STAFF SELECTION COMMISSION

COMBINED HIGHER SECONDARY LEVEL (TIER-I)

SOLVED PAPER

(16th October 2020: Shift-1)

Time Allotted- 1 hour   **Max marks-** 200

Important Instructions:-

⇨ This paper contains 100 questions which are divided into 4 sections and each section contains 25 questions.
 ✓ English Language (Basic Knowledge)
 ✓ General Intelligence
 ✓ Quantitative Aptitude (Basic Arithmetic Skill)
 ✓ General Awareness
⇨ There will be 2 marks for each correct answer and also there will be negative marking of 0.50 marks for each wrong answer.
⇨ Each question is compulsory to attempt and there will be no negative marking for unattempted questions.

English Language

1. Select the word which means the same as the group of words given.
   One whom it is impossible to defeat
   1. Cowardly   2. Dissatisfied
   3. Inimitable   4. Invincible

2. Given below are four jumbled sentences. Out of the given options, pick the one that gives their correct order.
   A. While the most common belief is that these traits remain fixed, research studies show otherwise!
   B. One such research study suggests that we can change our traits provided we want to change them.
   C. We all possess certain personality traits that set us apart from the rest.
   D. These traits, a mix of good and bad, define how we respond to situations and people.
   1. CBDA   2. ACDB   3. BCAD   4. CDAB

3. Select the INCORRECTLY spelt word.
   1. Massage   2. Amass
   3. Messanger   4. Immediate

4. Select the correct indirect form of the given sentence.
   The manager said, "I want you to attend the conference."
   1. The manager said I am wanting you to attend the conference.
   2. The manager told to me I am to go to attend the conference.
   3. The manager said that she wanted me to attend the conference.
   4. The manager said that she want me to attend the conference.

Comprehension:
In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.
Red okra from Karnataka. Black rice from Gujarat. Red corn from Tamil Nadu. What you would (1)_____ as exotic varieties of food today are (2)_____ indigenous crops that belong to a specific region. Many such (3)_____ crops have gone extinct. Many more are on the brink. But with Indian households (4)_____ more conscious about healthy eating and the natural benefits of consuming local food, (5)_____ among both consumers and farmers is increasing.

5. Select the most appropriate option for blank number 1.
   1. described   2. describing   3. describes   4. describe

6. Select the most appropriate option for blank number 2.
   1. incredibly   2. surprisingly
   3. mostly   4. openly

7. Select the most appropriate option for blank number 3.
   1. new   2. global   3. native   4. foreign

8. Select the most appropriate option for blank number 4.
   1. becoming   2. becomes
   3. became   4. have become

9. Select the most appropriate option for blank number 5.
   1. awareness   2. apprehension
   3. experience   4. intelligence

10. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement'.
    The teacher said that all that students who did not complete the task in the given time should attempt it again.
    1. those   2. No improvement
    3. them   4. this

11. Given below are four jumbled sentences. Out of the given options, pick the one that gives their correct order.
    A. Vijay the bus conductor was always there in one of these trucks.
    B. He had now quit his old job and joined politics.
    C. In the week before the elections, trucks bumped up and down the dirty streets of Laxmangarh, full of young men holding microphones and shouting: "Stand up to the rich!"
    D. That was the thing about Vijay; each time you saw him, he had done better for himself.
    1. CABD   2. ABCD   3. CBAD   4. DABC

12. In the given sentence, identify the segment which contains the grammatical error.
    A Delhi bound aircraft has to make an emergency landing at Mumbai airport as a woman passenger suddenly developed a serious breathing problem.
    1. a serious breathing problem 2. as a woman passenger
    3. suddenly developed   4. has to make

13. In the given sentence, identify the segment which contains the grammatical error.
    According to environment activitists, demolition of unauthorised apartment complexes are became a lesson for land encroachers.
    1. According to
    2. demolition of unauthorised apartment complexes
    3. for land encroachers
    4. are became

14. Select the most appropriate synonym of the given word.
    DEPLETE
    1. Increase   2. Raise   3. Complete   4. Reduce

15. Select the INCORRECTLY spelt word.
    1. Illiterate   2. Jostle   3. Dimention   4. Ideology

16. Select the most appropriate word to fill in the blank.
    You've cleared the _____ examination, haven't you?
    1. frequent   **2.** conclusion **3.** ability   **4.** entrance
17. Select the correct passive form of the given sentence.
    My friend narrated a very interesting story at the International Storytelling Festival.
    1. A very interesting story was narrated by my friend at the International Storytelling Festival.
    2. A very interesting story is being narrated by my friend at the International Storytelling Festival.
    3. A very interesting story has been narrated by my friend at the International Storytelling Festival.
    4. A very interesting story was being narrated by my friend at the International Storytelling Festival.
18. Select the most appropriate meaning of the given idiom.
    Let off the hook
    1. Made to pay for one's actions
    2. Not made to wait for a long time
    3. Not allowed to take part in an activity
    4. Allowed to escape from blame
19. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement'.
    My doctor knew that I would eventually recover and do the kind of work I would be doing before.
    1. would have been doing   **2.** had been doing
    3. No improvement   **4.** would have done
20. Select the most appropriate synonym of the given word.
    DEROGATORY
    1. Appreciative **2.** Favourable **3.** Lethargic **4.** Sarcastic
21. Select the most appropriate ANTONYM of the given word.
    OPTIONAL
    1. Original   **2.** Compulsory **3.** Elective   **4.** Fanciful
22. Select the most appropriate ANTONYM of the given word.
    INCOHERENT
    1. Delightful   **2.** Puzzling
    3. Inconsistent   **4.** Intelligible
23. Select the word which means the same as the group of words given.
    Soon passing out or of a short duration
    1. Fluke   **2.** Extempore
    3. Frostbite   **4.** Evanescent
24. Select the most appropriate meaning of the given idiom.
    Parthian shot
    1. Say goodbye   **2.** Praise
    3. Victory   **4.** Parting hit
25. Select the most appropriate word to fill in the blank.
    The student has made a _____ to the police about a false video of her that is being circulated by some miscreants.
    1. complaint   **2.** complain
   **3.** complaining   **4.** complainant

General Intelligence

26. Select the option that is related to the number in the same way as the second number is related to first number.
    215 : 125 :: 415 : ?
    1. 154   **2.** 145   **3.** 625   **4.** 250
27. In a certain code language, 458693 is coded as 367784. How will 742351 be coded as in that language?
    1. 651462   **2.** 651442   **3.** 655442   **4.** 863442
28. Select the option that is related to the third word in the same way as the second word is related to the first word.
    Car : Garage :: Aeroplane : ?
    1. Runway   **2.** Sky   **3.** Pilot   **4.** Hangar
29. In a family Mr. and Mrs. Gajanan have five daughters and each daughter has one brother. How many persons are there in the family?
    1. 6   **2.** 5   **3.** 8   **4.** 9

30. Select the letter that can replace the question mark (?) in the following series.
    A, D, B, F, D, I, G, ?, K
   **1.** J   **2.** M   **3.** E   **4.** N
31. In a certain code language, NEPOLIAN is written as MCQQKGBP. How will MOHANDEV be written as in that language?
    1. LMICMBFX   **2.** NQICMBFX
    3. LMICMBXF   **4.** NQGCLBFX
32. Select the answer figure in which the question figure is embedded. (Rotation is not allowed)

    1. **2.** **3.** **4.**
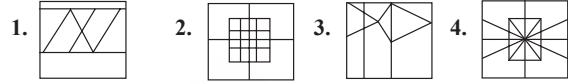
33. Four words have been given, out of which three are alike in some manner and one is different. Select the odd one.
    1. Water Filter   **2.** Study Table
    3. Wardrobe   **4.** Dining Table
34. The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the question figure. Select the figure from the answer figures that would most closely resemble the unfolded paper.

