### General Intelligence and Reasoning

**1.** After interchanging the given two signs, what will be the value of equation (I) and (II) respectively?
× and +, 3 and 9
I. $7 \times 9 - 8 \div 2 + 3$       II. $4 \times 9 - 3 + 8 \div 2$
**1.** 0, 1        **2.** – 26, – 29   **3.** 6, 0        **4.** 12, 13

**2.** In a certain code language, 'BEHOLD' is written as 'BDEHLO' and 'INDEED' is written as 'DDEEIN'. How will 'COURSE be written in that language?
**1.** CEROSU    **2.** CEORUS  **3.** CEOSUR  **4.** CEORSU

**3.** Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)
Library : Books :: Museum : ?
**1.** Building     **2.** Artefacts   **3.** People      **4.** Gallery

**4.** Which of the following numbers will replace the question mark(?) in the given series?
382, 322, 272, 232, 202?
**1.** 168        **2.** 150         **3.** 182        **4.** 132

**5.** Select the option in which the given figure is embedded (rotation is NOT allowed).


**6.** Select the correct combination of mathematical signs, to replace the * signs, and balance the given equation.
21 * 4 * 156 * 13 * 11 = 83
**1.** –, ÷, ×, +   **2.** ×, +, ÷, –  **3.** ×, –, ÷, +  **4.** +, ÷, –, ×

**7.** Which of the following letter-clusters will replace the question mark(?) in the given series?
PK, GT, XC, OL, ?
**1.** GT          **2.** HS         **3.** EV          **4.** FU

**8.** Select the set in which the numbers are related in the same way those of the following set.
(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.)
(3, 14, 1)
(4, 36, 2)
**1.** (8, 12, 2)     **2.** (5, 81, 4)    **3.** (7, 40, 3)    **4.** (8, 260, 2)

**9.** Select the correct combination of mathematical signs to replace the * signs sequentially and to balance the given equation.
12 * 24 * 4 * 2 * 60
**1.** +, ×, ÷, =   **2.** –, ×, –, =   **3.** +, ×, –, =   **4.** +, ÷, ×, =

**10.** Three of the following four letter-clusters are alike in a certain way and one is different.
Pick the odd one out.
**1.** HGF          **2.** RQP         **3.** UVW         **4.** LKJ

**11.** Select the option that is related to the third word in same way as the second word is related to the first word. (The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)
Phone : Talk : Television : ?
**1.** Remote       **2.** View        **3.** Read        **4.** Channel

**12.** Select the cube that can be formed by folding the given sheet along the lines.

**1.** None are possible              **2.** Only A and B
**3.** Only C and D                   **4.** Only A

**13.** Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown below.

P
BLZK541M ┃
Q

**1.** ИTⱯᏚᏔ⊃ᏂᏂⱯ   **2.** BLZK541M 3. ⅃MⱯᏚᏔ⊃Ꮓ⅃Ᏼ 4. ⅃MⱯᏚᏔ᎓ᏂᏂⱯ⅃Ᏼ

**14.** Select the figure that will replace the question mark(?) in the following figure series.


**15.** Read the given statements and conclusion carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.
**Statements:**
All cards are boxes.
All boxes are torches.
All touches are shoes.
**Conclusions:**
**I.** All shoes are torches.       **II.** All torches are boxes.
**III.** All boxes are cards.       **IV.** All cards are shoes.
**1.** Only conclusion IV follows.
**2.** Only conclusion I and III follow.
**3.** Only conclusion I and II follow.
**4.** Only conclusion III follows.

**16.** In a certain code language, FRUCTUS is coded as 108, and SPRINTER is coded as 119. How will MASCULINE be coded in that language?
**1.** 96          **2.** 99          **3.** 97          **4.** 98

**17.** In the following question, below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.

**Statements:**

I. All W are S.      II. No D is W

**Conclusion:**

I. Some S are W.      II. All S are D.

III. No W is D.

**1.** Only conclusion III follows.

**2.** Both conclusions I and III follow.

**3.** Both conclusions I and II follow.

**4.** All conclusions follow.

**18.** A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

NMRQ, NDZG, NUHW, NLPM, ?

**1.** NQRC      **2.** NCXC      **3.** NHMH      **4.** MQRQ

**19.** Which figure should replace the question mark(?) if the series continues?

| 4 | B | V | V | T | O | T | O | 6 | 6 | 2 | V | | | |
| | I | | | 6 | | | 4 | | | 9 | | | ? | |
| 2 | T | O | 4 | B | 2 | B | 2 | V | T | O | B | | | |

| **1.** | | | **2.** | | | **3.** | | | **4.** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | V | 9 | B | 6 | 2 | T | 9 | 6 | T | 9 | 6 |
| | T | | | V | | | O | | | O | |
| O | B | 6 | 9 | T | O | B | 2 | V | B | 2 | V |

**20.** Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

19 : 324 :: 25 : 576 :: 9 : ?

**1.** 16      **2.** 64      **3.** 88      **4.** 72

**21.** After arranging the given words according to the dictionary order, which word will come at the 'fifth' position?

1. Popular    2. Population   3. Populace    4. Pope
5. Poppy

**1.** Population    **2.** Poppy      **3.** Popular      **4.** Pospulace

**22.** Select the set in which the numbers are related in the same way as those of the following sets.

(NOTES: Operations should be performed on the whole numbers, without breaking down the number into its constituent digits. For example: 13 – Operation on 13 such as adding/subtracting/multiplying, etc. can be preformed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(20, 6, 4)

(24, 7, 5)

**1.** (65, 9, 4)    **2.** (22, 5, 2)    **3.** (40, 8, 5)    **4.** (42 ,7, 3)

**23.** A # B means 'A is the sister of B'.

A @ B means 'A is the husband of B'.

A % B means 'A is the father of B'.

If, A % B & C # D @ E, then how is B related to E?

**1.** Brother    **2.** Son-in-law **3.** Father      **4.** Son

**24.** If A × B means, A is the brother of B, A - B means that, A is the sister of B, A + B means, A is the father of B, then which of the following expressions shows that P is the paternal aunt of R?

**1.** P – Q × R    **2.** P– Q + R    **3.** P × Q + R **4.** P + Q – R

**25.** Select the odd groups of numbers. (NOTE: Operation should be performed on the whole number, without breaking down the numbers into its constituent digits. For example: 13 - Operations on 13 such as adding/subtracting/multiplying, etc. can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

**1.** (7 – 343 – 331)      **2.** (6 – 216 –206)

**3.** (5 – 125 – 115)      **4.** (4 – 64 – 54)

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### General Awareness

**26.** The term 'Back-stick' is used in which of the following games/sports?

**1.** Basketball    **2.** Badminton **3.** Hockey    **4.** Volleyball

**27.** Which of the following festivals in Punjab is celebrated to commemorate the formation of the Khalsa Panth?

**1.** Lohri      **2.** Hola Mohalla

**3.** Teej      **4.** Baisakhi

**28.** What theme was decided to celebrate the second 'International Day of Yoga' in India?

**1.** Yoga for the Achievement of the Sustainable Development Goals

**2.** Yoga for Peace

**3.** Yoga for Wellness      **4.** Yoga for Heart

**29.** Chemical formula of quick lime is _____.

**1.** $CaO$    **2.** $CO_2$    **3.** $CaCO_3$    **4.** $Ca(OH)_2$

**30.** What is the unit of work done ?

**1.** Watt      **2.** Decibel    **3.** Ampere    **4.** Joule

**31.** Which of the following sites does "Not" have nuclear power plant ?

**1.** Vijayawada      **2.** Naraura

**3.** Tarapur      **4.** Rawat Bhata.

**32.** The Ramakrishna mission stressed the ideal of _____ through social service and selfless action.

**1.** bhakti      **2.** education **3.** salvation    **4.** God

**33.** International Non-Violence Day is observed on:

**1.** 15 August      **2.** 31 October

**3.** 2 October      **4.** 14 November

**34.** Which of the following dynasties established the kingdom of Vijayanagara ?

**1.** Sangama Dynasty      **2.** Nagama Dynasty

**3.** Soma Dynasty      **4.** Tuluva Dynasty

**35.** When was 'Vayudoot' airline setup in India ?

**1.** 1981      **2.** 1991      **3.** 1971      **4.** 1969

**36.** Wearing away of landscape by different agents like water, wind and ice is called _____.

**1.** weathering      **2.** erosion

**3.** metamorphosis      **4.** sedimentation

**37.** Who has been appointed as the new chairman of the Central Board of Direct Taxes in June 2022?

**1.** Nitin Gupta      **2.** Nidhi Chibber

**3.** Ashish Jha      **4.** M. Jagadesh Kumar

**38.** Who among the following is known as 'Sarod Samrat' in Indian Classical Music ?

**1.** Pandit Ravishankar Prasad

**2.** Aamir Ali Khan      **3.** Amjad Ali Khan

**4.** Kishan Maharaj

**39.** Which of the following is NOT one of the methods of national income estimation ?

**1.** Banking method      **2.** Expenditure method

**3.** Product method      **4.** Income method

**40.** The term 'Parliament' refers to the _____.

**1.** Rajya Sabha      **2.** Lok Sabha

**3.** State legislature      **4.** National legislature

**41.** The Chief Minister of which state has inaugurated a project of the Women and Child Development Department to provide mike and eggs to children at all anganwadis in the state in a bid to improve their nutrition levels ?

