                    $-4 > 5$

79. 2) ⇒ 42   12 $-7/3 < 4/3$
      $\overset{\wedge}{7\ 6}$ $\overset{\wedge}{4\ 3}$ $-1/3 < 2$
      $\dfrac{7}{3}\ \dfrac{6}{3}$ $\dfrac{4}{3}\ \dfrac{3}{3}$ $-2 < 4/3$
                                    $-2 < 1$

80. 1) ⇒ 56   4) 93 $4 > 3$
      $\overset{\wedge}{8\ 7}$ $\underline{}$ $4 > 9/4$
      $\dfrac{8}{2}\ \dfrac{7}{2}$ $\dfrac{12}{4}\ \dfrac{9}{4}$ $1/2 > 3$
                                    $1/2 > 9/4$

81. 5) ⇒ 34   40
      $\dfrac{22}{56}$: $\dfrac{36}{76}$ ⇒ 14 : 19

82. 2) ⇒ $\dfrac{80}{28}{45}$ $\dfrac{36}{40}{76}$ 2) $\dfrac{76-48}{76} \times 100 = 36.84$

83. 4) ⇒ $\dfrac{36-22}{36} \times 100 = 38$

84. 1) ⇒ $\dfrac{34+30+40+46}{4} = 37,500$ (in thousands)

85. 1) ⇒ $\dfrac{20}{28}{34}{82}$ $\dfrac{30}{76}{22}{88}$ $= 88-82 = 6,000$

86. 5) $\Rightarrow$ 12(2016)

$\dfrac{9}{8} \times 224 = 252$ 160→180 $\Rightarrow$ 252
                            150→36 $\Rightarrow \dfrac{36}{288}$

87. 2) $\Rightarrow$ 210   32

$\dfrac{240}{450} - \dfrac{45}{57} \Rightarrow 393$

88. 1) $\Rightarrow$ 100→240   100→1810 $\Rightarrow \dfrac{84-36}{84} \times 100 \Rightarrow 57\dfrac{1}{7}$
           15→36   40→84

89. 1) $\Rightarrow$
175 : 225 = 7 : 9

90. 4) $\Rightarrow \dfrac{126 + 168 + 180}{3} = 158$

91. 2) $\Rightarrow \dfrac{\text{no. of non-officers}}{\text{no. of officers}} = \dfrac{\text{officer Avg} - \text{staff Avg}}{\text{staff Avg} - \text{non officer Avg}}$

$\left[\text{Staff} \begin{array}{l} \rightarrow \text{officers(14)} \\ \text{450} \rightarrow \text{non officers} \\ \text{Avg (80)} \end{array}\right.$ Avg=450

$\dfrac{n}{14} = \dfrac{300}{70} \Rightarrow n = \underline{60}$

92. 3) $\Rightarrow$
            4500
           M $\wedge$ F
$5/9 \times 4500$ $4/9 \times 4500$
           20,000 $\times \dfrac{40}{100}$

$= \dfrac{25,000 \times 40}{100}$

$= 10,000$ males $\Rightarrow \dfrac{10,000}{20,000} \times 100 \Rightarrow 50\%$

93. 4) $\Rightarrow \dfrac{A}{} \quad \dfrac{B}{} = A : B$

$5 \times x : 7 \times 7 = 4 : 2 \Rightarrow n = 10$ months.

94. 1) $\Rightarrow$ M : W   7p→56 $\Rightarrow \dfrac{40}{16+n} = \dfrac{2}{5} \Rightarrow 100 = 16+n \Rightarrow n = \underline{84}$
         5 : 2   5p→40
              2p→16

95. 2) $\Rightarrow D = \dfrac{30 \times 20}{10} \times 5 = 60$ kmph

96. 5) $\Rightarrow S_1 = \dfrac{150}{15} = 10$ mps $\Rightarrow S = S_1 + S_2 = \dfrac{D_1 + D_2}{t} \Rightarrow 52 + 10 = \dfrac{300}{5}$

$\Rightarrow S_2 = 37.5 - 10 \Rightarrow 27.5 \times \dfrac{18}{5} = 99$ kmph

97. 3) $\Rightarrow n = 6$ kmph $\Rightarrow$ Tup : Tdow = 2:1 $\Rightarrow \dfrac{up}{down} = \dfrac{6-y}{6+y} = \dfrac{1}{2}$
                           Sup : Sdown = 1:2 $\Rightarrow 12-2y = 6+y \Rightarrow y = 2$ kmph.

98. 3) $\Rightarrow$ P = 100% $\rightarrow$ 16,800

        $\underline{S.I}$ $\underline{C.I}$

      8% for 2yrs   10% for 2yrs

      16 + 21% $\Rightarrow$ 37% $\Rightarrow$ 6,216 /-

99. 1) $\Rightarrow$ Total work = 42 units $\Rightarrow$ A+B $\Rightarrow \dfrac{36}{9} = 4$

        A $\rightarrow$ 6 ; Remain 36 units   1 + B = 4 $\Rightarrow$ B = 3

                                       B $= \dfrac{42}{3} = 14$ days.

100. 1) $\Rightarrow \dfrac{\pi d_1^2}{4} : \dfrac{\pi d_2^2}{4} = 64 : 81$

                       $d_1 : d_2$

        $d_1 \Rightarrow 8 \rightarrow 56$

        $d_2 \Rightarrow 9 \rightarrow \underline{63}$