    1. **2.** **3.** **4.**
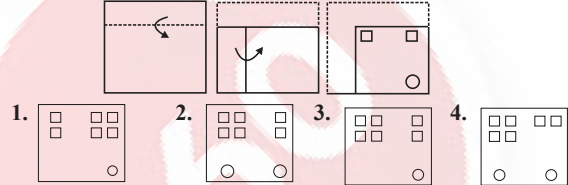
35. Which two signs should be interchanged to make the given equation correct?
 $(560 \div 80) + 90 \times 8 - 38 = 600$
    1. + and −   **2.** + and ÷   **3.** ÷ and −   **4.** × and +
36. Four pairs of letter-cluster have been given, out of which three are alike in some manner and one is different. Select the one that is different.
    1. KITE : TIEK   **2.** FIRU : RIUF
    3. MANY : NAYM   **4.** LICK : ILCK
37. Select the option that is related to the third term in the same way as the second term is related to the first term.
   KLEN : EKNL :: GHIS : ?
    1. IGHS   **2.** IGSH   **3.** IHGS   **4.** IHSG
38. If a mirror is placed on line PQ in the question figure, then which of the answer figures is the correct mirror image of the question figure?

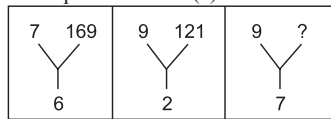   **1.** **2.** **3.** **4.**
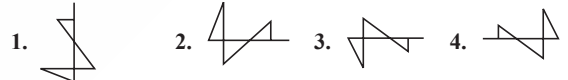
39. Four number have been given, out of which three are alike in some manner and one is different. Select the number that is different from the rest.
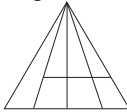   **1.** 2197   **2.** 2306   **3.** 1331   **4.** 1728
40. Select the answer figure that can replace the question mark (?) in the following question figure.
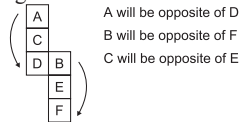

    1. **2.** **3.** **4.**
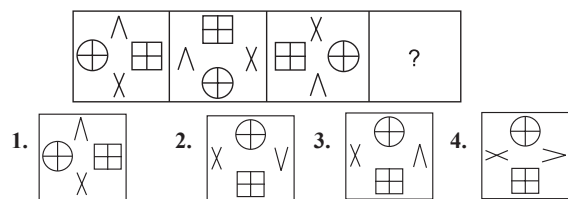
41. Study the given pattern carefully and select the number that can replace the question mark (?) in it.

7 169	9 121	9 ?
6	2	7

1. 256   **2.** 196   **3.** 81   **4.** 289

42. Find the number of triangles in the given figure.

1. 21   **2.** 13   **3.** 18   **4.** 16

43. Select the answer figure that can be formed by folding the given sheet along the lines.

A will be opposite of D
B will be opposite of F
C will be opposite of E

1.   **2.**   **3.**   **4.**

44. Select the combination of letters that when sequentially placed from left to right in the blanks of the given series, will complete the series.
a_cd_cba_bcddc_a

1. aaba   **2.** adcb   **3.** bdab   **4.** babd

45. Arrange the following word in a logical and meaningful sequence.
1. Quintal   **2.** Kilo Gram **3.** Gram
4. Milli Gram   **5.** Ton
1. 4 - 3 - 2 - 5 - 1   **2.** 4 - 3 - 2 - 1 - 5
3. 4 - 2 - 3 - 5 - 1   **4.** 4 - 2 - 3 - 1 - 5

46. When Laxmi saw Mahesh, she said , "He is the son of the father-in-law of the father of my daughter ". How is Mahesh related to Laxmi?
1. Maternal uncle   **2.** Son
3. Nephew   **4.** Brother

47. Select the number that can replace the question mark (?) in the following series.
5, 5, 15, 75, 525, ?
1. 1575   **2.** 2625   **3.** 4725   **4.** 1050

48. Read the given statements and conclusions 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 :**
 **1.** All squares are rectangles.
  2. All rectangles are polygons.
Conclusions :
  I. Square is not a polygon.
  II. Square is both rectangle and polygon.
  1. Only conclusion I follows.
  2. Neither conclusion I not II follows.
  3. Only conclusion II follows.
  4. Both conclusions I and II follow.

49. In the given Venn diagram, different animals are represented by different areas. 'A' denotes 'dogs', 'B' denotes 'cats', 'C' denotes 'fishes', 'D' denotes 'mongooses', 'E' denotes 'rats' and 'F' denotes 'rabbits'. Which area represents the group of only dogs, fishes and mongooses?
**1.** D   **2.** F   **3.** C   **4.** A
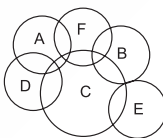
50. Select the number that can replace the question mark(?) in the following figure series.

**1.** 14   **2.** 16   **3.** 5   **4.** 11
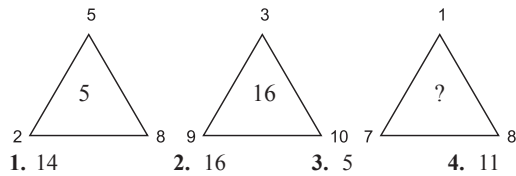
Quantitative Aptitude

51. In a company with 600 employees, the average age of the male employees is 42 years and that of the female employees is 41 years. If the average age of all the employees in the company is 41 years 9 months, then the number of female employees is:
1. 350   **2.** 150   **3.** 250   **4.** 450

52. A person invested a total of ₹9,000 in three parts at 3%, 4% and 6% per annum on simple interest. At the end of a year, he received equal interest in all the cases. The amount invested at 6% is :
1. ₹3,000   **2.** ₹5,000   **3.** ₹2,000   **4.** ₹4,000

53. The proportion among three number is 3: 4 : 5 and their LCM is 1800. The second number is :
1. 90   **2.** 120   **3.** 30   **4.** 150

54. If the diameter of a circle bisects each of the two chords of the circle, then both the cords :
1. are parallel to each other   **2.** intersect at 30°
3. intersect at 60°   **4.** intersect at 90°

55. A shopkeeper allows a discount of 20% on an article and still makes a profit of 25%. What does he pay for an article whose marked price is ₹800?
1. ₹ 492   **2.** ₹ 800   **3.** ₹ 512   **4.** ₹ 640

56. The following chart shows the marks (in degrees) scored by a student in different subjects — English, Hindi, History, Economics and Political Science — in an examination. Total marks obtained in the examination are 600. Observe the chart and answer the question.
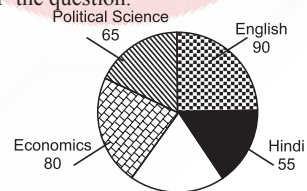
What is the difference between marks scored in History and marks scored in Hindi?
1. 25   **2.** 15   **3.** 40   **4.** 30

57. If $x + \dfrac{1}{x} = 4$, then the value $x^4 + \left(\dfrac{1}{x}\right)^4$ is :
1. 16   **2.** 196   **3.** 194   **4.** 14

58. If $\cosec \theta = \dfrac{\left(x^2 + y^2\right)}{\left(x^2 - y^2\right)}$, then what will be the value of $\tan \theta$?

1. $\dfrac{2xy}{\left(x^2 - y^2\right)}$ **2.** $\dfrac{\left(x^2 - y^2\right)}{2xy}$

3. $\dfrac{\left(x^2 + y^2\right)}{2xy}$ **4.** $\dfrac{\left(x^2 - y^2\right)}{\left(x^2 + y^2\right)}$

59. The following pie-chart shows the percentage-wise distribution of the number of students in five different schools P, Q, R, S and T. Total number of students in all five schools together is 8400.
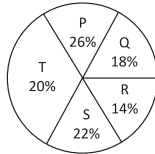
The number of students in school T is what percentage of the total number of students in schools Q and S together.