**1.** Andhra Pradesh      **2.** Kerala

**3.** Karnataka      **4.** Tamil Nadu

**42.** 'Camel protection and Development Policy' has been announced by the government of _____.

**1.** Rajasthan    **2.** Punjab    **3.** Gujarat      **4.** Ladakh

43. Who among the following Presidents of India was also the deputy chairman of planning commission?
   1. V.V. Giri    2. K.R. Narayanan
   3. Ramaswamy Venkataraman  4. Pranab Mukherjee

44. In Golgi apparatus, the maturing face is:
   1. spherical    2. convex    3. bi-concave  4. concave

45. Raja Ram Mohan Roy founded a reform association known as Brahmo Sabha, which was later known as _____.
   1. Dev Samaj              2. Arya Samaj
   3. Brahmo School          4. Brahmo Samaj

46. _____ part of xylem tissue in plants stores food.
   1. Vessels                2. Xylem fibres
   3. Xylem parenchyma       4. Tracheids

47. Who among the following composers won the Grammy in 2015 for his album 'Winds of Samsara' – a collaboration with South African flautist Wouter Kellerman?
   1. Mano Murthy            2. Raghu Dixit
   3. Subhashish Ghosh       4. Ricky Kej

48. In which of the following Indian states, Harappan cities have NOT been found?
   1. Uttarakhand            2. Gujarat
   3. Rajasthan              4. Haryana

49. Burning of coal is an example of _____.
   1. decomposition reaction
   2. double displacement reaction
   3. combination reaction
   4. displacement reaction

50. The foremost right among rights to freedom is_____.
   1. Right to life and personal liberty
   2. Preventive detention
   3. Freedom to assemble
   4. Right to freedom of speech and expression

## Quantitative Aptitude

51. A dishonest merchant sells goods at a 12.5 % loss on the cost price, but uses 28 g weight instead of 36 g. What is his percentage profit or loss?
   1. 6.25 % loss            2. 12.5% gain
   3. 18.75% gain            4. 10.5% loss

52. The HCF of two numbers is 12. Which one of the following can never be their LCM?
   1. 72        2. 60        3. 90        4. 84

53. Two circles touch each other externally at P. AB is a direct common tangent to the two circles, A and B are points of contact, and $\angle$ PAB = 40°. The measure of $\angle$ ABP is:
   1. 45°       2. 55°       3. 50°       4. 40°

54. The mean proportion of 169 and 144 is:
   1. 156       2. 147       3. 126       4. 165

55. The length and breadth of a rectangle are increased by 8% and 5%, respectively. By how much percentage will the area of the rectangle increase?
   1. 13.4%     2. 15.4%     3. 12.4%     4. 16.4%

56. Simplify $\dfrac{\cos 45°}{\sec 30° + \mathrm{cosec}\, 30°}$

   1. $\dfrac{3\sqrt{2} + \sqrt{6}}{8}$   2. $\dfrac{\sqrt{3}}{2\sqrt{2} - 2\sqrt{6}}$   3. $\dfrac{3\sqrt{2} - \sqrt{6}}{8}$   4. $\dfrac{\sqrt{3}}{2\sqrt{6} - 2\sqrt{2}}$

57. Which of the following numbers is a divisor of $(49^{15} - 1)$?
   1. 46        2. 14        3. 8         4. 50

58. In a 1,500 m race, Anil beats Bakul by 150 m and in the same race, Bakul beats Charles by 75 m. By what distance does Anil beat Charles?
   1. 217.50 m    2. 200.15 m   3. 293.50 m   4. 313.75 m

59. ₹ 2,500 when invested for 8 years at a given rate of simple interest per year, amounted to ₹ 3,725 on maturity. What was the rate of simple interest that was paid per annum?
   1. 6%        2. 6.125%     3. 6.25%      4. 5.875%

60. The following table shows the number of pages printed by 3 printers during 3 days.

| Printers | X | Y | Z |
|---|---|---|---|
| Days | | | |
| Monday | 130 | 140 | 210 |
| Tuesday | 110 | 145 | 160 |
| Wednesday | 180 | 90 | 218 |

What is the average number of pages printed by printer Z during the 3 days?
   1. 196       2. 194        3. 192        4. 190

61. The batting average for 27 innings of a cricket player is 47 runs. His highest score in an inning exceeds his lowest score by 157 runs. If these two innings are excluded, the average score of the remaining 25 innings is 42 runs. Find his highest score in an inning.
   1. 176       2. 188        3. 186        4. 174

62. P and Q can complete a project in 15 days and 10 days, respectively. They started doing the work together, but after 2 days, Q had to leave and P alone completed the remaining work. In how many days was the whole work completed?
   1. 11        2. 12         3. 13         4. 10

63. The pie chart given below shows the number of trucks sold by 8 different companies. The total number of trucks sold by all these 8 companies is 4000. The number of trucks sold by a particular company is shown as a per cent of the total number of trucks by all these 8 companies.
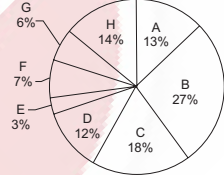


The number of trucks sold by B, C, F and H is how much per cent less than the number of trucks sold by all these 8 companies?
   1. 46 per cent   2. 22 per cent  3. 34 per cent  4. 14 per cent

64. If $x^2 - 5x + 1 = 0$, then the value of $\dfrac{x^6 + x^4 + x^2 + 1}{5x^3} = ?$
   1. 30        2. 25         3. 23         4. 28

65. In a right-angled triangle PQR, right-angled at Q, the length of the side PR is 17 units, length of the base QR is 8 units and length of the side PQ is units. If $\angle$ RPQ = $\alpha$, then sin $\alpha$ + cos $\alpha$ is:
   1. $\dfrac{18}{17}$   2. $\dfrac{23}{17}$   3. $\dfrac{21}{17}$   4. $\dfrac{15}{17}$

66. If $\dfrac{(17)^3 + (7)^3}{(17^2 + 7^2 - k)} = 24$, then what is the value of $k$?
   1. 119       2. 128        3. 24         4. 109

67. The circumference of the two circles is 198 cm and 352 cm, respectively. What is the difference between their radii?
   1. 45 cm     2. 16.5 cm    3. 49.5 cm    4. 24.5 cm

68. Radius of a circle is 10 cm. Angle made by chord AB at the centre of this circle is 60 degree. What is the length of this chord?
   1. 40 cm     2. 20 cm      3. 30 cm      4. 10 cm

69. How many spherical lead shots, each of diameter 8.4 cm can be obtained from a rectangular solid of lead with dimensions 88 cm, 63 cm, 42 cm $\left(\text{take } \pi \dfrac{22}{7}\right)$?
   1. 920       2. 750        3. 650        4. 860

70. The table given below shows the number of spoons manufactured by five factories.

| Factory | Spoon |
| --- | --- |
| P | 100 |
| Q | 200 |
| R | 150 |
| S | 50 |
| T | 250 |

What is the ratio of the number of spoons manufactured by P to the number of spoons manufactured by R?
1. 3 : 2        2. 2 : 3        3. 14 : 1        4. 1 : 3

71. In the triangle ABC, AB =12 cm and AC = 10 cm, and ∠ BAC = 60°. What is the value of the length of the side BC?
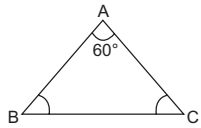


1. 10 cm        2. 7.13 cm        3. 13.20 cm        4. 11.13 cm

72. The value of $\tan^2\theta + \cot^2\theta - \sec^2\theta\,\text{cosec}^2\theta$ is:
1. 2        2. – 2        3. 0        4. 1/2

73. The following bar graph shows the sales of books (in thousands) from six branches of a publishing company during two consecutive years 2018 and 2019.
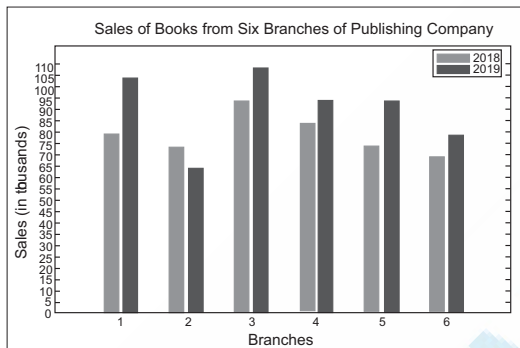


What is ratio of the total sales of the first branch for both years to the total sales of the fourth branch for both years?
1. 4 : 3        2. 5 : 9        3. 8 : 11        4. 7 : 9

74. If $\dfrac{4\left[(17)^3 - (7)^3\right]}{(17^2 + 7^2 + p)} = 40$, then what is the value of P?
1. – 119        2. – 129        3. 119        4. 129

75. Riya could not decide between discount of 30% or two successive discounts of 25% and 5% both given on shopping of ₹ 3,840. What is the difference between both the discounts?
1. ₹ 44        2. ₹ 48        3. ₹ 42        4. ₹ 46

## English Comprehension

76. The sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
   A. When this extra water vapour condenses into precipitation, it results in heavier rain or, if it's cold enough, heavier snow.
   B. The atmosphere can store an additional 4% of water vapour from every additional 1°F of warming.
   C. More water evaporates from soils, plants, lakes and seas as the atmosphere warms.
   D. One of the most obvious indications of climate change is heavier rainfall.
   1. CBDA        2. DCBA        3. ACDB        4. BCAD

77. Select the correct indirect form of the given sentence. She said, ''I am in no mood to work now.''
   1. She said that she has been in no mood to work then.
   2. She said that she was in no mood to work now.
   3. She said that she was in no mood to work then.
   4. She said that she has been in no mood to work now.

