Directions (1-5): **Read the passage carefully and choose the best answer to each question out of the four alternatives.**

In the early 20th century, polio was one of the most feared diseases in industrialized countries, paralysing hundreds of thousands of children every year. Though most people recovered quickly from polio, some suffered temporary or permanent paralysis and even death. Many polio survivors were disabled for life. They were a visible, painful reminder to society of the enormous toll this disease took on young lives.

Polio is the common name for poliomyelitis, which comes from the Greek words for grey and marrow, referring to the spinal cord, and the suffix –itis, meaning inflammation. Poliomyelitis, shortened, became polio. For a time, polio was called infantile paralysis, though it did not affect only the young.

Polio is caused by one of three types of polioviruses (which are members of the Enterovirus genus). These viruses spread through contact between people, by nasal and oral secretions, and by contact with contaminated faeces. Poliovirus enters the body through the mouth, multiplying along the way to the digestive tract, where it further multiplies. In about 98% of cases, polio is a mild illness, with no symptoms or with viral-like symptoms. In paralytic polio, the virus leaves the digestive tract, enters the bloodstream, and then attacks nerve cells. Fewer than 1%-2% of people who contract polio become paralyzed. In severe cases, the throat and chest may be paralyzed. Death may result if the patient does not receive artificial breathing support.

Polio reached epidemic proportions in the early 1900s in countries with relatively high standards of living, at a time when other diseases such as diphtheria, typhoid, and tuberculosis were declining. Indeed, many scientists think that advances in hygiene paradoxically led to an increased incidence of polio. The theory is that in the past, infants were exposed to polio, mainly through contaminated water supplies, at a very young age. Infants' immune systems, aided by maternal antibodies still circulating in their blood, could quickly defeat poliovirus and then develop lasting immunity to it. However, better sanitary conditions meant that exposure to polio was delayed until later in life, on average, when a child had lost maternal protection and was also more vulnerable to the most severe form of the disease.

Because of widespread vaccination, polio was eliminated from the Western Hemisphere in 1994. In 2016, it continued to circulate in just Afghanistan and Pakistan, with occasional spread to neighbouring countries. **Vigorous** vaccination programs are being conducted to eliminate these last pockets. Polio vaccination is still recommended worldwide to lower the risk of imported cases.

There has also been success in eradicating certain strains of the virus; of the three types of wild polioviruses (WPVs), the last case of type 2 was reported in 1999 and its eradication was declared in September 2015; the most recent case of type 3 dates to November 2012 and this strain was declared as globally eradicated in October 2019.

Q1. **Why is polio vaccination still recommended worldwide?**

(a) To eliminate the strains of the wild polioviruses.
(b) To prevent the risk of getting other severe forms of the diseases such as diphtheria, typhoid, and tuberculosis.
(c) To boost the immunity system.
(d) To minimise the risk of imported cases.

Q2. **The last case of wild poliovirus type 2 was reported in which year?**
   (a) In 2016
   (b) In November 2012
   (c) In 1999
   (d) in 1994

Q3. **What is the synonym of the word 'Vigorous' as per the context of the passage?**
   (a) Healthy
   (b) Resolute
   (c) Energetic
   (d) Flourishing

Q4. **Which of the following statement(s) is (are) false as per the passage?**
   (i)   In about 98% of cases, polio is a mild illness, with no symptoms or with viral-like symptoms.
   (ii)   Polio virus affects only the young.
   (iii)   Polio was eliminated from the Western Hemisphere in 1999.
   (iv)   Fewer than 1%-2% of people who contract polio become paralyzed.
(a) Only (i)
(b) Only (ii)
(c) Both (ii) and (iii)
(d)Both (ii) and (iv)

Q5. **Why do many scientists think that advances in hygiene causes an increased incidence of polio?**
   (a) Because Polio spreads rapidly in a large number of people within a short period of time in the early 1900s in countries despite high standards of living.
   (b) Exposure to polio was delayed because of advances in hygiene until later in life, when a child had lost maternal protection and hence was more vulnerable to the disease.
   (c) Better sanitary conditions increase the exposure to polio virus and other diseases at a very young age.
   (d) Advances in hygiene makes the immune systems of infants low, thus failing to quickly defeat poliovirus.

Directions (6-10): **Read the passage carefully and choose the best answer to each question out of the four alternatives.**

The State of Food Security and Nutrition in the World report estimated that almost 690 million people globally were undernourished in 2019, up by 10 million from 2018. The report — considered the most authoritative global study tracking progress towards ending hunger and malnutrition — said that the number of undernourished people in India declined from 249.4 million in 2004-06 to 189.2 million in 2017-19. It is a

remarkable 60 million decline, but the report titled "The State of Food Security and Nutrition in the World" also revealed a gradual rise in obesity among Indians, an issue that does not find a place in our health and nutrition policies.

The UN report attributes the change in India to long-term economic growth, reduced inequality, and improved access to basic goods and services. Evidently, the rise in service sector is one instance of monumental economic transitions. It caused a rise in incomes but also a rise in sedentary lifestyles as desk jobs boomed and became the key drivers of economic growth. Simultaneously, globalisation opened the doors to energy-dense foods, which became an integral component of our diets. The rise in fast food chains is a manifestation of lifestyle changes.

The phenomenon of declining undernourishment and rising obesity that India is facing can be seen as a nutrition transition. It is a shift in the population's dietary consumption and energy expenditure due to demographic, economic and cultural changes. It is characterised by a shift in disease burden from undernutrition to overnutrition-related chronic disease. It is also not unusual. With rapid development and urbanisation, many developing countries undergo this transition. It starts with a decline in the ratio of number of undernourished people to number of obese people until there are more obese people than their undernourished counterparts, as seen in advanced economies.

However, India is at a point in the transition where undernourishment and obesity exist at the same time, which is also called the double burden of malnutrition. Both undernourishment and obesity are caused by malnutrition — if the former happens due to nutrient-deficient diet, the latter happens due to energy-rich but nutrient-deficient diet. It is crucial to take action as the burden of obesity-related diseases is expected to rise in the future, and fall heavily on the health infrastructure. Obesity is a risk factor for a range of non-communicable diseases (NCDs) including diabetes, which leads to other related complications.

Thus, a country's nutrition and health policies need to accommodate obesity as well. A policy also needs to be well-targeted in order to be successful, which raises the following question: Which section of the population is getting obese? While obesity seems like a rich man's problem, the answer is not that simple.

Studies have found that people who face undernourishment early in life are more likely to become overweight. In addition, with economic development, the number of overweight people initially increases among the wealthy, but later the burden of obesity shifts from the high-income group to the low-income group. The current nutrition transition in India implies that it could have moved on from the initial stage and is at the next stage. It occurs when energy-dense/nutrient-poor diets become the norm in low-income groups, probably because of the affordability of such foods. There needs to be a study capturing health trends that takes into consideration their socio-economic location of respondents, but until then there is no data in the country that can explain this transition in socio-economic terms precisely.

Nevertheless, rapid urbanisation coupled with rural-urban labour migration, urban poverty and rising inequality do indicate that low-income households could be turning

to energy-dense/nutrient-poor foods as they are cheaper than the healthier options. The obesity problem in the US, for instance, also stems from the affordability of fast food among low-income households. Obesity is arguably then present among the rich as well as the low-income groups, which tells that obesity is replacing undernourishment to an extent.

While obesity is still at a **nascent** stage, it is the task of policymakers to curb the burgeoning issue while simultaneously ensuring that undernourishment continues to decline.