1. 55%   **2.** 45%   **3.** 50%   **4.** 40%

60. If 'a' is a natural number, then $(7a^2 + 7a)$ is always divisible by :
   1. 7 only   **2.** 14 only
   3. 7 and 14 both   **4.** 21 only

61. If a and b are two positive real number such that $4a^2 + b^2 = 20$ and $ab = 4$, then the value of $2a + b$ is :
   1. 80   **2.** 8   **3.** 6   **4.** 5

62. In the given figure, PQR is a triangle in which angle P : angle Q : angle R = 3 : 2 : 1, and PR is perpendicular to RS. What will be the measure of angle TRS?

   1. 30°   **2.** 45°   **3.** 60°   **4.** 50°

63. Raju can finish a piece of work in 20 days. He worked it for 5 days and then Jakob alone finished the remaining work in 15 days. In how many days can both finish it together?
   **1.** 20 days   **2.** 12 days   **3.** 10 days   **4.** 16 days
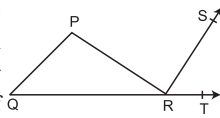
64. If $\cos(A+B) = 0$ and $\sin(A-B) = \dfrac{1}{2}$, then the value of B is:
   (Given 0° < A, B < 90°)
   1. 90°   **2.** 60°   **3.** 45°   **4.** 30°

**65.** In the given figure, if OQ = QR, then the value of m is :
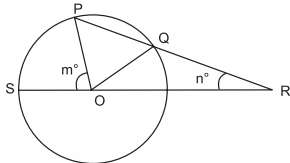
   1. 3n°   **2.** n°   **3.** 4n°   **4.** 2n°

66. A train, 150 m long, is running at 90km/h. How long (in seconds) will it take to clear a platform that is 300 m long?
   1. 6   **2.** 12   **3.** 50   **4.** 18

67. If the gain is one-fifth of the selling price, then the gain percentage is :
   1. 16%   **2.** 20%   **3.** 80%   **4.** 25%

68. If $\cos^2\theta + \cos^4\theta = 1$, then the value of $\sin\theta + \sin^2\theta$ is :
   1. $\dfrac{1}{2}$ **2.** 2   **3.** 1   **4.** 0

69. The value of a motorcycle depreciates every year by 4%. What will be its value after 2 years, if its present value is ₹75,000?
   1. ₹69,120   **2.** ₹72,000   **3.** ₹70,120   **4.** ₹69,000

70. In the given figure, AP is perpendicular to BC , and AQ is the bisector of angle PAC. What will be the measure of angle PAQ?


   1. 50°   **2.** 45°
   3. 60°   **4.** 30°
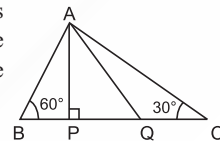
71. If $a + b = 8$ and $ab = 12$, then the value of $a^3 + b^3$ is :
   1. 512   **2.** 224   **3.** 288   **4.** 96

72. The following graph shows the number of books sold by a book-seller during five months of 2019, April, May, June, July and August. Study the graph and answer the question.
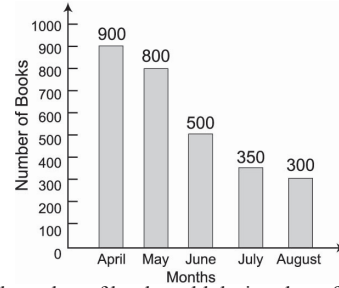
The total number of books sold during these five months is :
   1. 2950   **2.** 2800   **3.** 2850   **4.** 2900

73. Study the graph and answer the following question.
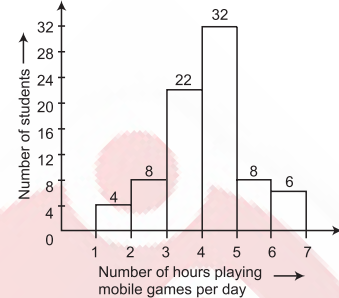
How many students spent 5 hours or more than 5 hours in playing mobile games per days?
   1. 14   **2.** 46   **3.** 6   **4.** 8

74. The value of $72 - 3(2 + 24 \div 4 \times 3 - 2 \times 2) + 8$ is :
   1. 72   **2.** 36   **3.** 32   **4.** 24

75. The area of a square field is 7200 m². What is the length of its diagonal?
   1. 1800 m   **2.** 180 m   **3.** 120 m   **4.** 60 m

General Awareness

76. When was the Indian national song 'Vande Mataram' sung for the first time on a political occasion?
   1. 1896 INC session   **2.** 1903 INC session
   3. 1911 INC session   **4.** 1900 INC session

77. The last Mauryan ruler to be killed by Pushyamitra Shunga was:
   1. Brihadratha   **2.** Devavarman
   3. Bindusara   **4.** Dasaratha

78. _____ is a diagrammatic representation of a program logic.
   1. Legend   **2.** Process   **3.** Data   **4.** Flowchart

79. 'Dhimsa' is a tribal dance form of which Indian state?
   1. Arunachal Pradesh   **2.** Madhya Pradesh
   3. Andhra Pradesh   **4.** Himachal Pradesh

80. Who is the 47th Chief Justice of India?
   1. Sharad Arvind Bobde   **2.** Dipak Misra
   3. Ranjan Gogoi   **4.** NV Ramana

81. In which part of a plant are mesophyll cells found?
   1. Root   **2.** Leaf   **3.** Stem   **4.** Seed

82. Who is the author of the book 'The Blue Umbrella'?
   1. Ruskin Bond   **2.** Vikram Seth
   3. Suketu Mehta   **4.** Vikram Chandra

83. The GST council is headed by the:
   1. Prime minister   **2.** Union finance minister
   3. SEBI chairman   **4.** RBI governor

84. 'Disha Act' was passed by which of the following state in December 2019?
   1. Tamil Nadu   **2.** Andhra Pradesh
   3. Telangana   **4.** Karnataka

85. A force due to which moving objects (wind and water current) tend to deflect to the right in Northern hemisphere and left in Southern hemisphere is known as:
   1. Applied force   **2.** Magnetic force
   3. Endogenic force   **4.** Coriolis force

86. The _____ is responsible for Earth's magnetic field.
   1. mantle   **2.** crust   **3.** inner core   **4.** outer core

87. A higher _____ index represents inequality in income distribution.
   1. NDP   **2.** GDP   **3.** CPI   **4.** Gini

88. The Constitution under Article _____ mandates the Election Commission, to conduct elections to the Parliament and the State Legislatures.
   1. 298   **2.** 324   **3.** 330   **4.** 312

89. Which is the second most abundant gas in Earth's atmosphere?
   1. Oxygen   **2.** Hydrogen
   3. Nitrogen   **4.** Carbon di oxide

90. With which of the following sports is Manika Batra associated?
   1. Badminton   **2.** Table Tennis
   3. Gymnastics   **4.** Cricket

91. Batholith is a type of:
   1. ocean current   **2.** secondary pollutant
   3. igneous rock   **4.** valley

92. How many gold medals did India win at the '1986 Asian Games' held in Seoul, South Korea?
   1. 5   **2.** 9   **3.** 6   **4.** 8

93. Which of the following is NOT an e-commerce website?
   1. Swiggy   **2.** Flipkart
   3. Google Maps   **4.** Uber

94. Which river is also called 'Dihang' in India?
   1. Indus   **2.** Ganges
   3. Tapti   **4.** Brahmaputra

95. International Astronomical Union (IAU) named minor planet 2006 VP32 (number -300128) in September 2019 after a famous Indian. Who is this Indian?
   1. Pandit Jasraj   **2.** APJ Abdul Kalam
   3. Viswanathan Anand   **4.** Hamsa Padmanabhan

96. Birthplace of Guru Nanak known as Nankana Sahib today, was earlier called.
   1. Umarkot   **2.** Rai Bhoi di Talvandi
   3. Luni   **4.** Roda

97. In which year was a separate Andhra state formed after the linguistic reorganisation of the then Madras province?
   1. 1947   **2.** 1950   **3.** 1952   **4.** 1956

98. Rambir Singh Khokar received the 'Dronacharya award' for:
   1. Kabaddi   **2.** Wrestling   **3.** Football   **4.** Athletics

99. In which year was the Bharat Ratna award instituted?
   1. 1950   **2.** 1953   **3.** 1954   **4.** 1956

100. In which medium does sound travel faster?
   1. Gas   **2.** Vacuum   **3.** Solid   **4.** Liquid

Answer Key

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

Answers with Explanations

1. Option (4) is correct.

Cowardly means a person who is weak and gutless. Dissatisfied means being unhappy and disappointed. Inimitable means something that is unique and matchless. Invincible means someone who cannot be defeated and someone who is unbeatable.