78. Select the correct passive form of the given sentence. Manu will tell her later.
   1. She will be tell later by Manu
   2. She will tell later by Manu
   3. She will be told later by Manu.
   4. She will be tell later.

79. Select the correct active form of the given sentence. Has the villa been occupied by them?
   1. Did they occupied the villa?
   2. Had they occupied the villa?
   3. Have they occupied the villa?
   4. Do they occupied the villa?

80. In the given sentences, one word may have been incorrectly spelt. Select the correctly spelt word from the given alternatives. If there is no error, select 'No error' as your answer.
   The erroneous information spread rapidly across the nation and created a stir.
   1. erronous        2. No error        3. eronneous        4. errauneous

81. Select the most appropriate ANTONYM of the word ''sinks'' from the given sentence.
   Groups work together to create Christmas parade themes, which are then carried out in floats, musical groups, and strolling figures.
   1. floats        2. create        3. parade        4. strolling

82. Select the most appropriate option to fill in the blank.
   The angles are equal, consequently the sides are _____.
   1. equal        2. unequal        3. larger        4. smaller

83. Select the most appropriate meaning of the given idiom. Like a cakewalk
   1. Smooth surface        2. Pleasant experience
   3. Easy task        4. Active

84. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No' substitution'.
   After finishing high school, I plan to pursuing law.
   1. No substitution        2. plan to pursue
   3. plan in pursue        4. plan to pursue

85. Select the most appropriate synonym of the given word. Confusion
   1. Intrepidity    2. Stagnation    3. Perusal        4. Commotion

86. Select the most appropriate option to substitute the underlined segment in the given sentence.
   Our guests arrived; they are sitting in the garden.
   1. shall arrive        2. have arrived
   3. are arriving        4. might arrive

87. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.
   During an earthquake,/ it is advised to take/ cover above a table/ to save your life.
   1. cover above a table        2. During an earthquake
   3. it is advised to take        4. to save your life.

88. Select the INCORRECTLY spelt word.
   1. Finery        2. Hiest        3. Cringe        4. Defer

89. Select the most appropriate meaning of the given idiom. All eyes
   1. Watching with anger        2. Watching eagerly
   3. Watching with no interest    4. Not watching at all

90. Select the most appropriate option that can substitute the underlined segment in the given sentence.

He was looking into his book for the last two hours but couldn't find it.
1. looking down on his book  2. looking above his book
3. looking for his book      4. looking after his book

**91.** Select the most appropriate collocating word to fill in the blank.
Ram was praised for his _____ leadership.
1. imaginary  2. visionary  3. magical  4. broad

**92.** Select the most appropriate word segment for the underlined word in the given sentence.
Pintu has been advised to reduce smoking by his family doctor
1. cut down  2. less down  3. lowerdown  4. up down

**93.** Select the most appropriate ANTONYM of the given word. (Rebellion)
1. Uprising  2. Loyalty  3. Sedition  4. Allotment

**94.** Select the most appropriate ANTONYM of the given word. (Hospitality)
1. Complaint  2. Cordiality  3. Coldness  4. Wrathful

**95.** Select the sentence with the appropriate use of adverb of manner.
1. He done his work regularly
2. He has just done his work.
3. He does his work carefully.
4. He has done his work on my table

**Comprehension:**
In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Digital India can be the prime (1) _____ behind making a reality of the government's promise of minimum government, maximum governance. Such a transformation requires technology to be firmly (2) _____ into government, something that the Digital India project lists as one of its foremost objectives. Embedding technology into government (3) _____ will do three things: transform the government and make it more transparent and efficient, transform the lives of citizens, especially those at the bottom of the (4) _____ pyramid and make our economy more efficient and competitive. A 2014 McKinsey Global Institute report predicts that the large-scale (5) _____ of technology through Digital India positions India with the biggest opportunity yet to accelerate economic growth.

**96.** Select the most appropriate option to fill in blank number 1.
1. impact  2. might  3. factors  4. force

**97.** Select the most appropriate option to fill in blank number 2.
1. inserted  2. embedded  3. planted  4. stuck

**98.** Select the most appropriate option to fill in blank number 3.
1. offices  2. details  3. processes  4. hierarchies

**99.** Select the most appropriate option to fill blank number 4.
1. mythical          2. proverbial
3. hypothetical      4. classified

**100.** Select the most appropriate option to fill blank number 5.
1. enhancement       2. anticipation
3. adaptation        4. monitoring

# Answer Key

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

# Answers with Explanations

### General Intelligence and Reasoning

**1. Option (2) is correct.**
**Explanation:**

| B | Bracket in order (), [], {} |
|---|---|
| O | Of |
| D | Division (÷) |
| M | Multiplication(x) |
| A | Addition (+) |
| S | Subtraction (-) |

I.    $7 \times 9 - 8 \div 2 + 3$
Interchange $\times$ and $+$, 3 and 9
$7 + 3 - 8 \div 2 \times 9$
$7 + 3 - 4 \times 9$
$7 + 3 - 36$
$10 - 36 = -26$
II.   $4 \times 9 - 3 + 8 \div 2$
Interchange $\times$ and $+$, 3 and 9

$4 + 3 - 9 \times 8 \div 2$
$4 + 3 - 9 \times 4$
$4 + 3 - 36$
$7 - 36 = -29$

**2. Option (4) is correct.**
**Explanation:** Table of alphabetical series (point to remember)

| Alphabets | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Positional value | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Alphabets | Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| Positional value | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

Now, according to the question

| B | E | H | O | L | D |
|---|---|---|---|---|---|
| 2 | 5 | 8 | 15 | 12 | 4 |

Arranging the above letters "B E H O L D" in increasing order of alphabetical series we get
"B D E H L O"

| B | D | E | H | L | O |
|---|---|---|---|---|---|
| 2 | 4 | 5 | 8 | 8 | 15 |

Similarly,

| C | O | U | R | S | E |
|---|---|---|---|---|---|
| 3 | 15 | 21 | 18 | 19 | 5 |

Arranging the above letters "C O U R S E" in increasing order of alphabetical series we get
"C E O R S U"

| C | E | O | R | S | U |
|---|---|---|---|---|---|
| 3 | 5 | 15 | 18 | 19 | 21 |

**3. Option (2) is correct.**

**Explanation:**

Library: Books:: Museum:?

A collection of books is called a library; similarly, a collection of **artefacts** is called Museum.

**4. Option (3) is correct.**

**Explanation:**

382, 322, 272, 232, 202, ?,182

Logic is as follows:

$382 \xrightarrow{-60} 322 \xrightarrow{-50} 272 \xrightarrow{-40} 232 \xrightarrow{-30} 202 \xrightarrow{-20} 182$

**5. Option (2) is correct.**

**Explanation:**

**Logic:** Find the embedded figure from the option figures. Hence,
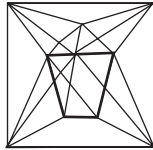


**6. Option (3) is correct.**

**Explanation:**

| B | Bracket in order (), [], {} |
|---|---|
| O | Of |
| D | Division (÷) |
| M | Multiplication (×) |
| A | Addition (+) |
| S | Subtraction (–) |

By checking options one by one and interchanging accordingly

21 * 4 * 156 * 13 * 11 = 83

(1) ÷, +, ×, +

21 – 4 ÷ 156 × 13 + 11

5 – 25 + 2028 + 11

2044.25 ≠RHS

(2) ×, +, ÷, –

21 × 4 + 156 ÷ 13 – 11

21 × 4 + 12 – 11

84 + 12 – 11

96 – 11 = 85 ≠ 83 ≠ RHS

(3) ×, –, ÷, +

21 × 4 – 156 ÷ 13 + 11

21 × 4 – 12 + 11

84 – 12 + 11

95 – 12 = 83 = RHS

(4) +, ÷, –, ×

21 + 4 ÷ 156 – 13 × 11

21 + 0.0256 – 13 × 11

12 + 0.0256 – 143

21 + 0.0256 – 143

21.0256 – 143 = –121.97 ≠ RHS

Hence, correct answer is ×, –, ÷, +.