Q6. As per the passage, both undernourishment and obesity are caused by?

    (a) Rising inequality
    (b) Malnutrition
    (c) lifestyle changes
    (d) rapid urbanisation

Q7. As per the context of the passage, what is the antonym of the word 'Nascent'?

    (a) Primitive
    (b) Fundamental
    (c) Initial
    (d) Advanced

Q8. As per the passage, what are the findings about the study on obesity?

    (i)   Burden of obesity shifts from the high-income group to the low-income group.
    (ii)   Obesity is only a rich man's problem.
    (iii)   People who face undernourishment early in life are more likely to become overweight.
        (a) Both (i) & (iii)
        (b) Only (ii)
        (c) Both (ii) & (iii)
        (d) Only (i)

Q9. As per the passage, the number of undernourished people in India declined from 249.4 million to?

    (a) 60 million
    (b) 189.2 million
    (c) Almost 690 million
    (d) There is no decline

Q10. Describe 'Double burden of malnutrition'?

    (a) The period in which the rate of obesity shifts from the high-income group to the low-income group.
    (b) The phenomenon of declining undernourishment and rising obesity.

(c) A decline in the ratio of number of undernourished people to number of obese people.

(d) A point in the transition where undernourishment and obesity exist at the same time.

Directions (11-13): In the following questions, a sentence / a part of the sentence is bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.

Q11. The easiest **of the thing to do** is to criticize others.
(a) of the things to do
(b) among the things to done
(c) of the thing to be done
(d) No improvement

Q12. Hardly **does the sun rise** when the stars disappeared.
(a) had the sun risen
(b) did the sun rose
(c) the sun rose
(d) No improvement

Q13. When I was a student, I was a member of the college cricket team, which I **should captain** in my penultimate year in school.
(a) captained
(b) had captained
(c) have captained
(d) No improvement

Q14. **Given below are four jumbled sentences. Pick the option that gives their correct order.**
A. New ideas on marketing were brainstormed and all the members agreed to try them forthwith.
B. Upon their return from an off-site camp Ravi and Sunil decided to hold a meeting.
C. As soon as everyone assembled, the meeting which lasted for four hours, began.
D. Its purpose was to replace some of the old ways of marketing used by the company with new ones.
(a) ACBD
(b) BDAC
(c) CDBA
(d) BCDA

Q15. **Identify the best way to improve the bold part of the given sentences. If there is no improvement required, select 'No improvement'.**
I'm **thinking to buy** a new car as my old one is giving me trouble.
(a) thinks to buying

(b)thinking of buying
(c) thought to buy
(d) no improvement

Q16. **Select the word which means the same as the group of words given.**
Exercising a compelling charm
(a) dismissive
(b) vapid
(c)charismatic
(d) uninspiring

Q17. **Choose the most appropriate option to change the voice (active/passive) form of the given sentence.**
They shifted the venue of the conference.
(a) The venue of the conference was shifted.
(b) The venue of the conference has been shifted.
(c) They are shifting the venue of the conference.
(d) They were shifting the venue of the conference.

Q18. **Given below are four jumbled sentences. Pick the option that gives their correct order.**
   A. There is a story about an ancient Indian sage who was called ugly names by a passerby.
   B. The sage then said, "well then, I have not accepted your offering" and walked away.
   C. He finally asked the man, "if an offering is not accepted who does it belong to?" at which the man replied, "To the person who offered it."
   D. The sage listened unperturbed till the man ran out of words.
(a) CABD
(b) ACDB
(c) DCBA
(d) ADCB

Directions (19-22): **Select the most appropriate word(s) to fill in the blank.**
Q19. Pakistan showed interest in importing Indian sugar and cotton and this would have meant the _____ of trade even if diplomatic relations remain suspended.
   (a) Revival
   (b) Wreckage
   (c) Equilibrium
   (d) Confide

Q20. Ayurveda is one of the oldest and most _____ forms of medicine.
   (a) Unsung
   (b) Convivial

(c) Renowned
(d) Proprietary

Q21. The Gujarat High Court had in May, 2020 _____ the Rupani administration for the "alarming number of deaths in Ahmedabad hospitals".
    (a) Castigated
    (b) Acquitted
    (c) Foretold
    (d) Accredited

Q22. To _____ the potential negative effects of television, it's important to understand what the impact of television can be on children.
    (a) Conveys
    (b) Address
    (c) Attribute
    (d) Deduce

Directions (23-25): **In these questions, out of the four alternatives choose the one which can be substituted for the given words or sentence.**
Q23. A large bound bundle of paper, hay or cotton
(a) barrel
(b) bale
(c) gale
(d) cache

Q24. Instrument used for coding and decoding messages
(a) chronometer
(b) cryptograph
(c) cardiograph
(d) crescograph

Q25. The base frame of a car or other wheeled vehicle
(a) fuselage
(b) bonnet
(c) chassis
(d) cockpit

Directions (26): In the following questions, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it.

Q26. Impeach
    (a) Blame
    (b) Challenge
    (c) Trouble
    (d) Discharge

Q27. Select the most appropriate idiom (in the context) to fill in the sentence.
The opposition party labelled the Government's plan a complete _____.
    (a) Best of both worlds
    (b) The last straw
    (c) Chip on shoulder
    (d) Dog's breakfast

Q28. Select the word which means the same as the group of words given.
Someone who makes, copies, or sells something illegally.
    (a) Footslogger
    (b) Pettifogger
    (c) Defogger
    (d) Bootlegger

Q29.   In the following question, four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

(a) aparthaid
(b) exhorbitant
(c) mischievous
(d) benifitted

Q30. Select the word which means the same as the group of words given.
A chronological misplacing of persons, events, objects, or customs in regard to each other.
    (a) Symmetallism
    (b) Existentialism
    (c) Anachronism
    (d) Futilitarianism

Q31. Select the related number from the given alternatives
122: 145:: 226 : ?
    (a) 250
    (b) 256
    (c) 257
    (d) 290

Q32. Introducing a man, a woman said "His mother is the only daughter of my father".
How is the man related to the woman?
    (a) Brother
    (b) Son
    (c) Father
    (d) Uncle

Q33. If '−' stands for division, '+' for multiplication, '÷' for subtraction and '×' for
addition, which one of the following equations is correct?
(a) $18 ÷ 3 × 2 + 8 − 6 = 10$
(b) $18 − 3 + 2 × 8 ÷ 6 = 14$
(c) $18 − 3 ÷ 2 × 8 + 6 = 17$
(d) $18 × 3 + 2 ÷ 8 − 6 = 15$

Q34. Find the odd word pair from the given responses.

    (a) Brotherhood
    (b) Babyhood
    (c) Adulthood
    (d) Childhood

Q35. If Ram's house is located to the south of Krishna's house and Govinda's house is to
the east of Krishna's house, in what direction is Ram's house situated with respect to
Govinda's house?
    (a) North-East
    (b) North-West
    (c) South-East
    (d) South-West

Q36. In the following question, a series is given with one number missing. Choose the correct alternative from the given options.
16, 33, 53, 76, 102, ?
(a) 131
(b) 135
(c) 230
(d) 231

Q37. If the letters in 'PRABA' are coded as 27595 and 'THILAK' are coded 368451, how can 'BHARATHI' be coded?
(a) 57686535
(b) 96575368
(c) 96855368
(d) 37536689

Q38. From the given alternative words, select the word which cannot be formed using the letters of the given word:
EXPERIMENTAL
(a) PARENT
(b) RELAX
(c) METER
(d) METHANE

Q39. Four friends sitting in a row facing north. Harish sits on the right of Satish. Satish sits between Manish and Girish. Who sits at the right end of the row?
(a) Satish
(b) Girish
(c) Harish
(d) Manish

Q40. Choose the numbers similar to the group of numbers given.
25 : 125 : : ? : 3125
(a) 525
(b) 625
(c) 725
(d) 825

Q41. In a certain code language,

'257' means 'good and tasty';

'793' means 'see good pictures' and

'916 ' means 'pictures are faint'.