2. Option (4) is correct.

Option C introduces the personality traits that can be possessed by anyone. Option D speaks about the types of traits and their impact as a continuation of option C. Option A explains the concept discussed in option D by quoting the research on personality traits. B further supports option D by referring to the concept given by one such research. So the right answer is CDAB.

3. Option (3) is correct.

The correct spelling is 'messenger'. The meaning of the word messenger is a person or an envoy who carries information or messages.

4. Option (3) is correct.

The given exercise for conversion is: The manager said, "I want you to attend the conference."

The reporting verb in the exercise is said that is in the past form and the part to be reported is a statement that is in the present form. If the reporting verb is in the past form, the verb to be reported must be changed to past. Since the part to be reported is a statement, in between the reporting element and the part to be reported, we need to use the connector 'that'. So, it must be: The manager said that…. The pronoun I should

be converted into 'she' as it refers to the manager. The verb 'want' has to be changed to its past form 'wanted'. You would become me. So, the answer is: The manager said that she wanted me to attend the conference.

5. Option (4) is correct.

In the given sentence with the blank, we come across the modal verb 'would'. With all modal verbs, we use the first form of the verb or the base form of the verb. In the given answers, option 4 'describe' is the base form of the verb and other options are the conjugated forms of the verbs.

6. Option (3) is correct.

Incredibly means something that is unbelievable and amazing. Surprisingly means something that is astonishing and amazing. Mostly means a greater part of the number. Openly means agreeably and frankly.

7. Option (3) is correct.

Global means relating to the whole world. Foreign means a country that is not our own. New means something that is introduced recently and native means a person born in a specified place or associated with a place by birth. The passage is all about India's native crops and so native is the right answer.

8. Option (1) is correct.

In this particular line, the writer is focusing on people's preference for healthy food habits. The state of being cautious is indicated. Hence, becoming will be the right choice as it

is a gerund. All the other three options are different forms of verbs, that can only indicate an action and not the state of being. So, the right answer is 'becoming'

9. Option (1) is correct.

The meaning of awareness is consciousness in people. Apprehension is anxiety. Experience is understanding from knowledge. Intelligence is the ability to understand, learn and think. The passage speaks about the benefits of consuming local food and hence, 'awareness' is the right option.

10. Option (1) is correct.

The sentence is structured using past tense and the noun 'students' is in plural form. So, instead of 'that', 'those' should be used as the noun is in plural form and the usage of 'that' is wrong.

11. Option (1) is correct.

Part C is the first sentence as it explains the starting of an incident. The next sentence will be part A as it speaks about the old job of Vijay stating that he was a bus conductor. Part B will be the next sentence as it continues about Vijay. Part D will be the last sentence as it describes the attitude and nature of Vijay. So, the option is CABD.

12. Option (4) is correct.

It must be 'had to make' as the entire construction is in the past form and 'has to make' is a wrong usage here in the sentence.

13. Option (4) is correct.

The final part of the sentence where we find the verb 'are became' is the wrong one as the sentence must be in past tense and the verb must be 'became' and the phrase 'are became' is an inappropriate usage as we will not use a 'be verb' along with the second or the past form of the verb.

14. Option (4) is correct.

The synonym of deplete is to reduce. Increase and raise convey the same synonym elevation or growth. The synonym of complete is whole. So the right answer is 'reduce'.

15. Option (3) is correct.

'Dimention' is the incorrectly spelt word. The right spelling is DIMENSION. Dimension means a measurement of the length, width, or height of something.

16. Option (4) is correct.

We will not say frequent examination, ability examination, or conclusion examination. We say entrance examination. So, the right option is the entrance examination. All the other options are inappropriate in this context.

17. Option (1) is correct.

When we convert active into passive, the object of active must become the subject in passive. Based on the number of the subject, we must use the helping verb. Here the verb is in the past form and since the subject is in the singular form, we must use the helping verb 'was'. Then we need to use the past participle form of the verb. Connector 'by' must be added before the object. And the subject of active is made as the object of passive. 'A very interesting story' will become the subject of the sentence and it is in singular form and the verb is in the past form. So, we will use the 'be verb' was and the third form of the verb 'narrated' will be used. We add the connector 'by' after the verb and the subject of the active sentence 'my friend' will become the object in the passive form.

18. Option (4) is correct.

The meaning of the idiom is to allow (someone who has been caught doing something wrong or illegal) to go without being punished. The first three options will not make the correct answers and option 4 is the right answer.

19. Option (2) is correct.

Wrong Explanation.

The sentence is about a past action; as indicated by 'knew'. Past perfect continuous tense 'had been doing' will be

used because it is used for an action that started in the past continued up until another time in the past. This is in reference to the 'kind of work' he used to do before.

20. Option (4) is correct.

The synonym of the word derogatory is offensive or sarcastic. Appreciative is being grateful. Favourable is being complimentary. Lethargic is being lazy and tired. So the right answer is sarcastic.

21. Option (2) is correct.

The antonym of the word original is borrowed. The antonym of the word elective is required. The antonym of the word fanciful is grave or usual. The antonym of compulsory is optional. So, the answer is compulsory.

22. Option (4) is correct.

The antonym of the word delightful is unpleasant. The antonym of the word puzzling is clear. The antonym of the word inconsistent is consistent or certain. The antonym of intelligible is incoherent. So the answer is intelligible.

23. Option (4) is correct.

The meaning of fluke is a surprising and lucky result that happens by accident. The meaning of extempore is spoken or done without preparation. The meaning of frostbite is a serious medical condition of the fingers, toes, etc. that is caused by very low temperatures. The meaning of evanescent is soon passing out of sight, memory, or existence; quickly fading or disappearing. So, the answer is evanescent.

24. Option (4) is correct.

A Parthian shot is a remark that you make when you are leaving so that it has a stronger effect. Options A, B, and C are inappropriate in this context and hence option D is the right answer.

25. Option (1) is correct.

Options 2 and 3 won't be fitting in the blank as they are verb forms and option 4 is a noun meaning one who makes a legal complaint.

26. Option (2) is correct.

The pattern is: $215 \rightarrow 125$

The Middle number is shifted at first place and first number is shifted to middle place.

Similarly, in 415 the middle number will be shifted at first place and the first number will be shifted to middle place.

Hence, 145 is the correct answer.

27. Option (2) is correct.

The pattern is:

$4 \rightarrow -1 \rightarrow 3$

$5 \rightarrow +1 \rightarrow 6$

$8 \rightarrow -1 \rightarrow 7$

$6 \rightarrow +1 \rightarrow 7$

$9 \rightarrow -1 \rightarrow 8$

$3 \rightarrow +1 \rightarrow 4$

Similarly, 742351 will be coded as 651442

Hence, 651442 is the correct answer.

28. Option (4) is correct.

Car is temporarily parked in the Garage and Aeroplane is parked in a Hangar.

Hence, hangar is the correct answer.

29. Option (3) is correct.

The total number of persons in family is Mr. Gajanan and Mrs Gajanan + Five daughters+ one brother=8

Hence, 8 is the correct answer.

30. Option (2) is correct.

There are two series pattern. One series is A, B, D, G, K (Alternative Series).