**7. Option (4) is correct.**

**Explanation:**

Table of alphabetical series (point to remember)

| Alphabets | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Positional value | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Alphabets | Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| Positional value | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

Logic follows here is:

| P | K | G | T | X | C | O | L | F | U |
|---|---|---|---|---|---|---|---|---|---|
| 11 | | 20 | | 3 | | 12 | | 21 | |

+9    +9    +9    +9

**8. Option (4) is correct.**

**Explanation:** (3, 14, 1), (4, 36, 2)

**Logic:** (3, 14, 1)     $\Rightarrow \dfrac{(3^3 + 1^3)}{2} = 14$

Similarly, (4, 36, 2)     $\Rightarrow \dfrac{(4^3 + 2^3)}{2} = 36$

Now, (8, 260, 2)     $\Rightarrow \dfrac{(8^3 + 2^3)}{2} = 260$

**9. Option (1) is correct.**

**Explanation:**

| B | Bracket in order (), [], {} |
|---|---|
| O | Of |
| D | Division (÷) |
| M | Multiplication (×) |
| A | Addition (+) |
| S | Subtraction (–) |

By checking options one by one and interchanging accordingly

12 * 24 * 4 * 2 * 60

(1) +, ×, ÷, =

12 + 24 × 4 ÷ 2 = 60

12 + 24 × 2 = 60

12 + 48 = 60

60 = 60

LHS = RHS

(2) –, ×, +, =

12 – 24 × 4 + 2 = 60

12 – 96 + 2 = 60

14 – 96 = 60

–82 ≠ 60

(3) +, ×, –, =

12 + 24 × 4 – 2 = 60

12 + 96 – 2 = 60

108 – 2 = 60

106 ≠ 60

(4) +, ÷, ×, =

12 + 24 ÷ 4 × 2 = 60

12 + 6 × 2 = 60

12 + 12 = 60

24 ≠ 60

Hence, the correct answer is +, ×, ÷, =.

**10. Option (3) is the correct.**

**Explanation:** Table of alphabetical series (point to remember)

| Alphabets | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Positional value | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Alphabets | Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| Positional value | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

Logic follows here is:

| H | −1 gives → | G | −1 → | F |
|---|---|---|---|---|
| 8 | | 7 | | 6 |

| R | −1 gives → | Q | −1 → | P |
|---|---|---|---|---|
| 18 | | 17 | | 16 |

| U | +1 gives → | V | +1 → | W |
|---|---|---|---|---|
| 21 | | 22 | | 23 |

| L | −1 gives → | K | −1 → | J |
|---|---|---|---|---|
| 12 | | 11 | | 10 |

**11. Option (2) is correct.**

**Explanation:** Phone: Talk:: Television:?

The phone is used for calls that are related to talking; similarly, television is used for watching (viewing).

**12. Option (4) is correct.**

**Explanation:**
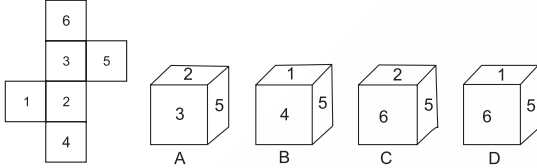


**Logic:** Alternate boxes are opposite faces of the cube

Opposite faces are as follows:

6 and 2

3 and 4

1 and 5

Opposite faces of a cube are not adjacent to each other. In options B, C, and D opposite faces are adjacent. Hence, they cannot form the above cube.

Hence, only A is the correct answer.

**13. Option (1) is correct.**

**Explanation:**

**Logic:** In the mirror image left becomes right and right becomes left. Now, mirror image of is

BLZK541M

**14. Option (1) is correct.**

**Explanation:**
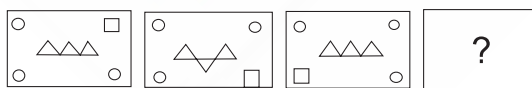


**Logic:** Small figures at the corners of the larger box are shifted by one place in the clockwise direction and a triangle-like figure in the middle of the larger box moves in the downward direction in alternate movements. Hence,
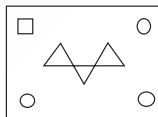
**15. Option (1) is correct.**

**Explanation:**

1. In conclusion, all shoes are not inside the torches. Hence, all shoes are not torches. The same logic is followed in II and III conclusions.

2. In conclusion IV, since all cards are inside the shoes. Hence, all cards are shoes. Therefore, only conclusion IV follows.



**16. Option (3) is correct.**

**Explanation:** Table of alphabetical series (point to remember)

| Alphabets | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Positional value | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Alphabets | Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| Positional value | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

Now,

| F | R | U | C | T | U | S | | |
|---|---|---|---|---|---|---|---|---|
| 6 | 18 | 12 | 3 | 20 | 21 | 19 | = | 108 |

And

| S | P | R | I | N | T | E | R | |
|---|---|---|---|---|---|---|---|---|
| 19 | 16 | 18 | 9 | 14 | 20 | 5 | 18 | = | 119 |

Similarly,

| M | A | S | C | U | L | I | N | E | |
|---|---|---|---|---|---|---|---|---|---|
| 13 | 1 | 19 | 3 | 21 | 12 | 9 | 14 | 5 | = | 97 |

**17. Option (2) is correct.**
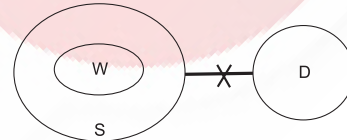
**Explanation:**



1. Since all W are inside S. Hence, some S are W.

2. All W are S and no W is Hence all S cannot be D.

3. Since no D is W, hence no W is D.

**18. Option (2) is correct.**

**Explanation:** Table of alphabetical series (point to remember)

| Alphabets | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Positional value | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Alphabets | Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| Positional value | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

NMRQ, NDZG, NUHW, NLPM, ?

| 14 | 13 | 18 | 17 |
|---|---|---|---|
| N | M | R | Q |
| | +17 | +8 | −10 |
| N | D | Z | G |
| 14 | 4 | 26 | 7 |
| | +17 | +8 | −10 |
| 14 | 21 | 8 | 23 |

| N | U | H | W |
|---|---|---|---|
| ↓+17 | ↓+8 | | ↓−10 |

| N | L | P | M |
|---|---|---|---|
| 14 | 12 | 16 | 13 |

| ↓+17 | ↓+8 | | ↓−10 |
|---|---|---|---|

| N | C | X | C |
|---|---|---|---|
| 14 | 3 | 24 | 3 |

**19. Option (1) is correct.**

**Explanation:**

| 4 | B | V | V | T | O | T | O | 6 | 6 | 2 | V | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | | | 6 | | | 4 | | | 9 | | ? |
| 2 | T | O | 4 | B | 2 | B | 2 | V | T | O | B | |

**Logic:**

| 4 | B | V | V | T | O | T | O | 6 | 6 | 2 | V | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | | | 6 | | | 4 | | | 9 | | ? |
| 2 | T | O | 4 | B | 2 | B | 2 | V | T | O | B | |

Similarly, following the pattern, we will get:

| 2 | V | 9 |
|---|---|---|
| | T | |
| O | B | 6 |

**20. Option (2) is correct.**

**Explanation:** 19 : 324 :: 25 : 576 :: 9 : ?

**Logic:**

$(19 - 1)^2 = 324$

$(25 - 1)^2 = 576$

$(9 - 1)^2 = 64$

**21. Option (1) is correct.**

**Explanation:**

| Pope | Poppy | Populace | Popular | Population |
|---|---|---|---|---|

Population is at 5th position.

**22. Option (1) is correct.**

**Explanation:**

**Logic:** (Square of 2nd number) – (square of 3rd number)

$= $ First number

(20, 6, 4)     $= 6^2 - 4^2 = 36 - 16 = 20$

(24, 7, 5)     $= 7^2 - 5^2 = 49 - 25 = 24$

Similarly,

(65, 9, 4)     $= 9^2 - 4^2 = 81 - 16 = 65$

**23. Option (2) is correct.**

**Explanation:**

A # B means 'A is the sister of B'

A @ B means 'A is the daughter of B'

A & B means 'A is the husband of B'

A % B means 'A is the father of B'

$$A^+ \qquad E$$
$$| \qquad\quad |$$
$$B^+ = C - D^-$$
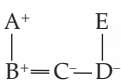
B is the son-in-law of E

**24. Option (2) is correct.**

**Explanation:**

A × B mean 'A is the brother of B'

A – B means 'A is the sister of B'

A + B means 'A is the father of B'

Since P is the paternal aunt of R, the gender of P will be female.

Hence, only option (1)

Now,

**2. P – Q + R**

Family tree:   $P^- \text{———} Q^+$

$$|$$
$$R$$
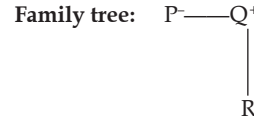
**25. Option (1) is correct.**

**Explanation:**

**Logic:** 2nd number is the cube of first number and difference between 2nd number and 3rd number is 10. This condition is not followed in option (1).

| 7 | 343 ($7^3$) | −12 → 331 |
|---|---|---|
| 6 | 216 ($6^3$) | 206   −10 → |
| 5 | 125 ($5^3$) | 115   −10 → |
| 4 | 64 ($4^3$) | −10 → 54 |

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### General Awareness

**26. Option (3) is correct.**

The term 'Back-stick' is used in hockey. It is a type of fowl and an illegal shot in which the ball strikes the rounded face of hockey. Legally, the players are not allowed to use both sides of hockey stick in the field hockey. The hockey stick has a flat and curved side. The flat side is used for regular playing and hitting the hockey ball. The curved side is deliberately curved and should not be used to contact the ball at all.

**27. Option (4) is correct.**

Baisakhi is celebrated to commemorate the formation of the Khalsa Panth in 1699 by Guru Gobind Singh. He founded the Khalsa Panth in front of thousands of people at Anandpur Sahib. Guru Gobind Singh was the last and tenth Sikh Guru. This day marks a symbolic beginning of the Sikh New Year. Baisakhi also signifies the harvest of the rabi crops in Punjab. It is a spring harvest festival that falls on 13–14 April every year.