Which of the following digits stands for 'see'?

    (a) 1

    (b) 3

    (c) 5

    (d) 6

Q42. If 'A' stands for '+', 'B' stands for '-', C stands for 'x', D stands for '÷' then
14 C 10 A 42 D 2 B 8 =?

    (a) 426

    (b) 169

    (c) 153

    (d) 83

Q43. Which one of the given responses would be a meaningful order of the following words?

a. Open Text book   b. Attend Assembly   c. Catch Bus   d. Wear Uniform   e. Get into classroom

    (a) d, b, c, e, a

    (b) d, c, e, a, b

    (c) d, c, b, e, a

    (d) d, c, a, e, b

Q44. Select the related word from the given alternatives?

Length: Meter: : Power : ?

    (a)   Volt

    (b)   Calories

    (c)   Kilogram

    (d)   Watt

Q45. In the following questions a word is followed by four other words, one of which cannot be formed by using the letters of the given word. Find this word.

    (a)   MOTHER

    (b)   THERAPY

    (c)   PANTHER

    (d)   REMOTE

Q46. If CAB = 13 and FEED = 41, then FADE =?
    (a) 33
    (b) 39
    (c) 41
    (d) 29

Q47. If in a certain code 'OPERATION' is written as 'BWDATXPBJ' and 'PARENT' is written as 'WTADJX', how will 'ORIENT' be written in that code language?
    (a) PSJFOU
    (b) BAPDJX
    (c) BPADJX
    (d) BWPDJX

Q48. If in a certain code, EDITION is written as VWRGRLM, then which word will be coded as SLMVHGB?
    (a) HAUGHTY
    (b) AMNESTY
    (c) EDITORS
    (d) HONESTY

Q49. In the following question, select the related word from the given alternatives.
      Car : Road : : Rail : ?
    (a) Water
    (b) Air
    (c) Road
    (d) Track

Q50. In the following question, select the related number from the given alternatives.
      102 : 10404 : : 104 : ?
    (a) 10202
    (b) 10404
    (c) 10804
    (d) 10816

Q51. Find out the odd number from the given alternatives
    (a) 125
    (b) 512
    (c) 1321
    (d) 1728

Q52. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.

8 + 5 – 5 = 45
12 + 6 – 5 = 77
14 + 5 – 10 =?
    (a) 60
    (b) 80
    (c) 58
    (d) 76

Q53. Select the related word from the given alternatives.
Poster: Wall: : Photograph : _?
    (a) Camera
    (b) Film
    (c) Negative
    (d) Frame

Q54. Choose the correct alternative from the given ones that will complete the series.

133, 119, 105, 91, ?

(a) 80
(b) 77
(c) 85
(d) 79

Q55. Select the one which is different from other three alternatives.

    (a) 59
    (b) 19
    (c) 25
    (d) 23

Q56. Select the related word from the given alternatives.

Radio: Listener: : Film : ?

    (a) Transmission
    (b) Criticism
    (c) Hero
    (d) Audience

Q57. Select the related word/letters/number from the given alternatives.

Sound: Medium: : Light : ?

(a) Air

(b) Vacuum

(c) Water

(d) Glass

Q58. Select the related word/letters/number from the given alternatives.

TR : VX : : MK : ?

(a) QP

(b) QR

(c) OQ

(d) OP

Q59. Select the related word/letters/number from the given alternatives.

ZY : CD : : SR : ?

(a) RS

(b) JK

(c) JP

(d) PQ

Q60. Select the related word/letters/number from the given alternatives.

8 : 27 : : 64 : ?

Options:

(a) 75

(b) 65

(c) 100

(d) 125

Q61. Select the odd word/letters/number/number pair from the given alternatives.

(a) Perpendicular

(b) Base

(c) Hypotenuse

(d) Radius

Q62. Identify the number that does NOT belong in the given series.
2, 6, 6, 10, 8, 12, 12, 15, 14, 18
   (a) 15
   (b) 8
   (c) 18
   (d) 12
Q63. Which set of letters when sequentially placed at the gaps in the given letter series shall complete it?

x_zz_xx_z_yx

(a) xyxy

(b) xxxy

(c) yyyz

(d) zyyy

Q64. Ram travels towards east covering 5 km. He takes a left turn and travels 10 km more. Then, he takes a right turn and travels another 5km and finally takes a right turn to cover 10 km. How far is he from his original position?

(a) 10 km

(b) 20 km

(c) 15 km

(d) 25 km

Q65. **Each question given below consists of a statement, followed by two arguments numbered I and II. You have to decide which of the arguments is a 'strong' argument and which is a 'weak' argument.**
Statement: Should new universities be established in India?
Arguments:
1.Yes. We have still not achieved the target for literacy.
2. No. We will have to face the problem of unemployed but highly qualified people.
(a) Only argument I is strong
(b) Only argument II is strong
(c) Either I or II is strong
(d) Both I and II are strong

Directions (66-70): study the following pie-chart carefully & answer the following questions.

Pie-chart given below shows the total number of passed candidates in different subjects in a class.

Total number of passed students = 12000
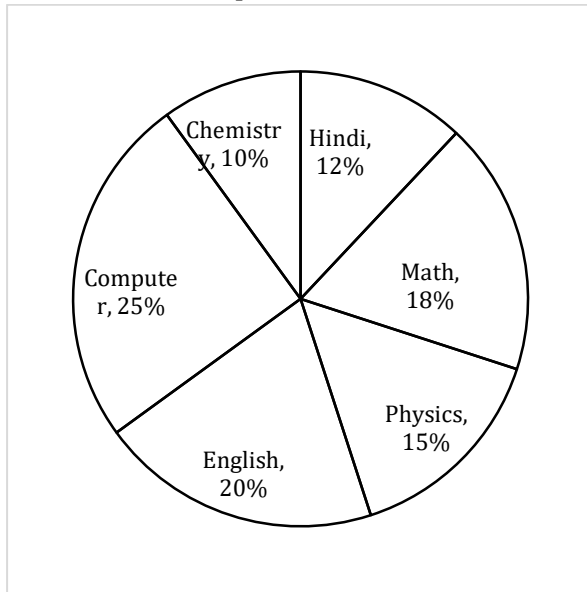
Q66. If the number of failed students in Hindi is 25% more than number of passed students in Hindi. Then number of failed students in Hindi is what percent of number of passed students in English?
(a) 80%
(b) 75%
(c) 55%
(d) 60%
(e) 70%

Q67. If total number of student who had taken exam of physics are 4000. Then find ratio of number of failed students in physics to number of passed students in chemistry?
(a) 11 : 6
(b) 13 : 6
(c) 11 : 5
(d) 3 : 2
(e) 2 : 1

Q68. If the total number of passed students are 25% of the total number of student in the class. Then total number of failed student is how much more/less than total number of passed students in computer, Math & Hindi together?
   (a) 28,800
   (b) 27,400
   (c) 26,200
   (d) 29,400
   (e) 29,600

Q69. Total number of passed students in English & physics together is what percent more/less than total number of passed students in chemistry & Hindi together?
   (a) $57\frac{1}{11}\%$
   (b) $59\frac{1}{11}\%$
   (c) $51\frac{2}{3}\%$
   (d) $43\frac{2}{5}\%$
   (e) $47\frac{1}{9}\%$

Q70. If the ratio of total number of passed to total number of students in class is 2 : 5. And the percentage distribution of failed students is same as that of the passed students in the class. Then find average number of failed student in chemistry & English?
   (a) 2200
   (b) 3200
   (c) 1500
   (d) 1700
   (e) 2700

Directions (71-75): The line graph given below shows the number of earphones manufactured and sold by a company "Boat" in six (2012, 2013, 2014, 2015 2016 & 2017) different years. (in '000).
Study the line graph carefully and answer the questions.