Next series is D, F, I, ?

A	+1	B
B	+2	D
D	+3	G
G	+4	K

And

D	+2	F
F	+3	I
I	+4	M

Hence, M is the correct answer.

31. Option (1) is correct.

N – 1 = M
E – 2 = C
P + 1 = Q
O + 2 = Q
L – 1 = K
I – 2 = G
A + 1 = B
N + 2 = P

Similarly,

M – 1 = L
O – 2 = M
H + 1 = I
A + 2 = C
N – 1 = M
D – 2 = B
E + 1 = F
V + 2 = X

Hence, LMICMBFX is the correct answer.

32. Option (4) is correct.

The given figure is shown how it is embedded in the figure.
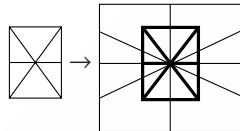
33. Option (1) is correct.

Except option 1 all other are types of furniture.

34. Option (3) is correct.

The process of unfolding is shown in the below figures.
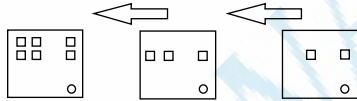
35. Option (4) is correct.

Using BODMAS: On checking option 4 we get,

$(560 \div 80) \times 90 + 8 - 38$

$= 7 \times 90 + 8 - 38 = 630 + 8 - 38 = 638 - 38$

$= 600 = $ RHS

Hence, 600 is the correct answer.

36. Option (4) is correct.

The pattern is that every 1st letter of each word is shifted to last place.

In the option LICK L should be the last letter instead of K. 2nd letter is not changed, the 3rd letter is shifted to the first letter.

Hence, LICK:ILCK is the correct answer.

37. Option (2) is correct.
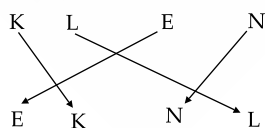
Similarly,
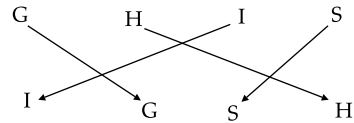
Hence, IGSH is the correct answer.

38. Option (4) is correct.

When the Mirror is placed at the right side then the objects appear on the right side will be positioned to the left side and the objects appear on the left side will appear on the right side.
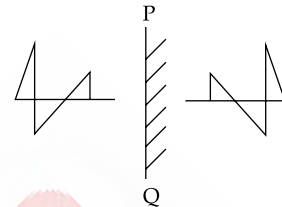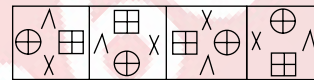

39. Option (2) is correct.

Except option 2 all other numbers are perfect cubes as follows:

$13^3 = 2197$
$11^3 = 1331$
$12^3 = 1728$

Hence, odd one out is 2306 which is the correct answer.

40. Option (3) is correct.

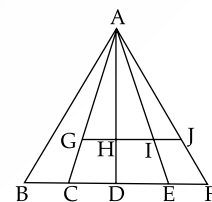The figure will be completed as:

The pattern here is every object is rotated by 90° in clockwise direction.

41. Option (1) is correct.

The pattern is:

$7 + 6 = 13$ and $13^2 = 169$
$9 + 2 = 11$ and $11^2 = 121$
$9 + 7 = 16$ and $16^2 = 256$

Hence, 256 is the correct answer.

42. Option (4) is correct.

The triangles being formed are as follows:

ABC, ABD, ABE, ABF, ACD, ACE, ACF, ADE, ADF, AEF, AGH, AGI, AGJ, AHI, AHJ, AIJ

43. Option (4) is correct.

In option 1 C is the opposite of E hence it cannot be formed.

Option 2 C is the opposite of A and it cannot be formed.

Option 3 B is the opposite of F and it also cannot be formed.

44. Option (3) is correct.

We count the total number of positions which is 16 and 16 can be written as 4×4. So, 4 groups will be formed each group having 4 letters which are abcd.

The pattern is: abcd dcba abcd dcba

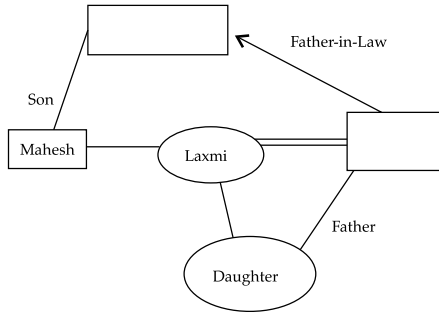Hence, bdab is the correct answer.

45. Option (2) is correct.

We know that all of these are the units of weight so they can be arranged in ascending order.

Smallest unit of weight is milli gram then comes gram, kilo

gram, quintal, and ton.

Hence, 4-3-2-1-5 is the correct answer.

46. Option (4) is correct.

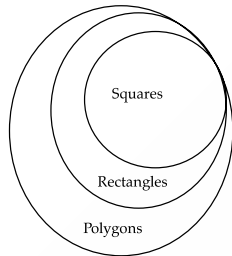From the above blood relation tree, Mahesh is the brother of Laxmi.

Hence, brother is the correct answer.

47. Option (3) is correct.

The pattern is:

$5 \times 1 = 5$

$5 \times 3 = 15$

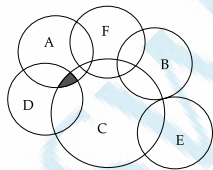$15 \times 5 = 75$

$75 \times 7 = 525$

$525 \times 9 = 4725$

48. Option (3) is correct.

From the above diagram only conclusion II follows.

49. Option (1) is correct.

In the given venn diagram the area of only dogs, fishes and mongooses is the area of ADC intersection which is highlighted in the below diagram, and that part comes within the circle D.

50. Option (1) is correct.

The pattern is

Triangle 1: $5 + 5 - 2 = 8$ (Top + Middle – Left Corner

= Right Corner)

Triangle 2: $3 + 16 - 9 = 10$

Triangle 3: $1 + ? - 7 = 8$

$\rightarrow ? - 6 = 8$

$\rightarrow ? = 8 + 6 = 14$

Hence, 14 is the correct answer.

51. Option (2) is correct.

Let number of male employees be x and female employees be y.

According to the question,

$x + y = 600$ …(i)

$\because$ Average age of male = 42 years

$\therefore$ Sum of age of male = 42 x

Average age of female = 41 years

$\therefore$ Sum of age of female = 41 y

Average age of all employees = $41\dfrac{9}{12}$ years

$\therefore$ Sum of age of all employees = $42x + 41y = 41\dfrac{3}{4} \times 600$

$$= \dfrac{167}{4} \times 600$$

$42x + 41y = 25050$ …(ii)

From (ii) – 42 (i)

$$\begin{array}{r} 42x + 42y = 25200 \\ 42x + 41y = 25050 \\ \hline y = 150 \end{array}$$

$\therefore$ Number of female = 150

52. Option (3) is correct.

Let ₹x, ₹y and ₹z in invest at 3%, 4% and 6% per annum respectively.

According to question $\dfrac{3x}{100} = \dfrac{4y}{100} = \dfrac{6z}{100}$

$\Rightarrow \dfrac{x}{4} = \dfrac{y}{3} = \dfrac{z}{2} = k$

$\therefore x = 4k, y = 3k, z = 2k$

Total amount = ₹ 9,000

$4k + 3k + 2k = 9,000$

$\Rightarrow$ $9k = 9,000$

$\Rightarrow$ $k = 1,000$

$\therefore$ The amount invested at 6% = $2k = $ ₹ 2,000

53. Option (2) is correct.

Given that the proportion among three numbers is 3 : 4 : 5.