Lohri is a winter folk festival in Punjab and almost always falls on 13 January. It is characterised by lighting bonfire, eating popcorn, rewari, groundnut, singing folk songs and dancing around the fire.

Hola Mohalla is a Sikh festival celebrated for three days on the first lunar month of Chet, which usually falls in March. This tradition was established by Guru Gobind Singh. This day marks the occasion to demonstrate their martial skills in simulated battles.

Teej is a Hindu festival celebrated in Eastern UP, Bihar, Uttarakhand, Jharkhand, Rajasthan and Madhya Pradesh. On this day, idols of Lord Shiva, Maa Parvati and Lord Ganesha are prepared with sand or clay and worshipped.

**28. Option (1) is correct.**

The second 'International Day of Yoga' theme in India is 'Yoga for the Achievement of the Sustainable Development Goals.'

SDGs are the 17 goals set up by the United Nations for peace and prosperity for people and the planet now and into the future. The aim is to achieve these goals by 2030 in order to make this planet a better place to live.

International Yoga Day is observed on 21 June every year to spread awareness about the benefits of yoga. It was celebrated for the first time in the year 2015 under the initiative of Prime Minister Narendra Modi. It is a United Nations day and the approval was given by the United Nations General Assembly on 11 December 2014.

**29. Option (1) is correct.**

Chemical formula of quick lime is CaO. Quick lime is basically calcium oxide or burnt lime. It is alkaline in nature, crystalline and white in colour. It is usually produced by the thermal decomposition of limestone or seashells by the process known as calcination. It is made from calcium carbonate ($CaCO_3$).

Calcium carbonate ($CaCO_3$) is also known as calcite/chalk/lime. It is commonly found in rocks.

Calcium hydroxide is known as slaked lime and is an inorganic compound with the formula $Ca(OH)_2$.

**30. Option (4) is correct.**

Joule is the unit of work done in the SI system. It is named after the English Physicist James Prescott Joule. It can be defined as the amount of work done when a force of 1 Newton displaces a mass through a distance of 1 metre in the direction of the force applied. Its units are $kgm^2s^{-2}$.

Watt is the unit of power in the SI system. It is named after James Watt and quantifies the rate of energy transfer.

Decibel is used to measure the intensity of sound. It is named after the inventor Alexander Graham Bell.

Ampere is the SI unit of electric current. It is named after French Physicist and Mathematician Andre-Marie Ampere. It is the amount of current produced by the force of one volt acting through a resistance of one ohm.

**31. Option (1) is correct.**

Vijaywada does not have a nuclear power plant. Nuclear power generation is the fifth largest source of electricity in India after coal, gas, hydro-electricity and wind power. As of 2022, India has 22 operational nuclear reactors in 7 states with an installed capacity of about 6,780 MW. The nuclear power stations in India are in:

I.    Tarapur, Maharashtra
II.   Rawatbhata, Rajasthan
III.  Kalpakkam, Tamil Nadu
IV.   Narora, Uttar Pradesh
V.    Kakrapar, Gujarat
VI.   Kaiga, Karnataka
VII.  Kudankulam, Tamil Nadu

India's nuclear program was launched under the leadership of Homi J. Bhabha.

Tarapur Atomic Power Plant-1 (TAPS-1) is the first and oldest Nuclear Power Station in India. Nuclear Power Corporation of India Limited, NPCIL, is administered by the Department of Atomic Energy (DAE) and is headquartered in Mumbai, Maharashtra.

**32. Option (3) is correct.**

The Ramakrishna Mission stressed the ideal of salvation through self-service and selfless action. Ramakrishnan mission was founded by Swami Vivekananda on 1 May 1897 in Calcutta, British India. The mission is named after the Indian spiritual Guru Ramakrishna Paramahamsa. Swami Vivekananda was his chief disciple. It is also known as the Vedanta movement.

**33. Option (3) is correct.**

International Non-Violence Day is observed on 2 October. It is a United Nations Day attributed to Mahatma Gandhi, who was the leader of India's independence. He is known for his ideology of non-violence. This day was designated as an International United Nations Day in the year 2007. This idea was proposed by Iranian Noble Laureate Shirin Ebadi.

15 August is observed as the Independence Day of India. It was on this day in the year 1947 that India got independence from the British.

31 October is observed as the World Cities Day as designated by the United Nations General Assembly. It was celebrated for the first time in the year 2014. This day aims to raise the awareness about global urbanisation and push for global cooperation in sustainable urban development.

14 November is celebrated as Children's Day in India. This day falls on the birthday of India's first Prime Minister Jawaharlal Nehru. This day aims to raise awareness about the rights, education and welfare of children.

**34. Option (1) is correct.**

Sangama dynasty established the kingdom of Vijayanagara. It was founded by Harihara I and Bukka Raya I. They were the first to rule Vijayanagara Empire. They were helped and inspired by a contemporary scholar and a saint Vidyaranya for the establishment of their kingdom.

Somavamshi or Keshari dynasty ruled the present-day Odisha between 9th and 12th centuries. The capital was Yayatinagara, which is modern-day Binka and Abhinava-Yayatinagara, which is modern day Jaipur. They introduced a new style of architecture and art, and brought a shift from Buddhism to Brahmanism in their kingdom.

Tuluva dynasty was the third dynasty of the Vijayanagara Empire. It ruled from 1491 to 1570 with Vijayanagar as its capital. The dynasty was founded by Tuluva Narasa Nayaka.

**35. Option (1) is correct.**

'Vayudoot' airline was setup in the year 1981. It was a joint venture between Air India and Indian Airline, and headquartered at New Delhi. The airlines started its operations on 26 January 1981 in the remote north-east of the country. It was a regional airline and ceased its operations in the year 1997.

**36. Option (2) is correct.**

Wearing away of landscape by different agents like water, wind and ice is called erosion. It is a geological process in which soil is removed from the Earth's crust.

Weathering is the natural wear and tear, breaking down of rocks or dissolving of soil and minerals on the Earth's surface. The different weathering and eroding agents are water, acids, salt, plants, animals, and changes in temperature.

Metamorphosis is the biological process of development of an animal. This is a change that happens in animals after their birth. It may lead to change in the body of organisms, number of legs, means of breathing, and means of eating, etc.

Sedimentation is the physical process of allowing suspension to settle in water under the effect of gravity.

**37. Option (1) is correct.**

Nitin Gupta has been appointed as the new chairman of the Central Board of Direct Taxes in

June 2022. CBDT is a statutory and apex authority charged with the administration of laws related to direct taxes. It functions under the Central Board of Revenue Act, 1963. It is administered by the Department of Revenue under the Ministry of Finance.

**38. Option (3) is correct.**

Amjad Ali Khan is known as 'Sarod Samrat' in Indian Classical Music. He is a Padma awardee and was awarded with Padma Bhushan and Vibhushan. He is best known for clear and fast 'ekhara taans.'

Nusrat Fateh Ali Khan was a Pakistani Singer and is known as 'Shahenshah-e-Qawwali'. He was a qawwali singer, which was a form of Sufi devotional music.

Kishan Maharaj was an Indian Tabla player who belonged to Benares Gharana of Hindustani classical music. Indian classical music has two major traditions – North Indian and South Indian. North Indian is known as Hindustani and the South Indian expression is known as Carnatic.

**39. Option (1) is correct.**

Banking method is not a method of national income estimation. National income is the total value of final goods and services produced in the country in a financial year. It takes depreciation into consideration. This income doesn't include taxes, raw materials (non-factor inputs) and depreciation. There are three methods to measure national income:

• **Income method** – It is estimated by considering income that is generated from the basic factors of production – land, capital, labour and organisation. It consists of income from wages, rent of buildings and land, interest on capital, profits, etc. in an accounting year.

• **Product (value-added) method** – In this method, monetary value of all the final goods and services produced by different sectors is calculated. In this method, we include only the value added by each firm in the production process in the output figure. However, this method is unscientific and not much reliable.

• **Expenditure method** – It is the most common method and this method measures the total domestic expenditure taking into account consumption and investment expenditure. It includes net export and government expenditures as well.

**40. Option (4) is correct.**

The term Parliament refers to the National Legislature. The Parliament of India consists of President and the two houses. The upper house is Rajya Sabha or council of states. The lower house is Lok Sabha or house of people. The Parliament is the supreme legislative body and is a bicameral legislature.

The President of the Republic is elected by an electoral college consisting of the elected members of both Houses of Parliament and the elected members of the Legislative Assemblies (popular houses) of the states.

**41. Option (2) is correct.**

Chief Minister of Kerala has inaugurated a project of the Women and Child development department to provide milk and eggs to children at all anganwadis in the state in a bid to improve their nutrition levels. Under this scheme, each child will be given 125 ml of milk two days a week for 44 weeks and an egg twice a week. This scheme targets children of age group 3–6 years.

This scheme was introduced to improve their nutritional parameters and assumes significance as ending hunger is one of the Sustainable Development Goals (SDGs) established by the United Nations.

**42. Option (1) is correct.**

A 'Camel Protection and Development Policy' has been announced by the government of Rajasthan. There are less than 2 lakhs camels left in Rajasthan and the number is gradually decreasing. A budget of 10 crores has been proposed for rearing, protecting and developing animals. Camel is the state animal of Rajasthan and World Camel Day is observed on 22 June every year.