100

90

80

70

60

50

40

30

20

10

2012   2013   2014   2015   2016   2017

Manufactured   Sold

Q71. Find the difference between the number of earphones manufactured by Boat in the year 2013, 2015 and 2017 together and the number of earphones sold in year 2012, 2014 and 2016 together.
(a) 40000
(b) 33000
(c) 30000
(d) 18000
(e) 27000

Q72. Find the respective ratio of the number of earphones unsold in year 2013 and 2016 together to the number of earphones sold in year 2015.
(a) 3 : 5
(b) 4 : 5
(c) 5 : 3
(d) 2 : 3
(e) 2 : 5

Q73. Find the average number of earphones manufactured in the year 2012 and 2015.

(a) 80000
(b) 30000
(c) 50000
(d) 40000
(e) 70000

Q74. Find the number of earphones unsold in year 2017 is what percent of the total number of earphones manufactured in year 2012 and 2016 together.

(a) $\frac{100}{17}$%

(b) $\frac{200}{17}$%

(c) $\frac{150}{17}$%

(d) $\frac{150}{17}$%

(e) $\frac{50}{17}$%

Q75. Total earphones manufactured in year 2018 is 50% of the number of earphones manufactured in 2014 and number of sold earphones is 60%. Find the number of earphones unsold in year 2018.
(a) 14000
(b) 12000
(c) 10000
(d) 16000
(e) 18000

Directions (76-80): Study the charts given below carefully and answer the following questions.
Pie chart shows the percentage distribution of total Spectators of a particular city loving different sports as shown below.

Total Spectators = 14000
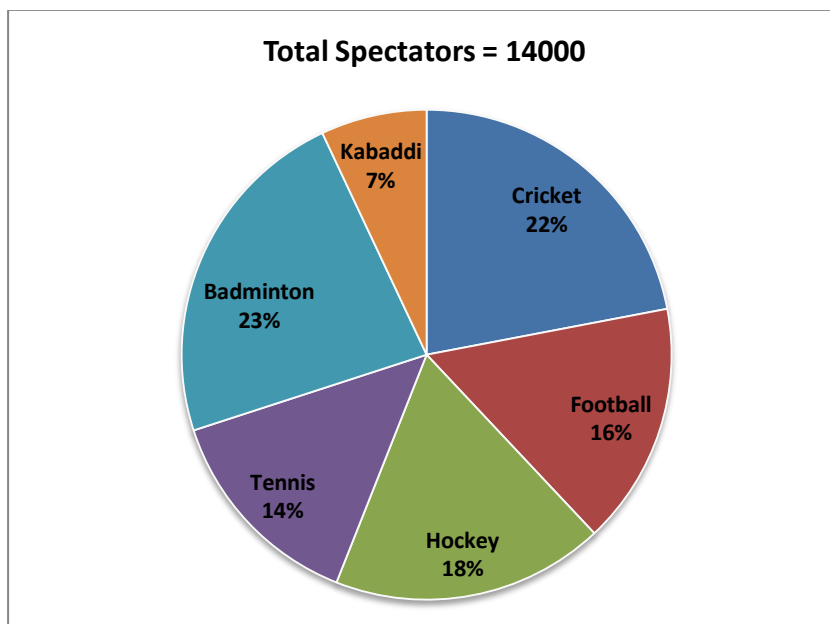
Q76.Total spectators of Badminton and kabaddi together is what percentage of total spectators of cricket and hockey together ?
(a) 70%
(b) 75%
(c) 80%
(d) 65%
(e) 60%

Q77. Find the ratio of total spectators of Football and tennis together to the total spectators of Cricket?
(a) 17:12
(b) 11:15
(c) 15:11
(d)12:17
(e) 13:18

Q78.Find the central angle of total spectators of badminton and tennis together?
(a) 79.2°
(b) 136.8°
(c) 115.2°
(d) 126°
(e) 133.2°

Q79.Out of total hockey spectators, male and female lovers are in the ratio 9: 6 respectively, then find difference between male and female spectators of hockey?
(a) 524
(b) 484
(c) 336
(d) 504
(e) 472

Q80.Total spectators of cricket and football together is how much more/less than total spectators of badminton and tennis together?
(a) 160
(b) 140
(c) 180
(d) 200
(e)None of these

Q81. 6 hours after a goods train passed a station, another train travelling at a speed of 56 km/hr following that goods train passed through that station. If after passing the station the train overtakes the goods train 10 hours. What is the speed of the goods train?
    (a) 42 km/hr
    (b) 52.5 km/hr
    (c) 35 km/hr
    (d) 28 km/hr

Q82.On an article the profit is 210% of the cost price. If the cost price increases by 40% but the selling price remains constant, then approximately what percentage of selling price will be the profit?
        (a) 55
        (b) 62
        (c) 74
        (d) 85

Q83. A boat travels 60 kilometers downstream and 20 kilometers upstream in 4 hours. The same boat travels 40 kilometers downstream and 40 kilometers upstream in 6 hours. What is the speed (in km/hr) of the stream?

(a) 24
(b) 16
(c) 18
(d) 20

Q84. In an examination, the average of marks was found to be 50. For deducting marks for computational errors, the marks of 100 candidates had to be changed from 90 to 60 each and so the average of marks came down to 45. The total number of candidates, who appeared at the examination, was

(a) 600
(b) 300
(c) 200
(d) 150

Q85. The marked price of a dress is Rs 2,340 which is 25% above the cost price. If the dress is sold at a profit of 10%, the profit earned on the dress is:
(a) Rs 234
(b) Rs 187.20
(c) Rs 197
(d) Rs 175.50

Q86. A, B, C, D are points on the circumference of a circle of radius 5 cm, such that ABD is equilateral triangle and AC is a diameter of circle. Find the area of quadrilateral ABCD?
(a) $15\sqrt{3}$ cm²
(b) $36\sqrt{2}$ cm²
(c) $9\sqrt{2}$ cm²
(d) $25\sqrt{3}$ cm²

Q87. Two Man leave the same place at the same time. One runs at 6 km/hr. towards north and the other at 2.5 km/hr. towards east. What will be the distance between them (in km) after 2 hours of travelling?

(a) 6.5 km
(b) 13 km
(c) 17 km
(d) 15 km

Q88. The mean high temperature of the first four days of a week is 25°C whereas the mean of the last four days is 25.5°C. If the mean temperature of the whole week is 25.2°C then the temperature on the 4th day is?