Let numbers be $3x, 4x$ and $5x$

$\because$ L.C.M. of $3x, 4x, 5x = 1800$

$60x = 1800 \Rightarrow x = 30$

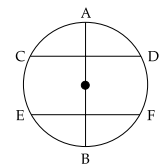$\therefore$ The second number = $4x = 120$

54. Option (1) is correct.

We know that perpendicular draw from centre to the chord bisect the chord

$\therefore$ AB $\perp$ CD and AB $\perp$ EF

$\therefore$ CD $||$ EF

So, both chord are paralled to each other

55. Option (3) is correct.

Given that marked price is ₹ 800 and discount is 20%.

$\therefore$ S.P. = $800\left(1 - \dfrac{20}{100}\right) = 800 \times \dfrac{4}{5} = 640$

Profit = 25%

C.P. = $\dfrac{\text{SP} \times 100}{100 + \text{profit}\%} = \dfrac{640 \times 100}{100 + 25}$

$= \dfrac{640 \times 100}{125} = 512$

56. Option (1) is correct.

Marks scored in History = $\dfrac{70}{360} \times 600 = \dfrac{700}{6}$

Marks scored in Hindi = $\dfrac{55}{360} \times 600 = \dfrac{550}{6}$

Difference = $\dfrac{700}{6} - \dfrac{550}{6} = \dfrac{150}{6} = 25$

57. Option (3) is correct.

Given that $x + \dfrac{1}{x} = 4$

$$\left(x + \dfrac{1}{x}\right)^2 = x^2 + \dfrac{1}{x^2} + 2 = 16$$

$$\Rightarrow x^2 + \dfrac{1}{x^2} = 14$$

$$\Rightarrow \left(x^2 + \dfrac{1}{x^2}\right)^2 = (14)^2$$

$$\Rightarrow x^4 + \dfrac{1}{x^4} + 2 = 196$$

$$\Rightarrow x^4 + \dfrac{1}{x^4} = 194$$

58. Option (2) is correct.

$$\operatorname{cosec} \theta = \dfrac{x^2 + y^2}{x^2 - y^2}$$

$$\cot \theta = \sqrt{\operatorname{cosec}^2 \theta - 1} = \sqrt{\left(\dfrac{x^2 + y^2}{x^2 - y^2}\right) - 1}$$

$$= \sqrt{\dfrac{(x^4 + y^4 + 2x^2y^2) - (x^4 + y^4 - 2x^2y^2)}{(x^2 - y^2)^2}}$$

$$= \sqrt{\dfrac{4x^2y^2}{(x^2 - y^2)^2}} = \dfrac{2xy}{x^2 - y^2}$$

$$\tan \theta = \dfrac{x^2 - y^2}{2xy}$$

59. Option (3) is correct.

Number of students in the school T

$$= \dfrac{20}{100} \times 8400 = 1680$$

Number of students in the school Q

$$= \dfrac{18}{100} \times 8400 = 1512$$

Number of students in the school S

$$= \dfrac{22}{100} \times 8400 = 1848$$

Total number of student in the school Q and S
$$= 1512 + 1848 = 3360$$

Percentage $= \dfrac{1680}{3600} \times 100 = 50\%$

60. Option (3) is correct.

Given a is natural number

∴   Put $a = 1$ in $7a^2 + 7a = 7(a^2 + a)$

$$= 7(1 + 1) = 14$$

Put $a = 2 = 7(4 + 2) = 42 = 3 \times 14$

∴ $7a^2 + 7a$ is divisible by 7 and 14 both.

61. Option (3) is correct.

Given that, $4a^2 + b^2 = 20$ and $ab = 4$

Now, $(2a + b)^2 = 4a^2 + b^2 + 4ab$

$$= 20 + 4(4) = 20 + 16 = 36$$

∴ $2a + b = \sqrt{36} = 6$

62. Option (3) is correct.

Let $\angle P = 3x$, $\angle Q = 2x$ and $\angle R = x$

By angle properties of triangle

$$3x + 2x + x = 180°$$

$\Rightarrow$ $6x = 180° \Rightarrow x = 30°$

∴ $\angle R = 30°$ and $\angle PRS = 90°$ (∵ PR ⊥ RS)

∵ $\angle PRQ + \angle PRS + \angle TRS = 180°$

$$30° + 90° + \angle TRS = 180°$$

∴ $\angle TRS = 180° - 120° = 60°$

63. Option (3) is correct.

∴ Raju can finish a piece of work in 20 days

∴ Raju can do a piece of work in 1 days $= \dfrac{1}{20}$ parts

Raju can do a piece of work in 5 days $= \dfrac{5}{20} = \dfrac{1}{4}$ parts

Remaning work $= 1 - \dfrac{1}{4} = \dfrac{3}{4}$ parts

Jakob do $\dfrac{3}{4}$ parts of work in 15 days

Jakob do 1 part of work in $\dfrac{15 \times 4}{3} = 20$ days

Together do a work in 1 day $= \dfrac{1}{20} + \dfrac{1}{20} = \dfrac{1}{10}$ parts

∴ Together can finish a piece of work in 10 days.

64. Option (4) is correct.

Given that $\cos (A + B) = 0 = \cos 90°$

∴ $A + B = 90°$ …(i)

and $\sin (A - B) = \dfrac{1}{2} = \sin 30°$

∴ $A - B = 30°$ …(ii)

Subtract (ii) from (i)

$$A + B = 90°$$
$$A - B = 30°$$
$$\underline{- \quad + \quad -}$$
$$2B = 60° \Rightarrow B = 30°$$

65. Option (1) is correct.

In ΔOQR   OQ = QR   (Given)

∴ $\angle QOR = \angle ORQ = n°$

(Angle opposite equal sides of an isosceles triangle.)
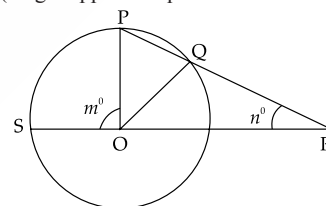
∴ $\angle QOP = \angle ORQ + $ angle OPQ (Exterior angle)

$$= n° + n° = 2n°$$

In Δ POQ

OP = OQ (radii)

$$\angle OPQ = \angle OQP = 2n°$$

$$\angle OPQ + \angle OQP + \angle POQ = 180°$$

$$2n° + 2n° + \angle POQ = 180°$$

$$POQ = 180° - 4n°$$

∴ $\angle POS + \angle POQ + \angle QOR = 180°$

(Straight angle)

$\angle POS + 180° - 4n° + n° = 180°$

$\angle POS = 180° - 180° + 4n° - n° = 3n°$

66. Option (4) is correct.

For clear platform train traved $150 + 300 = 450$ m.

$\therefore$ Distance $= \dfrac{450}{1000}$ km and speed $= 90$ km/h

Time $= \dfrac{\text{Distance}}{\text{Speed}} = \dfrac{450}{1000 \times 90}$ h

$= \dfrac{450 \times 60 \times 60}{1000 \times 90} = 18$ sec.