**43. Option (4) is correct.**

Pranab Mukherjee was also the deputy chairman of Planning Commission from 1991 to 1996. Pranab Mukherjee was the 13th President of India from the year 2012–17. He was honoured with Bharat Ratna in 2019.

Planning Commission was the institution of Government of India that formulated five years plan for the country. However, it was replaced by Niti Aayog in 2014.

V.V. Giri was the fourth President of India from 1969 to 1974. He was the third Vice-President of India. He was honoured with Bharat Ratna posthumously.

K.R. Narayanan was the tenth president and ninth vice-president of India.

Ramaswamy Venkatraman was the eighth president of India. He was an Indian lawyer and was an activist.

**44. Option (2) is correct.**

In Golgi apparatus, the maturing face is convex. Golgi apparatus is named after Italian scientist Camillo Golgi. It is a membrane bound organelle found in the eukaryotic cells and is the part of cytoplasm. It consists of five to six cistern, which are flat, disk shaped and stacked pouches.

Cis face is located nearby to the endoplasmic reticulum. Trans face is the area of the Golgi apparatus that is pointing towards the plasma membrane.

It processes and packages proteins and lipid molecules which are later exported to the other component of cells. These are the site synthesis of various glycolipids, sphingomyelin, etc.

**45. Option (4) is correct.**

Raja Ram Mohan Roy founded a reform association known as Brahmo Sabha which was later known as Brahmo Samaj. It was one of the first socio-religious reform movements founded in Kolkata. Roy is known as the 'Father of Modern India' or 'Father of the Bengal Renaissance'.

Dev Samaj was founded by Shiv Narayan Agnihotri in the year 1887. He was earlier a member of Brahmo Samaj.

Arya Samaj was founded by Dayanand Saraswati on 7th April 1875. It promotes values and practices based on the Vedas.

**46. Option (3) is correct.**

Xylem Parenchyma in plants stores food. Xylem is a transport and vascular tissue that transports water and nutrients from roots to stems and leaves. It also provides mechanical strength and is composed of four different kinds of elements – tracheids, vessels, Xylem fibre, and xylem parenchyma.

Tracheids are dead tube like cells whose main function is the transportation of water and minerals.

Vessels are long cylindrical tube like structures involved in conducting water and minerals. They also provide mechanical strength to the plant.

Fibres are dead tissues involved in transportation of water and minerals. It is involved in providing mechanical support.

Parenchyma are the living cells that store fat, tannins, crystals and starch. They involve radial conductance of water.

**47. Option (4) is correct.**

Rickey Kej won the Grammy awards in 2015 for his album 'Winds of Samsara', a collaboration with South African flautist Wouter Kellerma. The Grammy awards are presented by the Recording Academy of the United States to recognise "outstanding" achievements in the music industry. Its trophy is a gilded gramophone.

**48. Option (1) is correct.**

Harappan city has not been found in Uttarakhand. Indus Valley civilisation is also known as Harappan Valley civilisation and was a part of the Bronze Age. Harappa, Mohanjodaro, Banawali and Dholavira are considered as the four main Harappan Sites. Surkotada, Lothal and Dholavira are the important port towns in the Indus Valley.

I.   Lothal is situated in Ahmedabad, Gujarat and contains the world's oldest dock.

II.   Rakhigari in Hisar, Haryana, is the largest site of the Indus Valley Civilisation.

III.   Alamgirpur in Meerut, Uttar Pradesh, is along the Yamuna River and is known as 'Parasaram-ka-here.

IV.   Kalibangan in Hanumangarh, Rajasthan, is situated on the banks of the Ghaggar river.

V.   Dholavira in Kutch district, Gujarat, has an island named Khadir Bet.

**49. Option (3) is correct.**

Burning of coal is an example of combination reaction. A combination reaction is the one in which two or more elements combine to form a single compound. During burning of coal, the carbon combines with oxygen to form carbon dioxide and heat. $C + O_2 = Heat + CO_2$.

Decomposition reactions are the ones in which a complex molecule breaks down into simpler elements. A general form of these reactions can be represented as $AB = A + B$.

Double displacement reaction is a chemical reaction in which two ionic compounds interchange their cations and anions to form a new product. The new product is generally a precipitate. A general form of these reactions can be represented as $AB + CD = AD + BC$.

Displacement reaction is the one in which an atom is displaced by another atom in the molecule. A general form of these reactions can be represented as $A + BC = AC + B$.

**50. Option (1) is correct.**

The foremost right among rights to freedom is right to life and personal liberty. The constitution of India states that no citizen can be denied his life or personal liberty except by the procedure set down by the law. The different rulings of Supreme Court have widened the scope of this right.

The rulings state that it is the right to live with human dignity, free from exploitation. The court has held that right to shelter and livelihood is also included in the right to life because no person can live without the means of living, that is, the means of livelihood.

However, not all the rights stated under right to life are absolute. Some of the rights such as right to freedom of speech and expression is subject to restrictions such as public order, peace and morality, etc. Freedom to assemble too is to be exercised peacefully and without arms.

## Quantitative Aptitude

**51. Option (2) is correct.**

We have, Loss percentage = 12.5%

Gain percentage when he is using 28 g weight instead of 36 g

$$= \frac{36-28}{28} \times 100 = \frac{200}{7}\%$$

By successive percentage change,

Overall percentage profit/loss

$$= -\frac{25}{2} + \frac{200}{7} + \frac{-\frac{25}{2} \times \frac{200}{7}}{100} = -\frac{25}{2} + \frac{200}{7} - \frac{25}{7}$$

$$= -\frac{25}{2} + \frac{175}{7} = \frac{25}{2}\% = 12.5\%$$

Value is positive. So, there is a profit of 12.5%.

**52. Option (3) is correct.**

H.C.F of two numbers is 12.

So, 12 will be a factor of both numbers.
From given options, only 90 is not a multiple of 12.

**53. Option (3) is correct.**

We have,
$$\angle PAB = 40°$$
As we know, two tangents from a common point will always be equal.
So,　　　　　　$AC = PC$
and　　　　　　$BC = PB$
In $\Delta APC$,
$$\angle PAC = \angle CPA = 40°$$
In $\Delta BPC$,
$$\angle CPB = \angle CBP = \beta$$
So, in $\Delta ABP$,
$$\angle A + \angle B + \angle P = 180°$$
$\Rightarrow$　$40 + \beta + (40 + \beta) = 180°$
$\Rightarrow$　　　　　　　$2\beta = 100°$
$\Rightarrow$　　　　　　　$\beta = 50°$
So, $\angle ABP$　　　$= 50°$

**54. Option (1) is correct.**

The mean proportion of 169 and 144
$$= \sqrt{(169 \times 144)}$$
$$= 13 \times 12 = 156$$

**55. Option (1) is correct.**

We have,
Increase in length = 8%
Increase in breadth = 5%
By successive percentage change,
Percentage change in the area
$$= 8 + 5 + \frac{8 \times 5}{100} = 13 + 0.4 = 13.4\%$$

**56. Option (3) is correct.**

We have,

$\Rightarrow$ $\dfrac{\cos 45°}{\sec 30° + \operatorname{cosec} 30°} = \dfrac{\frac{1}{\sqrt{2}}}{\frac{2}{\sqrt{3}} + 2}$

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

$= \dfrac{\sqrt{3}}{2\sqrt{2}(1 + \sqrt{3})}$

$= \dfrac{\sqrt{3}}{2\sqrt{2}(1 + \sqrt{3})} \times \dfrac{(1 - \sqrt{3})}{(1 - \sqrt{3})}$

$= \dfrac{\sqrt{3} - 3}{2\sqrt{2}(-2)} = \dfrac{3 - \sqrt{3}}{4\sqrt{2}} \times \dfrac{\sqrt{2}}{\sqrt{2}}$

$= \dfrac{3\sqrt{2} - \sqrt{6}}{8}$

**57. Option (3) is correct.**

We have, Number = $49^{15} - 1$
We know, $a^n - b^n$ is always divisible by $a - b$ for all values of $n$.
So, $49^{15} - 1^{15}$ will be divisible by $49 - 1 = 48$.
From given options, only 8 will divide the given expression.