(a) 25.5°C

(b) 25.6° C
(c) 25°C
(d) 25.2°C

Q89. Average age of a team having 12 players is 23 years. If the age of the coach is also included, then the average age increases by 2 years. What is the age (in years) of the coach?
(a) 41
(b) 47
(c) 49
(d) 51

Q90. Two students appeared for an examination. One of them secured 23 marks more than the other and his marks were 60% of the sum of their marks. The marks obtained by them are
(a) 69 and 46
(b) 68 and 45
(c) 107 and 84
(d) 54 and 31

Q91. Train A crosses a pole in 25 sec and another train B crosses a Pole in 1 min 15 sec. The length of train A is half of the length of train B. What is the ratio between the speed of Train A and Train B?
(a) 3 : 2
(b) 3 : 4
(c) 4 : 3
(d) Cannot be determined

Q92. A joint family consists of 5 males, 4 females and some children. The average consumption per person per month is 1.5 kg. If the average consumption for male, female and children is respectively 1 kg. 1.25 kg and 2 kg then what is the number of children in the family?
(a) 5
(b) 7
(c) 6
(d) 8

Q93. The price of diamond is directly proportional to the square of its weight. A diamond broke into 4 pieces in the ratio of 1 : 2 : 3 : 4. The broken pieces got sold in Rs. 2,10,000 less. What was the actual price of the diamond?
(a) Rs. 3,00,000
(b) Rs. 4,00,000
(c) Rs. 2,00,000
(d) Rs. 5,00,000

Q94. A sum of Rs. 13,440 was distributed in two parts. The first part given on loan at 4% per annum for three years while the second part at 6% for 5 years. If interests accrued on both the parts were equal, then what was the difference between the parts?
 (a) Rs. 3840
(b) Rs. 3640
(c) Rs. 9600
(d) Rs. 5760

Q95. In a class with a certain number of students, if one new student weighing 50 kg is added, then the average weight of the class increased by 1 kg. If one more student weighing 50 kg is added, then the average weight of the class increases by 1.5 kg over the original average. What is the original average weight (in kg) of the class?
(a) 46
(b) 42
(c) 27
(d) 47

Q96. Two trains running in opposite directions cross each other in 7 sec. If the length of one of the trains is 150 m, then what will be the length of the other train if they are running at a speed of 50 km/h and 58 km/h respectively?
(a) 60 m
(b) 120 m
(c) 125 m
(d) 100 m

Q97. Four bells commence tolling together and toll at interval of 4 sec, 6 sec, 8 sec and 14 sec. If they toll together at 12 o'clock then at what time will they toll together again?
(a) At 12 : 02 : 48
(b) At 12 : 03
(c) At 12 : 03 : 20
(d) At 12 : 03 : 44

Q98. The train A left Delhi at noon sharp. Four hours later, another train B started from Delhi in the same direction. The train B overtook the train A at 10 p.m. Find the average speed of the both trains over this journey if the sum of their speed is 80 km/h.
(a) 40 km/h
(b) 50 km/h
(c) 37.5 km/h
(d) 36km/h

Q99. Profit of Rs. 277200 has to be divided among three partners Abdullah, Bhanudas and Chakor in the ratio 3 : 6 : 2. How much share (in Rs.) Chakorgets?
  (a) 50400
  (b) 151200
  (c) 75600
  (d) 252000

Q100. A trader had 13 quintals of wheat. He sold a part of it at 14% profit and the rest at 24% profit, so that he made a total profit of 18%. How much wheat did he sell at 24% profit?
  (a) 780 kg
  (b) 260 kg
  (c) 1040 kg
  (d) 520 kg

Solutions

S1. Ans.(d)
Sol. The correct answer is option d.
Refer to fifth paragraph where it mentions, '**Polio vaccination is still recommended worldwide to lower the risk of imported cases.**'

S2. Ans.(c)
Sol. The correct answer is option c.
Refer to the last paragraph, 'The **last case of type 2 was reported in 1999'**.

S3. Ans.(b)
Sol. The correct answer is option b.
Vigorous – carried out forcefully and energetically.
Synonyms – Resolute, Determined.

S4. Ans.(c)
Sol. The correct answer is option c.
Refer to the 5th paragraph where it mentions, 'Because of widespread vaccination, polio **was eliminated from the Western Hemisphere in 1994**.' And refer to the 2nd paragraph where it mentions, 'For a time, polio was called infantile paralysis, **though it did not affect only the young.**

S5. Ans.(b)
Sol. The correct answer is option b.
Refer to the 4th paragraph where it mentions, 'However, **better sanitary conditions meant that exposure to polio was delayed until later in life, on average, when a child had lost maternal protection and was also more vulnerable to the most severe form of the disease**.'

S6. Ans (b)
Sol. The correct answer is option b.
Refer to, 'However, India is at a point in the transition……... **Both undernourishment and obesity are caused by malnutrition** — if the former happens due to nutrient-deficient diet, the latter happens due to energy-rich but nutrient-deficient diet.

S7. Ans (d)
Sol. The correct answer is option d.
Nascent   - Beginning to exist or develop. Only recently formed or started, but likely to grow larger quickly
Synonyms – budding, formative, initial, original, elementary, fundamental, introductory, preliminary, preparatory, primitive.
Antonyms - advanced, developed, evolved, improved, refined, adult, mature.

S8. Ans (a)
Sol. The correct answer is option a.
Refer to, 'While **obesity seems like a rich man's problem, the answer is not that simple**. Studies have found that **people who face undernourishment early in life are more likely to become overweight.** In addition, with economic development, the number of overweight people initially increases among the wealthy, but later **the burden of obesity shifts from the high-income group to the low-income group.**

S9. Ans (b)
Sol. The correct answer is option b.
Refer to 'The report — considered the most authoritative global study tracking progress towards ending hunger and malnutrition — said that the number of **undernourished people in India declined from 249.4 million in 2004-06 to 189.2 million** in 2017-19.'

S10. Ans (d)
Sol. The correct answer is option d.
Refer to 'However, **India is at a point in the transition where undernourishment and obesity exist at the same time, which is also called the double burden of malnutrition**. Both undernourishment and obesity are caused by malnutrition — if the former happens due to a nutrient-deficient diet, the latter happens due to an energy-rich but nutrient-deficient diet.'

S11. Ans. (a)
Sol. As the selection is to be made thus "thing" should be made plural.

S12. Ans. (a)
Sol. If hardly, scarcely, barely and no sooner are in the initial position, the subject and the auxiliary verb are inverted.
And when a story is told in the past tense, the adverbials hardly, scarcely, barely and no sooner take past tense of verb.
For e.g. Hardly had I arrived home when my phone rang.
Hence option (a) improves the sentence.

S13. Ans. (b)
Sol. As the time mentioned is of structure **past of past** thus it should be "had captained".

S14. Ans. (d)

S15. Ans. (b)
Sol. Think is followed by preposition 'of' and a preposition is followed by gerund form of verb.

S16. Ans. (c)
Sol. **Vapid**: offering nothing that is stimulating or challenging; bland.
Charismatic: exercising a compelling charm which inspires devotion in others.
Uninspiring: not producing excitement or interest.
Dismissive: feeling or showing that something is unworthy of consideration.

S17. Ans. (a)

S18. Ans. (d)

S19. Ans (a)
Sol. The correct answer is option a.
The word that can be filled in the blank is, 'Revival'.
Revival- an improvement in the condition, strength, or fortunes of someone or something.
Wreckage - the state or fact of being rendered non-existent, physically unsound, or useless.
Equilibrium - a state in which opposing forces or influences are balanced.
Confide - to put (something) into the possession or safekeeping of another.

S20. Ans (c)
Sol. The correct answer is option c.
The word that can be filled in the blank is, 'Renowned'.
Renowned – known or talked about by many people; famous.
Unsung - not celebrated or praised.
Convivial- (of an atmosphere or event) friendly, lively, and enjoyable.
Proprietary – relating to an owner or ownership.