67. Option (4) is correct.

Let   S.P. = ₹ 100

$\therefore$ Gain $= \dfrac{1}{5} \times 100 = 20$

C.P. $= 100 - 20 = ₹80$

$\therefore$ Gain % $= \dfrac{20}{80} \times 100 = 25\%$

68. Option (3) is correct.

Given that $\cos^2 \theta + \cos^4 \theta = 1$

$\Rightarrow$ $\cos^4 \theta = 1 - \cos^2 \theta = \sin^2 \theta$

$\Rightarrow$ $\cos^2 \theta = \sin \theta$

$\therefore$ $\sin^2 \theta + \sin \theta = \cos^4 \theta + \cos^2 \theta = 1$

69. Option (1) is correct.

Given that percent value = ₹ 75,000

Depreciates = 4%

Value after 2 years $= 75000 \left(1 - \dfrac{4}{100}\right)^2$

$= 75000 \times \dfrac{24}{25} \times \dfrac{24}{25} = ₹ 69120$

70. Option (4) is correct.

In Δ PAC $\angle$APC + $\angle$PAC + $\angle$PCA = 180°

$\Rightarrow$ $90° + PAC + 30° = 180°$

$\Rightarrow$ $\angle PAC = 180° - 120° = 60°$

Since, AQ bisect the angle $\angle PAC$

$\therefore$ $\angle PAC = \dfrac{1}{2} \angle PAC = \dfrac{1}{2} \times 60° = 30°$

71. Option (2) is correct.

Given that $a + b = 8$ and $ab = 12$

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

$\Rightarrow$ $64 = a^2 + b^2 + 24$

$\Rightarrow$ $a^2 + b^2 = 40$

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

$(8)^3 = a^3 + b^3 + 3(12)(8)$

$a^3 + b^3 = 512 - 288 = 224$

72. Option (3) is correct.

Total number of books sold during these five month

$= 900 + 800 + 500 + 350 + 300 = 2850$

73. Option (1) is correct.

Total students speed 5 hours or more in playing mobile game

$= 8 + 6 = 14$ h

74. Option (3) is correct.

$72 - 3 (2 + 24 \div 4 \times 3 - 2 \times 2) + 8$

$= 72 - 3 (2 + 6 \times 3 - 2 \times 2) + 8$

$= 72 - 3 (2 + 18 - 4) + 8$

$= 72 - 3 (16) + 8 = 72 - 48 + 8 = 80 - 48 = 32$

75. Option (3) is correct.

Area of square $= a^2$

$7200 = a^2$

$\Rightarrow$ $a = \sqrt{7200} = 60\sqrt{2}$ m

$\therefore$ Diagonal $= \sqrt{2}\, a$

$= 60 \sqrt{2} \times \sqrt{2}$

$= 60 \times 2 = 120$ m

76. Option (1) is correct.

The first time 'Vande Mataram' was sung in a political context was at the Indian National Congress in 1896. Calcutta hosted the Indian National Congress session in 1896. M. Rahmathulla Sayani presided over the INC's Calcutta session in 1896. Bankim Chandra Chatterjee wrote the Sanskrit poem Vande Mataram. It was adapted from Anand Math, which was published in 1882. Rabindranath Tagore first sang Vande Mataram in 1896. The constituent assembly approved it on January 24, 1950. Vande Mataram's music was written by Jadhunath Bhattacharya.

77. Option (1) is correct.

Brihadratha, the last Mauryan ruler, was assassinated in 185 B.C by his commander-in-chief Pushyamitra Shunga. Pushyamitra Shunga established a kingdom to the north. Pushyamitra Shunga founded the Sunga dynasty. The Mauryan dynasty reigned for 137 years. In 322 BC, Chandragupta dethroned the last Nanda ruler, Danananda, and occupied Patliputra. Chandragupta was one of the Maurya dynasty's three important rulers - Bindusara, Ashoka and Bindusara. Maurya succeeded Chandragupta Maurya. Bindusara was also referred to as Amitrochates or Amitraghata. Dasharatha was Ashoka's grandson. Devvarman was Shalishuka Maurya's successor and reigned for only seven years.

78. Option (4) is correct.

A flowchart is a diagram that represents programme logic. A flowchart depicts a solution model for a specific problem. A flowchart is a graphical representation of the algorithm. It is a common way of describing computer algorithms. It is primarily used in various fields to analyse, design, document, or manage a process or programme. Frank and Lillian Gilbreth developed the first structured method for document process flow. A programme is an algorithm expressed in a precise notation that can be executed by a computer. A program's execution is referred to as Process. Data is a collection of facts and figures.

79. Option (3) is correct.

Dhimsa is an Andhra Pradesh tribal dance form. It is primarily performed by the Porja tribe. Porjas are primarily found in the tribal areas of Andhra Pradesh's Vizag district. It originated in Odisha's Koraput district. The 'Dhimsa' dance is considered the official dance of Visakhapatnam. It is mostly seen at weddings. The instruments that accompany the Dhimsa dance are Mori, Kiridi, Tudumu, Dappu, and Jodukommulu.

80. Option (1) is correct.

The highest-ranking officer of the Indian federal judiciary is the Chief Justice of India. Sharad Arvind Bobde has been appointed as India's 47th Chief Justice. The President of India appoints the Chief Justice of India. Since 1950, the Chief Justice of India has been appointed by the Supreme Court's senior-most judge. This rule, however, was broken twice. A. N. Ray was appointed CJI in 1973, succeeding three senior judges. In 1975, Justice M.H. Beg was appointed to succeed Justice H.R. Khanna. The Supreme Court of India currently has 34 judges, including the Chief Justice of India. A Supreme Court justice is in office until he reaches the age of 65.

81. Option (2) is correct.

Plant leaves contain mesophyll cells. The mesophyll cells in the leaves contain a large number of chloroplasts, which are responsible for CO_2 fixation. Mesophyll, which contains chloroplasts and performs photosynthesis, is composed of parenchyma. Plants rely heavily on their leaves. It contributes to food synthesis via photosynthesis. Cactus leaves are modified to form spines. The stem of a plant is the part of the plant that grows towards the light. The root is the plant's descending part that developed from the radicle. The matured ovule contains embryonic plant material, stored material, and a protective coat or coat.

82. Option (1) is correct.

"The Blue Umbrella" is a book written by Ruskin Bond that was adapted into a comic book by Amar Chitra Katha publications in 2012. Ruskin Bond is a well-known Indian author of British ancestry. In 1992, he received the Sahitya Academy Award. In 1999, he was awarded the Padma Shri. In 2014. He was awarded the Padma Bhushan. Notable works of Ruskin bond are Roads to Mussoorie. Our Trees Still Grow in Dehra. The Cherry Tree. A Flight of Pigeons. Too Much Trouble. The Blue Umbrella. The Panther's Moon.

83. Option (2) is correct.

The Goods and Services Tax Council is a constitutional body that makes recommendations to the Union and State Governments on Goods and Services Tax issues. With 33 members, the GST Council is the governing body of GST. The union finance minister presides over the GST Council. The union finance minister will preside over the GST council. The GST council's first chairman was Arun Jaitley. The GST council is currently chaired by Union Finance Minister Nirmala Sitharaman.

84. Option (2) is correct.

The Disha Act is a law that aims to punish those who commit specified crimes against women with the death penalty and to expedite trials in such cases within 21 days of the crime being committed. The law aims to punish those who commit specified crimes against women with the death penalty and to expedite trials in such cases within 21 days of the crime being committed. The Disha Act was first enacted in Andhra Pradesh. Sections 376, 376D, and 376DA of the Act amend the punishments in cases involving rape and murder of a woman, awarding capital punishment to those convicted of such offences.

85. Option (4) is correct.

The Coriolis force is the force exerted by the rotation of the earth. In the northern hemisphere, the Coriolis force deflects the wind to the right, while in the southern hemisphere, it deflects the wind to the left. Wind deflection is greater when the wind velocity is high. It is directly proportional to the latitude angle. The Coriolis force is greatest at the poles and absent at the equator. At the equator, the Coriolis force is zero, and the wind blows perpendicular to the isobars. Magnetic force is the attraction or repulsion caused by the motion of electrically charged particles. Endogenic force is the force that acts within the earth's interior. An applied force is a force that is applied to an object by a person or another object.

86. Option (4) is correct.

The earth's interior is divided into three layers: the crust, the mantle, and the core. The core is the earth's deepest layer. The innermost layer's (core's) radius is approximately 3500 km. The material used to make the core is nickel and iron. The central core's temperature and pressure are extremely high. The core is divided into two layers: the outer core and the inner core. The earth's outer core is in a liquid state. The inner core is completely solid. The magnetic field of the Earth is controlled by the outer core.

87. Option (4) is correct.

The Gini index measures how far an economy's distribution of income or consumption expenditure deviates from a perfectly equal distribution among individuals or households. A Gini index of 0 denotes perfect equality, whereas a Gini index of 100 denotes perfect inequality. A higher Gini index indicates income distribution inequality. In 2011, the World Bank estimated that the Gini index in India was 35.70. In 1993, India had a minimum value of 31.70.