**58. Option (1) is correct.**

We have,
Length of race track = 1,500 m
When Anil and Bikul participate in race,
Total distance covered by Anil = 1,500 m
Total distance covered by Bakul = 1,350 m
Ratio of distance covered by Anil and Bakul

$= 1,500 : 1,350 = 30 : 27 = 10 : 9$
When Bakul and Charles participate in race,
Total distance covered by Bakul = 1,500 m
Total distance covered by Charles = 1,425 m
Ratio of distance covered by Bakul and Charles = 1,500 : 1,425 = 300 : 285 = 20 : 19



Ratio of distances covered by them when all run on the same track,
Anil : Bakul : Charles
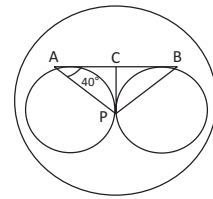$$= 10 \times 20 : 9 \times 20 : 19 \times 9$$
$$= 200 : 180 : 171$$
$$= 1,500 : 1,350 : 1,282.5$$
Distance by which Anil beats Charles
$$= 1,500 - 1,282.5$$
$$= 217.50 \text{ m}$$

**59. Option (2) is correct.**

We have,
Total duration = 8 years
Principal amount = ₹ 2,500
Total amount = ₹ 3,725
So, simple interest = 3,725 − 2,500 = ₹ 1,225
We know that,
$$\text{SI} = \frac{P \times R \times T}{100}$$
$\Rightarrow$　$1,225 = \dfrac{2,500 \times R \times 8}{100}$
$\Rightarrow$　$1,225 = 200R$
$\Rightarrow$　$R = \dfrac{1,225}{200} = 6.125\%$

**60. Option (1) is correct.**

The average number of pages printed by printer Z
$$= \frac{210 + 160 + 218}{3} = \frac{588}{3} = 196 \text{ pages}$$

**61. Option (2) is correct.**

We have, Total runs in 27 innings = 27 × 47 = 1,269
Total runs in 25 innings = 25 × 42 = 1,050
Let the lowest runs scored by him = $x$
So, highest score = $x + 157$
As per the question,
$$x + x + 157 = 1,269 - 1,050$$
$\Rightarrow$　$2x + 157 = 219$
$\Rightarrow$　$2x = 219 - 157 = 62$
$\Rightarrow$　$x = 31$
So, highest score = 31 + 157 = 188

**62. Option (2) is correct.**

We have, Time taken by P = 15 days
Time taken by B = 10 days
Let total work = LCM (15, 10) = 30 units
P's per day work = $\dfrac{30}{15} = 2$
Q's per day work = $\dfrac{30}{10} = 3$
Their 2 days work, when they work together = 2 ( 2 + 3) = 10 units
Remaining work = 30 − 10 = 20 units
Time taken by P to complete the remaining work = $\dfrac{20}{2} = 10$ days

So, total time taken to finish the work = 10 + 2 = 12 days

**63. Option (3) is correct.**

We have,

Total number of trucks sold by all the companies
$$= 4,000$$

Number of trucks sold by the company B
$$= 27\% \text{ of } 4,000 = 1,080$$

Number of trucks sold by the company C
$$= 18\% \text{ of } 4,000 = 720$$

Number of trucks sold by the company F
$$= 7\% \text{ of } 4,000 = 280$$

Number of trucks sold by the company H
$$= 14\% \text{ of } 4,000 = 560$$

Total number of trucks sold by above 4 companies
$$= 1,080 + 720 + 280 + 560 = 2,640$$

Required percentage $= \dfrac{4,000 - 2,640}{4,000} \times 100$

$$= \dfrac{1,360}{4,000} \times 100 = 34\%$$

**64. Option (3) is correct.**

We have, $x^2 - 5x + 1 = 0$

Divide by x in above equation, $x + \dfrac{1}{x} = 5$

cubing both sides,

$$\Rightarrow \qquad \left(x + \dfrac{1}{x}\right)^3 = 5^3$$

$$\Rightarrow \quad x^3 + \dfrac{1}{x^3} + 3\left(x + \dfrac{1}{x}\right) = 125$$

$$\Rightarrow \qquad x^3 + \dfrac{1}{x^3} + 3(5) = 125$$

$$\Rightarrow \qquad x^3 + \dfrac{1}{x^3} = 125 - 15$$

$$\Rightarrow \qquad x^3 + \dfrac{1}{x^3} = 110$$

Now, $\dfrac{x^6 + x^4 + x^2 + 1}{5x^3} = \dfrac{x^3 + x + \dfrac{1}{x} + \dfrac{1}{x^3}}{5}$

$$= \dfrac{x^3 + \dfrac{1}{x^3} + x + \dfrac{1}{x}}{5}$$

$$= \dfrac{110 + 5}{5} = \dfrac{115}{5} = 23$$

**65. Option (2) is correct.**

In ΔPQR,

$$PR = 17, QR = 8, PQ = 15$$
$$\angle PQR = 90°$$

By right angle triangle property,

$$\sin \alpha = \dfrac{8}{17} \text{ and } \cos \alpha = \dfrac{15}{17}$$

so, $\sin \alpha + \cos \alpha = \dfrac{15 + 8}{17} = \dfrac{23}{17}$

**66. Option (1) is correct.**

We have,

$$\Rightarrow \dfrac{17^3 + 7^3}{17^2 + 7^2 - k} = 24$$

$$\Rightarrow \dfrac{(17 + 7)(17^2 + 7^2 - 119)}{17^2 + 7^2 - k} = 24$$

$$\Rightarrow \dfrac{(24)(17^2 + 7^2 - 119)}{17^2 + 7^2 - k} = 24$$

$$\Rightarrow 17^2 + 7^2 - 119 = 17^2 + 7^2 - k$$

$$\Rightarrow k = 119$$

**67. Option (4) is correct.**

We have, Circumference of 1st circle $2\pi r_1 = 198$ cm

Circumference of 2nd circle $2\pi r_2 = 352$ cm

As per the question,

$$2\pi r_2 - 2\pi r_1 = 352 - 198$$
$$\Rightarrow \qquad 2\pi(r_2 - r_1) = 154$$

$$\Rightarrow \qquad r_2 - r_1 = 154 \times \dfrac{7}{22 \times 2}$$

$$\Rightarrow \qquad r_2 - r_1 = 24.5$$

**68. Option (4) is correct.**

In triangle OAB,

$$\angle AOB = 60°$$

$$OA = OB = 10 \text{ cm} \quad \text{(radius of circle)}$$

So, $\angle OAB = \angle OBA = \dfrac{180 - 60}{2} = 60°$

[sum of all angles of a triangle = 180°]

As, it is a equilateral triangle,

$$OA = OB = AB = 10 \text{ cm}$$

**69. Option (2) is correct.**

Volume of a rectangular solid
$$= 88 \times 63 \times 42 = 2,32,848 \text{ cm}^3$$

Spherical lead volume $= \dfrac{4}{3} \times \pi \times 4.2 \times 4.2 \times 4.2$

$$= 310.464 \text{ cm}^3$$

$$\left(\text{radius} = \dfrac{8.4}{2} = 4.2 \text{ cm}\right)$$

Number of spherical lead $= \dfrac{2,32,848}{310.464} = 750$

**70. Option (2) is correct.**

We have,

Number of spoons manufactured by P = 100

Number of spoons manufactured by R = 150

Required ratio = 100 : 150 = 2 : 3

**71. Option (4) is correct.**

We have,

$$AB = 12 \text{ cm},$$
$$AC = 10 \text{ cm}$$
$$\angle BAC = 60°$$

By cosine rule,

$$\cos A = \dfrac{AB^2 + AC^2 - BC^2}{2 \cdot AB \cdot AC}$$

$$\Rightarrow \quad \cos 60° = \dfrac{12^2 + 10^2 - BC^2}{2 \times 12 \times 10}$$

$$\Rightarrow \qquad \dfrac{1}{2} = \dfrac{144 + 100 - BC^2}{240}$$
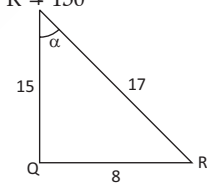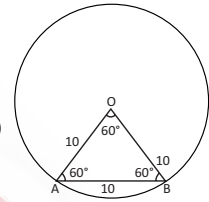
$$\Rightarrow \qquad BC^2 = 244 - 120 = 124$$

$$\Rightarrow \qquad BC = \sqrt{124} = 11.13 \text{ cm}$$

**72. Option (2) is correct.**

We have, $\tan^2\theta + \cot^2\theta - \sec^2\theta \, \text{cosec}^2\theta$

$$= \dfrac{\sin^2\theta}{\cos^2\theta} + \dfrac{\cos^2\theta}{\sin^2\theta} - \dfrac{1}{\cos^2\theta} \dfrac{1}{\sin^2\theta}$$

$$= \dfrac{\sin^4\theta + \cos^4\theta - 1 + 2\sin^2\theta\cos^2\theta - 2\sin^2\theta\cos^2\theta}{\sin^2\theta\cos^2\theta}$$

$$= \frac{(\sin^2\theta + \cos^2\theta)^2 - 1 - 2\sin^2\theta\cos^2\theta}{\sin^2\theta\cos^2\theta}$$

$$= \frac{1 - 1 - 2\sin^2\theta\cos^2\theta}{\sin^2\theta\cos^2\theta} = -2$$

**73. Option (4) is correct.**

We have,

Total sales of branch $B_2$ for both the years
$$= 65 + 75 = 140$$

Total sales of branch $B_4$ for both the years
$$= 85 + 95 = 180$$

Require ratio $= 140 : 180 = 7 : 9$

**74. Option (3) is correct.**

We have,

$$\Rightarrow \qquad \frac{4(17^3 - 7^3)}{(17^2 + 7^2 + p)} = 40$$

$$\Rightarrow \qquad \frac{(17-7)(17^2 + 7^2 + 119)}{(17^2 + 7^2 + p)} = 10$$

$$\Rightarrow \qquad \frac{(10)(17^2 + 7^2 + 119)}{(17^2 + 7^2 + p)} = 10$$

$$\Rightarrow \qquad 17^2 + 7^2 + 119 = 17^2 + 7^2 + p$$

$$\Rightarrow \qquad p = 119$$

**75. Option (2) is correct.**

We have,

MRP of article = ₹ 3,840

When percentage discount is 30%,

Then discounted amount

$$= \frac{30}{100} \times 3,840 = 1,152$$

When percentage discount is equal to the two successive discount of 25% + 5%,

Overall percentage discount

$$= 25 + 5 - \frac{25 \times 5}{100} = 28.75\%$$

Then, discounted amount

$$= 28.75/100 \times 3,840 = 1,104$$

Required difference

$$= 1,152 - 1,104 = ₹ 48$$

### English Comprehension

**76. Option (2) is correct.**

Sentence B talks of an additional percentage of water vapour, which is referred to as 'this extra water vapour' in sentence A. This makes BA a mandatory pair, which is present only in option (2). The correct sequence is DCBA.