S21. Ans (a)
Sol. The correct answer is option a.
The word that can be filled in the blank is, 'Castigated'.
Castigated - to subject to severe punishment, reproof, or criticism.
Acquitted - to free from a charge of wrongdoing.
Foretold - predict (the future or a future event).
Accredited – (of a person, organization, or course of study) officially recognized or authorized.

S22. Ans (b)

Sol. The correct answer is option b.
The word that can be filled in the blank is, 'Address'.
Address – to deal with: TREAT.
Conveys - make (an idea, impression, or feeling) known or understandable.
Attribute - to explain (something) as being the result of something else.
Deduce - to form an opinion or reach a conclusion through reasoning and information.
Solution:

S23. Ans(b)
Sol. **Barrel**: a cylindrical container bulging out in the middle, traditionally made of wooden staves with metal hoops round them.
Gale: a very strong wind.
Cache: a collection of items of the same type stored in a hidden or inaccessible place.

S24. Ans(b)
Sol. **Chronometer**: an instrument for measuring time accurately in spite of motion or variations in temperature, humidity, and air pressure.
Cardiograph: an instrument for recording heart muscle activity, such as an electrocardiograph.
Crescograph: a device for measuring the growth in plants.

S25. Ans(c)
Sol. **Fuselage**: the main body of an aircraft.
Bonnet: the hinged metal canopy covering the engine of a motor vehicle.
Cockpit: a compartment for the pilot, and sometimes also the crew, in an aircraft or spacecraft.

S26. Ans (d)
Sol. The correct answer is option d.
Impeach - To make a claim of wrongdoing against.
Synonyms – Accuse, Charge, Criminate, Defame.
Antonyms - Absolve, Acquit, Clear, Discharge.

S27. Ans (d)
Sol. The correct answer is option d.
Dog's breakfast - It is an idiomatic expression which means, 'Something that is messy or poorly done'.
As per the context, the idiom – 'Dog's breakfast' best fits in the given sentence.
Hence, option (d) is the correct choice.

S28. Ans (d)
Sol. The correct answer is option d.
Bootlegger - Someone who makes, copies, or sells something illegally.
Footslogger - Fights on foot with small arms
Pettifogger   - An inferior legal practitioner, especially one who deals with petty cases or employs dubious practices.

Defogger   - A device that removes mist.
Option (d) portrays the same meaning as that of the given group of words & hence it is the correct choice

S29.Ans. (c)
Sol. Mischievous means to cause trouble in a playful way.

S30. Ans (c)
Sol. The correct answer is option c.
Anachronism - A chronological misplacing of persons, events, objects, or customs in regard to each other.
Whereas, meaning of other words –
Symmetallism - System of coinage in which the unit of currency consists of a particular weight of an alloy of two or more metals
Existentialism - A philosophical theory or approach which emphasizes the existence of the individual person as a free and responsible agent determining their own development through acts of the will.
Futilitarianism – It is a philosophical movement referring to the belief that all human activity (or endeavour) is futile.
Option (c) portrays the same meaning as that of the given group of words & hence it is the correct choice.

S31.Ans. (c)
Sol.
$122 = (11)^2 + 1$
$145 = (12)^2 + 1$
$226 = (15)^2 + 1$
Therefore, $? = (16)^2 + 1 = \mathbf{257}$

S32.Ans. (b)
Sol.

Only daughter of woman's father means the woman herself.
Therefore, the man is the son of that woman.

S33.Ans. (b)
Sol.
$18 - 3 + 2 \times 8 \div 6 = 14$
➔ $18 \div 3 \times 2 + 8 - 6 = 14$
➔ $6 \times 2 + 8 - 6 = 14$
➔ $12 + 8 - 6 = 14$
➔ $14 = 14$

S34.Ans. (a)
Sol.
except Brotherhood, all others are different stages of growth

S35.Ans. (d)
Sol.
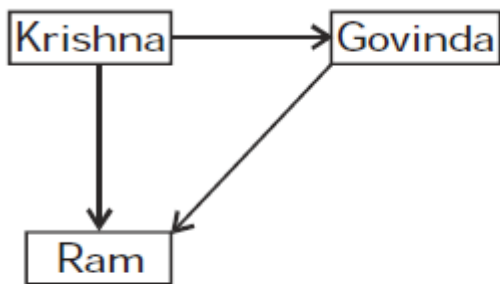
Ram's house is to the South-West of Govinda's house.

S36.Ans. (a)
Sol.
16 + 17 = 33
33 + 20 = 53
53 + 23 = 76
76 + 26 = 102
102 + 29 = **131**

S37.Ans. (b)
Sol.

```
P  R  A  B  A
↓  ↓  ↓  ↓  ↓
2  7  5  9  5
```

```
T  H  I  L  A  K
↓  ↓  ↓  ↓  ↓  ↓
3  6  8  4  5  1
```

Therefore,

```
B  H  A  R  A  T  H  I
↓  ↓  ↓  ↓  ↓  ↓  ↓  ↓
9  6  5  7  5  3  6  8
```

S38.Ans. (d)
Sol. There is no 'H' letter in thegiven word. Therefore, the word METHANE cannot be formed.

S39.Ans. (c)
Sol.

| LEFT | M / G | S | M / G | H | RIGHT |

Here M is Manish, G is Girish, S is Satish and H is Harish.

S40.Ans. (b)
Sol.
$(5)^2 = 25$
$(5)^3 = 125$
Similarly,
$(5)^4 = 625$
$(5)^5 = 3125$

S41.Ans. (b)
Sol.

Code for good is 7, code for pictures is 9

So, code for see is 3

S42.Ans. (c)
Sol.

$14 * 10 + 42 \div 2 - 8$

$= 140 + 21 - 8$

$= 153$

S43.Ans. (c)
Sol.
Logical Order Of Words:
d.Wear Uniform
c.Catch Bus
b.Attend Assembly
e.Get into classroom
a.Open Text book

S44.Ans. (d)
Sol.   The second is the unit of measurement of the first. Meter is the unit of length. Similarly, Watt is the unit of power.

S45.Ans. (c)
Sol.   There is no 'N' letter in the given word. Therefore, the word PANTHER cannot be formed.

S46.Ans. (a)
Sol. Given CAB = (3+1+2) x 2 + 1 = 13
FEED = (6+5+5+4) x 2 + 1 = 41
FADE = (6+1+4+5) x 2 + 1 = **33**

S47.Ans. (b)
Sol. As, second letter of all option is different So,
R in OPERATION is coded as A in BWDATXPBJ
A is given in option (B) so, it is the correct answer.

S48.Ans. (d)
Sol. Logic is: All letters are coded as the opposite alphabetical position.
So, HONESTY will be written as SLMVHGB

S49. Ans.(d)
Sol. Car runs on road.
Rail runs on Track.

S50. Ans.(d)
Sol. $102^2 = 10404$
$104^2 = 10816$

S51.Ans. (c)
Sol.
Except 1321, all other numbers are perfect cubes.
$5 \times 5 \times 5 = 125$
$8 \times 8 \times 8 = 512$
$12 \times 12 \times 12 = 1728$

S52.Ans. (b)
Sol.
$8 + 5 - 5 = 45$
➔ $8 \times 5 + 5 = 45$

$12 + 6 - 5 = 77$
➔ $12 \times 6 + 5 = 77$

$14 + 5 - 10$
➔ $14 \times 5 + 10$
➔ $70 + 10 = 80$

S53.Ans. (d)
Sol. Poster is fixed on the wall.
Similarly, Photograph is fixed in the Frame.