88. Option (2) is correct.

The Indian constitution established the election commission as a permanent and independent body. The Election Commission is mandated by Article 324 of the Indian constitution to conduct elections to the Parliament and State Legislatures. It is shared by both the national and state governments. The Election Commission of India is unconcerned about the state's panchayat and municipal elections. The Election Commission of India was established on January 25, 1950. The Election Commission's headquarters are located in New Delhi at Nirvachan Sadan. A chief election commissioner and two election commissioners make up the election commission. The president appoints the election commissioners. Election commissioners serve for six years or until they reach the age of 65, whichever comes first. Sukumar Sen was India's first chief election commissioner.

89. Option (1) is correct.

The second most abundant gas in the Earth's atmosphere is oxygen. The oxygen content of the Earth's atmosphere is approximately 21%. At a height of 120 km, oxygen will be almost non-existent. The most abundant element in the Earth's crust is oxygen. Gases, water vapour, and dust particles make up the atmosphere. The most abundant gas in the Earth's atmosphere is nitrogen. The following gases are found in the Earth's atmosphere: nitrogen (78.08%), and oxygen (20.95%). Argon (0.93%) and Carbon dioxide (0.036%) is a gas. NO AC is a code to remember the composition of gases in the Earth's atmosphere (Nitrogen, Oxygen, Argon, Carbon dioxide). The most abundant element in the universe is hydrogen.

90. Option (2) is correct.

Manika Batra is linked to table tennis. In 2020, she will be awarded the Rajiv Gandhi Khel Ratna. She won gold in the Women's Singles category at the Commonwealth Games in 2018. At the 2016 South Asian Games, she won three gold medals.

91. Option (3) is correct.

The batholith is an igneous rock type. Batholith formed beneath the Earth's surface as a result of magma intrusion and solidification. When magma rises into the earth's crust, batholith forms. It does not appear on the surface. It is typically made up of rocks such as granite or granodiorite. Igneous rocks are formed when hot and molten magma cools, solidifies, and crystallises. Igneous rocks are typically harder and granular in nature. Igneous rock formation occurs both beneath and above the earth's surface. Igneous rocks do not contain fossils. Pumice stone, Granite, Basalt, Gabbro, and other igneous rocks are examples.

92. Option (1) is correct.

The Asian Games were held in Seoul, South Korea, in 1986. The Asian Games were held for the tenth time. Seoul had previously been scheduled to host the 1970 games, but it was unable to do so due to security concerns. Chun Doo-hwan, South Korea's then- President, officially opened the event. India won five gold medals at the Asian Games in 1986. India won a total of 37 medals in the competition. With 5 gold medals, 9 silver medals, and 23 bronze medals, India finished fifth. P. T. Usha took home four of the five gold medals. Kartar Singh won a gold medal in wrestling for India. China won the most gold medals, with 94.

93. Option (3) is correct.

The only Google Maps option is not an e-commerce website. Google Maps is a web mapping service created by Google that allows users to plan routes by foot, car, bicycle, air (in beta), and public transportation. E-commerce is an abbreviation for electronic commerce or internet commerce. The primary function of an e-commerce website is to facilitate the purchase and sale of goods or services via the internet. It also allows for the transfer of money in order to carry out these transactions. It is one of the most common methods for consumers to purchase goods and services. Thomson Holidays pioneered business-to-business online shopping. Flipkart, Amazon, Uber, Swiggy, eBay, Walmart and Ola are the few examples of e-commerce websites.

94. Option (4) is correct.

The Brahmaputra River rises in Tibet from the Chemayundung glacier near Manasarover Lake. Brahmaputra is known as Dihang in Arunachal Pradesh. The Brahmaputra River enters India through Sadiya, Arunachal Pradesh. The Brahmaputra is known as Jamuna in Bangladesh. The Tibetan name for the upper course of the Brahmaputra is the Yarlung Tsangpo. The majority of its route is outside of India. It passes through several countries, including India, China, and Bangladesh. The Brahmaputra River in India has the largest volume of water. Tista, Lohit, and Subansiri are some of the major tributaries of the Brahmaputra River.

95. Option (1) is correct.

Between Mars and Jupiter, a minor planet has been named after 'Pandit Jasraj,' the doyen of Indian classical vocal music. Minor planet 2006 VP32 (number -300128), discovered on November 11, 2006, has been named 'Panditjasraj' by the International Astronomical Union (IAU). 'Pandit jasraj' travels through space between Mars and Jupiter's orbits. Pandit Jasraj was a Mewati gharana classical vocalist from India. His 75-year musical career earned him national and international fame, respect, and numerous major awards and accolades.

96. Option (2) is correct.

Guru Nanak is the Sikh religion's founder. Guru Nanak was born on April 15, 1469, in Pakistan at Rai Bhoi di Talvandi (present-day Nankana Sahib). Gurdwara Janam Asthan marks his birthplace. He is widely regarded as the first of the ten Sikh Gurus. His birthday is known as Guru Nanak Gurpurab all over the world. Before his death, Guru Nanak named Bhai Lehna as his successor. Guru Angad was the name given to Bhai Lehna. He died on September 22, 1539. Guru Nanak's final resting place is Gurdwara Darbar Sahib in Kartarpur.

97. Option (3) is correct.

Potti Sreeramulu began a death fast on October 19, 1952, in order to demand a separate state of Andhra Pradesh. Potti Sreeramulu passed away on December 15, 1952. The death of Potti Sreeramulu resulted in the establishment of the Andra state. In December 1952, the Prime Minister announced the formation of a separate Andhra state. On October 1, 1953, the Telugu-speaking area of Andhra state was formed. Kurnool was the state capital of Andra. T Prakasam was Andra state's first chief minister. The gentlemen's agreement was used to form the combined state of Andhra Pradesh. On November 1, 1956, Andhra State merged with the Telugu-speaking areas of the already existing Hyderabad State.

98. Option (1) is correct.

Rambir Singh Khokar was a former coach in Indian Kabaddi. In 1987, he trained the Indian Kabaddi team for the first Asian Kabaddi Championships. In 2019, he received the Dronacharya award. He is only the fourth kabaddi coach to receive the prestigious Dronacharya award. Rambir Singh Khokhar left SAI in 2014. He was the head coach of Patna Pirates in the 2014 Pro Kabaddi League.

99. Option (3) is correct.

The Bharat Ratna is India's highest civilian honour. These awards are open to anyone, regardless of race, occupation, position, or gender. The Bharat Ratna was established in 1954. It is not necessary to award the Bharat Ratna every year. C. Rajagopalachari is one of the first three recipients of the Bharat Ratna. Radhakrishnan, Sarvepalli. Raman, C. V. Lal Bahadur Shastri was the first person to be posthumously awarded the Bharat Ratna. There is no written provision stating that the Bharat Ratna should only be awarded to Indian citizens. Khan Abdul Ghaffar Khan was the first foreigner to be honoured with the Bharat Ratna. Indira Gandhi was the first woman to receive the Bharat Ratna award. Sachin Tendulkar is the first athlete to be awarded the Bharat Ratna. Bharat Ratna was last bestowed on January 25, 2019. The Bharat Ratna awardees for 2019 are Nanaji Deshmukh (Posthumous), Mr. Bhupen Hazarika (Posthumous), Mukherjee, Pranab. There will be no Bharat Ratna in 2021.

100. Option (3) is correct.

Sound waves are mechanical waves, which mean they must travel through a material medium. The wave is transmitted by the movement of the medium. Because solids have a high density and their molecules are closely packed, sound waves are quickly transmitted from one molecule to the next, allowing them to travel faster. As a result, the speed of sound is greatest in solids, followed by liquids (which are less dense than solids) and finally gas (least dense). Because there is no material medium in a vacuum, sound cannot travel.

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