**77. Option (3) is correct.**

As the reporting verb of the direct speech is in past tense, the verb to be reported too will be converted into past tense when we transform the sentence into indirect speech. Also, 'now' changes to 'then' in indirect speech.

(1) This option is in present perfect tense, while what we require is past simple tense.

(2) This option is incorrect as it doesn't change the time expression.

(3) This option is in the correct tense and has the correct time expression, 'then'.

(4) This option is in present perfect tense. Also, it has the incorrect time expression.

**78. Option (3) is correct.**

The subject of the active sentence becomes the object of the passive sentence. Similarly, the object of the active sentence becomes the subject of the passive sentence. Also, if the sentence is in simple future tense, then the passive form will have 'will + be + past participle' structure.

(1) This option is incorrect as it doesn't use the past participle but uses the base form of the verb.

(2) This option doesn't have the correct passive formation of the verb.

(3) This option has the correct passive formation of the verb, which is 'will + be + past participle.'

(4) This option doesn't have the correct passive formation of the verb. Also, the object of the passive sentence is not present in this option.

**79. Option (2) is correct.**

As this is an interrogative sentence, the helping verb comes before the object in the passive voice. Also, we use the preposition 'by', and convert the verb into past participle. Also, the tense of the sentence is not changed.

(1) 'Did' is not used in the passive voice.

(2) This option is in past perfect, while we need to use present perfect tense.

(3) This option is grammatically correct as per the rules.

(4) 'Do' is not used in the passive voice.

**80. Option (2) is correct.**

The correct spelling of the word is 'erroneous', which means wrong or incorrect.

**81. Option (1) is correct.**

'Sinks' is to become submerged.

(1) 'Floats', as a noun, refers to a thing that is buoyant in water. As a verb, it means to rest on the surface of a liquid without sinking. It is the antonym of the word 'sinks'.

(2) 'Create' is to bring something into existence.

(3) 'Parade', as a noun, refers to a public procession. As a verb, it means to display someone or something while marching or moving around a place.

(4) 'Strolling' is to walk in a leisurely way.

**82. Option (1) is correct.**

If the angles are equal, the sides will also be equal. The sentence doesn't give any other information about the shape of the figure to suggest any other option.

**83. Option (3) is correct.**

'Like a cakewalk' means something that is very easy to achieve.

**84. Option (2) is correct.**

(1) 'Pursuing' is the present participle form of the verb. So, it cannot be used with 'to'.

(2) With the preposition 'to', we should use the base form of the verb. 'Pursue' is the base form of the verb.

(3) With the verb 'plan', we don't use the preposition 'in'.

(4) 'Pursuing' is the present participle form of the verb. So, it cannot be used with 'to'.

(Options 1 and 4 are the same)

**85. Option (4) is correct.**

'Confusion' is uncertainty about what is happening, intended, or required.

(1) 'Intrepidity' is the fact or quality of being resolutely fearless or dauntless.

(2) 'Stagnation' is the state of not flowing or moving.

(3) 'Perusal' is the action of reading or examining something.

(4) 'Commotion' is a state of confused and noisy disturbance. It is the synonym of the given word.

**86. Option (2) is correct.**

The sentence talks about an action that started in the past, but the effect is felt even in the present. The guests reached earlier and are now sitting in the garden. So, the tense used will be present perfect tense.

(1) This is in present simple tense.

(2) This is in present perfect tense.

(3) This is in present continuous tense.

(4) This is in present simple tense.

**87. Option (1) is correct.**

The sentence talks of taking cover or taking shelter. One cannot take shelter above a table. So, the error is in option (1). The correct phrase will be covered below a table.

**88. Option (2) is correct.**

(1) 'Finery' refers to expensive or ostentatious clothes or decoration.

(2) The correct spelling of the word is 'heist', which refers to a robbery.

(3) 'Cringe' is to bend one's head and body in fear or apprehension or in a servile manner.

(4) 'Defer' means put off an action or event to a later time.

**89. Option (2) is correct.**

'All eyes' means to be very attentive.

**90. Option (3) is correct.**

The sentence suggests that he was searching for his book 'but couldn't find it'.

(1) 'Look into' is to investigate something.

(2) 'Look above' is to look at a higher position than something else.

(3) 'Look for' is to attempt to find someone or something.

(4) 'Look after' is to take care of someone or something.

**91. Option (2) is correct.**

The sentence needs a positive adjective to describe leadership.

(1) 'Imaginary' means existing only in the imagi-nation. Imaginary leadership will not be praised.

(2) 'Visionary' means thinking about or planning the future with imagination or wisdom.

(3) 'Magical' means relating to, using, or resemb-ling magic. Leadership cannot be described as magical.

(4) 'Broad' means covering a large number and wide scope of subjects. It doesn't fit the context.

**92. Option (1) is correct.**

(1) 'Cut down' means to reduce.

(2) 'Less down' isn't an idiomatic phrase.

(3) 'Lower down' is a redundant phrase as both the words have the same meaning.

(4) 'Up down' isn't an idiomatic phrase. Both the words are antonyms of each other.

**93. Option (2) is correct.**

'Rebellion' is an act of armed resistance to an established government or leader.

(1) 'Uprising' is an act of resistance or rebellion.

(2) 'Loyalty' is a strong feeling of support or alle-giance. It is the closest antonym of the given word.

(3) 'Sedition' is conduct or speech inciting people to rebel against the authority of a state or monarch.

(4) 'Allotment' is the action of allotting or issuing something.

**94. Option (3) is correct.**

'Hospitality' is the friendly and generous reception and entertainment of guests, visitors, or strangers.

(1) 'Complaint' is a statement that something is unsatisfactory or unacceptable.

(2) 'Cordiality' is behaviour that is friendly, but formal and polite

(3) 'Coldness' is the quality of lacking affection or warmth of feeling. It is an antonym of the given word.

(4) 'Wrathful' means full of or characterised by intense anger.

**95. Option (3) is correct.**

An adverb of manner must be placed before the verb or at the end of the clause.

(1) This option is grammatically incorrect. The past participle form of the verb needs a heling verb before it.

(2) 'Just' means very recently. It is an adverb of time and not manner.

(3) 'Carefully' is an adverb of manner and is placed correctly at the end of the clause.

(4) This option doesn't use any adverb at all.

**96. Option (4) is correct.**

The sentence talks of digital India helping the government fulfil its promise.

(1) 'Impact' means a marked effect or result. Digital India isn't the result but the cause.

(2) 'Might' refers to great or overwhelming power or strength.

(3) 'Factors' refers to elements or parts of some-thing.

(4) 'Force' refers to a person or thing regarding as exerting power or influence.

**97. Option (2) is correct.**

The sentence talks of technology being a part of the government.

(1) 'To insert' is to place, fit, or push something into something else. Technology cannot be inserted into the government.

(2) 'To embed' is to fix (an object) firmly and deeply in a surrounding mass. Technology can be ingrained or embedded into the government. Also, the next sentence uses the same word.

(3) 'To plant' is to set or place in a particular position. Technology cannot be planted in the government.

(4) 'To stick' is to insert or push.

**98. Option (3) is correct.**

This sentence talks of how technology needs to be part of the government.

(1) Being part of the government offices need not necessarily have the required impact.

(2) 'Details' refers to individual facts. Technology cannot be part of the government facts.

(3) 'Processes' refers to a series of actions or steps taken in order to achieve a particular end. So, technology will definitely have the desired impact if it becomes part of the government's processes.

(4) 'Hierarchies' refers to systems in which members of an organisation or society are ranked according to relative status or authority. Being part of the government hierarchies may make the government's work easier but may not necessarily make the government more transparent.

**99. Option (2) is correct.**

The sentence focuses on making live better for those people who are at the bottom of a pyramid. The blank needs an adjective to describe this pyramid.

(1) 'Mythical' means occurring in or characteristic of myths or folk tales. It is irrelevant to the context.

(2) 'Proverbial' means well known, especially so as to be stereotypical.

(3) 'Hypothetical' means supposedly but not necessarily real or true. It doesn't in fit the context.

(4) 'Classified' means arranged in classes or categories. This word also doesn't in fit the context.

**100. Option (3) is correct.**

The entire paragraph talks of technology becoming part of the government. So, the prediction should also be about the same.

(1) 'Enhancement' refers to an increase or improvement in quality, value, or extent. Technology isn't being enhanced.

(2) 'Anticipation' is the action of anticipating some-thing; expectation or prediction. Technology isn't being anticipated.

(3) 'Adaptation' is the action or process of adapting or being adapted to new conditions.

(4) 'Monitoring' is to observe and check the progress or quality of (something) over a period of time; keep under systematic review. Technology isn't being monitored.