S54.Ans. (b)

Sol. The given number series is based on the following pattern:

133 − 14 = 119
119 − 14 = 105
105 − 14 = 91
91 − 14 = **77**

S55.Ans. (c)

Sol. Except the number 25, all others are Prime Numbers. The number 25 is a perfect square.

S56.Ans. (d)

Sol. The first is meant for the second.

S57. Ans.(b)

S58. Ans.(c)

Sol.
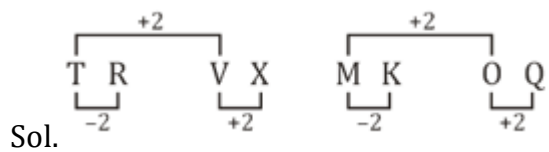
S59. Ans.(b)

Sol.

Z − 2 = X (Corresponding letter = C)

Y − 2 = W (Corresponding letter = D)

Same will follow for MK.

S60. Ans.(d)

Sol. $(2)^3 : (2 + 1)^3 :: (4)^3 : (4 + 1)^3$

S61. Ans.(d)

Sol.

Except radius other three are part of triangle.

S62.Ans. (a)

There is 2 alternate series

2   6   8   12   14

+4   +2   +4   +2

6   10   12   15   18

+4   +2   +3   +2
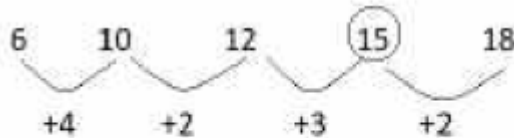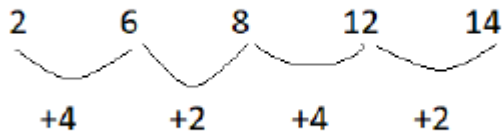
So, 15 is the wrong number.
Sol.

S63. Ans.(c)
Sol. x y z / z y x / x y z / z y x

S64. Ans.(a)
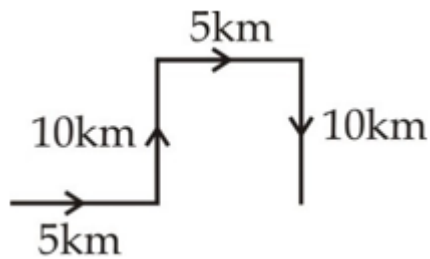
5km
→
10km ↑   ↓ 10km
→
5km
Sol.

S65. Ans.(d)
Sol.

S66.Ans.(b)
Passed student in Hindi = $\frac{12}{100} \times 12,000 = 1440$
Failed student in Hindi = $1440 \times \frac{125}{100} = 1800$
Passed student in English = $12,000 \times \frac{20}{100} = 2400$
Required percentage = $\frac{1800}{2400} \times 100 = 75\%$

S67.Ans.(a)

Total passed student in Physics = $\frac{15}{100} \times 12{,}000 = 1800$

Passed student in Chemistry = $\frac{10}{100} \times 12{,}000 = 1200$

Required Ratio = $\frac{4000 - 1800}{1200} = \frac{2200}{1200} = 11 : 6$

S68.Ans.(d)

25% of total student = 12,000

total student = 48,000

Total failed student = 48,000 – 12,000 = 36,000

Total passed student in Computer, Math and Hindi together = $\frac{55}{100} \times 12{,}000 = 6{,}600$

Required difference = 36,000 – 6,600 = 29,400

S69.Ans.(b)

Required percentage = $\frac{(20 + 15) - (10 + 12)}{(10 + 12)} \times 100$

$= \frac{35 - 22}{22} \times 100 = 59\frac{1}{11}\%$

S70.Ans.(e)

Total failed student = $\frac{12000}{2} \times 3 = 18{,}000$

Required average = $\frac{1}{2}\left[\frac{10 + 20}{100}\right] \times 18{,}000 = 2{,}700$

S71. Ans.(c)

Sol.

Total number of earphones manufactured in year 2013, 2015 and 2017 together

= 30000+50000+60000=1,40,000

Total number of earphones sold in year 2012, 2014 and 2016 together

= 60000 + 50000 + 60000 = 170000

Required difference = 30,000

S72. Ans.(a)

Sol.

Number of earphones unsold in year 2013 and 2016

$= (30000 - 20000) + (80000 - 60000) = 30000$

Required ratio = $\frac{30000}{50000} = \frac{3}{5}$

S73. Ans.(e)

Sol.

Required average = $\frac{90000 + 50000}{2} = \frac{140000}{2} = 70000$

S74. Ans.(b)

Sol.

Earphones unsold in year 2017 = $60000 - 40000 = 20000$

Required percentage = $\frac{20000}{170000} \times 100 = \frac{200}{17}\%$

S75. Ans.(a)
Sol.
Manufactured earphones in year 2018 = $\frac{50}{100} \times 70000 = 35000$

Earphones unsold in year 2018 = $35000 \times \frac{40}{100} = 14000$

S76. Ans(b)
Total spectators of Badminton and kabaddi together=$14000 \times \frac{23}{100} + 14000 \times \frac{7}{100}$
=3220+980
=4200
Total spectators of cricket and hockey together= $14000 \times \frac{22}{100} + 14000 \times \frac{18}{100}$
=3080+2520
=5600
Required percentage=$\frac{4200}{5600} \times 100$
=75%

S77. Ans(c)
Sol. Total spectators of Football and tennis together=$14000 \times \frac{16}{100} + 14000 \times \frac{14}{100}$
=2240+1960
=4200
Total spectators of Cricket = $14000 \times \frac{22}{100} = 3080$
Required ratio =$\frac{4200}{3080}$
=15:11

S78. Ans(e)
Sol.
central angle of total spectators of badminton and tennis together
=$(23+14) \times \frac{360}{100}$
=133.2°

S79. Ans(d)
Sol.
Total male spectators of hockey =$14000 \times \frac{18}{100} \times \frac{9}{15}$
=1512
Total female spectators of hockey =$14000 \times \frac{18}{100} \times \frac{6}{15}$
=1008
Required difference=1512-1008
=504

S80. Ans(b)
Sol.
Total spectators of cricket and football together=$14000 \times \frac{22}{100} + 14000 \times \frac{16}{100}$
=3080+2240

=5320

Total spectators of badminton and tennis together=14000×$\frac{23}{100}$ + 14000×$\frac{14}{100}$

=3220+1960

=5180

Required difference=5320 -5180
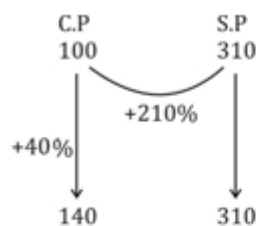
=140

S81. Ans.(c)

Sol.

Let the speed of goods train be x km/hr

ATQ,

Distance travelled by goods train in 16 hours is equal to the distance travelled by other train in 10 hours

16 × x =10 × 56

x = 35 km/hr

S82. Ans.(a)

Sol.

∴ Profit % on S.P = $\frac{310-140}{310}$ × 100 = $\frac{170}{310}$ × 100 ≈ 55%

S83.Ans.(b).

Sol.

Let the speed of Boat = B km/hr

And the speed of stream = S km/hr

∴ $\frac{60}{B+S} + \frac{20}{B-S} = 4$

$\frac{40}{B+S} + \frac{40}{B-S} = 6$

∴ By solving. B = 24, S = 16

∴ Speed of the stream = 16 km/hr.

S84. Ans.(a)

Sol.

$50x - 30 × 100 = 45x$

$x = 600$

S85. Ans.(b)
Sol.

$$25\% = \frac{1}{4}$$

CP   MP

4   5

1872 ← 468   468 →2340

10% profit = $1872 \times \frac{10}{100}$

= 187.20 Rs

S86. Ans.(d)
Sol.
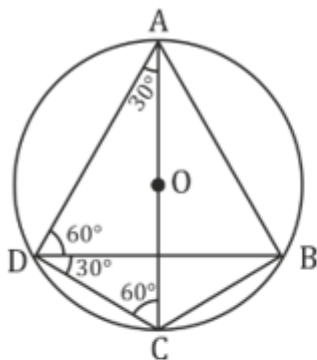
AC = 10 cm

In ΔADC

AD = $5\sqrt{3}$ cm

CD = 5 cm

Area of ΔADC = $\frac{1}{2} \times 5\sqrt{3} \times 5$

= $\frac{25\sqrt{3}}{2}$ cm^2

Therefore area of quadrilateral ABCD = $\frac{25\sqrt{3}}{2} \times 2 = 25\sqrt{3}$ cm

S87.Ans. (b)
Sol.
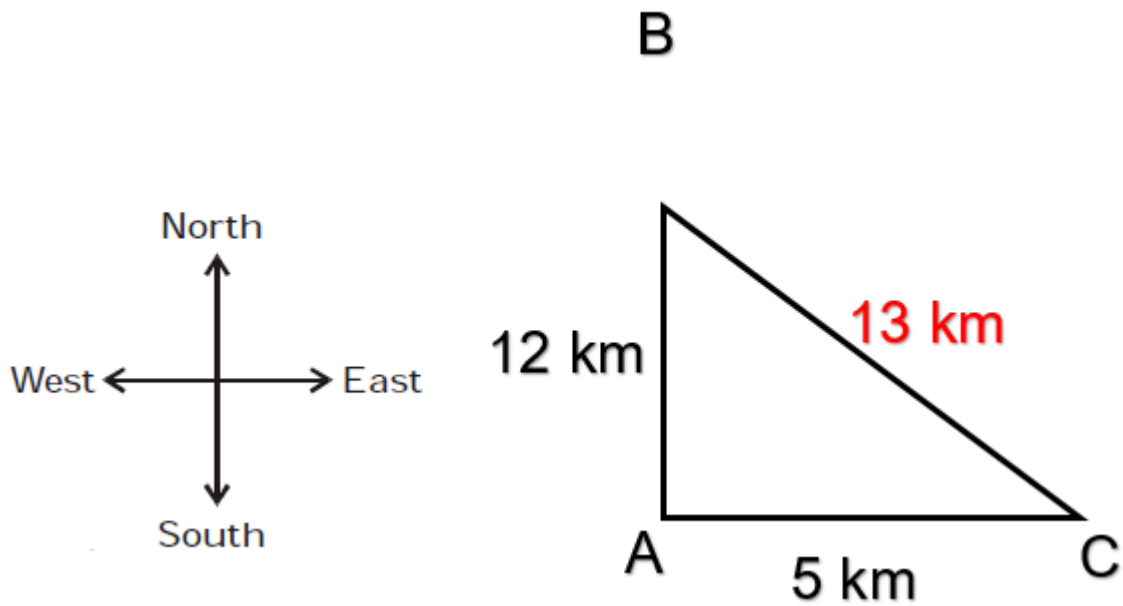
The person moves towards north will travel 12 km in 2 hours at speed 6km/hr.
And the person moves towards east will travel 5 km in 2 hours at speed 2.5km/hr.

So the distance between them after 2 hours

$BC = \sqrt{AB^2 + AC^2}$
$= \sqrt{12^2 + 5^2}$
$= \sqrt{144 + 25}$
$= \sqrt{169} = 13$ km

S88.Ans. (b)
Sol.
Temperature on 4th day
= (4 × 25 + 4 × 25.5 – 25.2 × 7)°C
= (100 + 102 – 176.4)°C
= 25.6°C

S89. Ans.(c)
Sol.
Req. age of coach = 13 × 25 – 12 × 23 = 49

S90. Ans.(a)
Sol.

Let the marks scored by two candidates be x & (x + 23)
ATQ,

$$(x + 23) = \frac{60}{100}[x + x + 23]$$

$\Rightarrow x = 46$

So, the marks scored are 46 & 69

S91. Ans.(a)
Sol.
If length of train A is ℓ, the length of train B is 2ℓ

$\therefore$ Ratio of speed $= \dfrac{\ell/25}{2\ell/75} = \dfrac{3}{2}$

S92. Ans.(b)
Sol.
Let the no. of children in family is x.

$(5 + 4 + x) \times \dfrac{3}{2} = 5 \times 1 + 4 \times \dfrac{5}{4} + x \times 2$

So, $x = 7$

S93. Ans.(a)
Sol.
A.T.Q.
If price of diamond is P. Then
$P\{(1 + 2 + 3 + 4)^2 - (1^2 + 2^2 + 3^2 + 4^2)\} = 2,10,000 \times (1 + 2 + 3 + 4)^2$
$P(100 - 30) = 210000 \times 10^2$
$P = 3,00,000$

S94. Ans.(d)
Sol.

$\dfrac{p_1 r_1 t_1}{100} = \dfrac{p_2 r_2 t_2}{100}$

$\dfrac{p_1}{p_2} = \dfrac{r_2 t_2}{r_1 t_1} = \dfrac{6 \times 5}{3 \times 4} = \dfrac{5}{2}$

I part $= \dfrac{5}{2+5} \times 13440 = 9600$

Second part $= \dfrac{2}{2+5} \times 13440 = 3840$

So, diff $= 9600 - 3840 = 5760$

S95. Ans.(d)
Sol.

No. of students = x and avg. weight = y

$$\frac{xy + 50}{x + 1} = y + 1$$

x + y = 49 ....(i)

$$\frac{xy + 50 + 50}{x + 2} = y + 1.5$$

1.5x + 2y = 97 ......(ii)

y = 47

S96. Ans. (a);
Sol.

$$(150 + l_2) = (50 + 58) \times \frac{5}{18} \times 7$$

$$l_2 = 60\,m$$

S97. Ans.(a)
Sol.
L.C.M. of 4, 6, 8, 14 sec = 168 sec = 2 min 48 sec.

S98. Ans.(c)
Sol.

Delhi $\vdash\!\!\longrightarrow$

12 : 00noon   A → 10 p.m.

4 : 00 pm   B → 10 p.m

Both the trains are moving in the same direction.

Train B started 4 hours later from train A.

	A	:	B
Time	10	:	6
Speed	3	:	5

Let speed A= 3x and B = 5x

From question

3x + 5x = 8x → 80

x→10

Speed of A = 3 × 10 = 30 km/h

Speed of B = 5 × 10 = 50 km/h

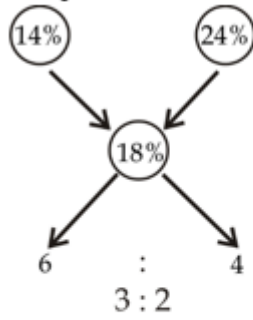$\therefore$ *Average speed* $= \frac{2 \times 30 \times 50}{50 + 30} = 37.5\ kmph$

S99. Ans.(a)
Sol.

Chakor's profit $= \frac{277200}{(3+6+2)} \times 2$

= Rs 50400

S100. Ans.(d)
Sol.
ATQ,

6 : 4
3 : 2

∴ Wheat sold at 24% profit

$= \frac{13 \times 100}{5} \times 2$

=520 kg