

MENTAL ABILITY TEST

I Directions (Q1 to Q10): In the number series given below one number is missing. Each series is followed by four alternatives (1), (2), (3) and (4) one of them is the right answer. Indicate it as per the instructions.

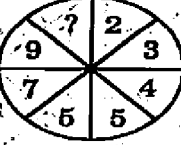
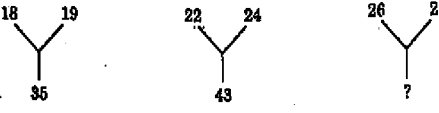
- 1) 4, -8, 16, -32, 64, ?
(1) 128 (2) -128
(3) 192 (4) -192
- 2) 5, 10, 13, 26, 29, 58, 61, ?
(1) 122 (2) 64
(3) 125 (4) 128
- 3) 1, 4, 9, 16, 25, 36, 49, ?
(1) 54 (2) 56
(3) 64 (4) 81
- 4) 1, 8, 27, 64, 125, 216, ?
(1) 354 (2) 343
(3) 392 (4) 245
- 5) 11, 13, 17, 19, 23, 29, 31, 37, 41, ?
(1) 43 (2) 47
(3) 53 (4) 51
- 6) 16, 33, 65, 131, 261, ?
(1) 523 (2) 521
(3) 613 (4) 721
- 7) 3, 7, 6, 5, 9, 3, 12, 1, 15, ?
(1) 18 (2) 13
(3) -1 (4) 3
- 8) 15, 31, 63, 127, 255, ?
(1) 513 (2) 511
(3) 517 (4) 523
- 9) 2, 6, 12, 20, 30, 42, 56, ?
(1) 60 (2) 64
(3) 72 (4) 70
- 10) 8, 24, 12, 36, 18, 54, ?
(1) 27 (2) 108
(3) 68 (4) 72


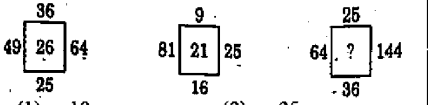
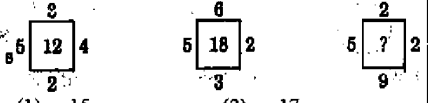

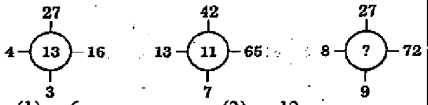
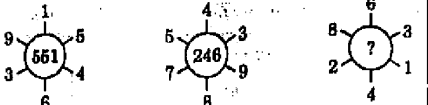
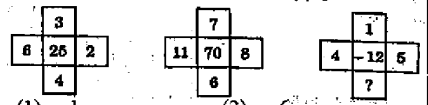
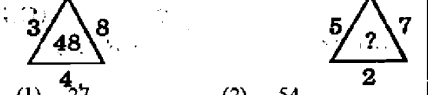
II Directions (Q11 to Q20): In these questions, there are equations that have become wrong due to incorrect order of signs. From the four alternatives given below, find out the correct order of signs. So that the equations become correct.

- 11) $5 - 2 + 7 = 17$
(1) +, -, = (2) ×, -, =
(3) ×, +, = (4) +, =, -
- 12) $4 \times 42 - 7 \div 2$
(1) =, ÷, - (2) +, =, ×
(3) ×, -, ÷ (4) ×, +, -

- 13) $22 + 5 - 34 = 2$
(1) +, =, - (2) =, ×, ÷
(3) -, =, ÷ (4) +, -, =
- 14) $52 - 13 = 8 + 2$
(1) -, +, = (2) +, =, ×
(3) =, +, × (4) =, ×, ÷
- 15) $36 - 9 \times 4 = 8$
(1) =, +, - (2) +, -, =
(3) ×, -, = (4) ÷, +, =
- 16) $25 = 5 \times 3 + 2$
(1) -, +, = (2) =, +, -
(3) ÷, -, = (4) ×, -, =
- 17) $32 = 21 + 4 - 15$
(1) -, ×, = (2) =, ÷, +
(3) +, -, = (4) -, +, =
- 18) $15 - 3 + 4 = 3$
(1) =, ×, + (2) ×, -, =
(3) -, ÷, = (4) ÷, -, =
- 19) $56 = 7 + 2 - 16$
(1) +, ×, ÷ (2) ÷, ×, =
(3) -, +, = (4) ÷, -, =
- 20) $210 \div 15 = 15 - 15$
(1) +, -, × (2) -, ×, ×
(3) +, =, ÷ (4) =, ×, -

III Directions (Q21 to Q30): In each of the following questions a set of figures carrying certain character is given. Assuming that the characters in each set follow a similar pattern, find the missing character in each case from the given four alternatives.

- 21) 
(1) 10 (2) 12
(3) 11 (4) 13
- 22) 
(1) 49 (3) 89
(2) 76 (4) 94

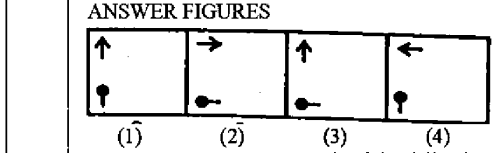
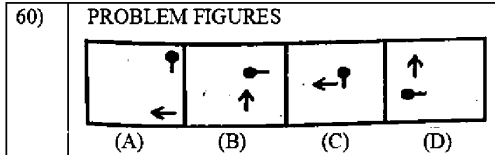
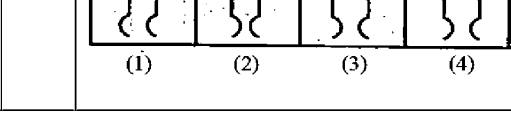
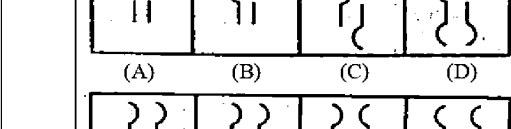
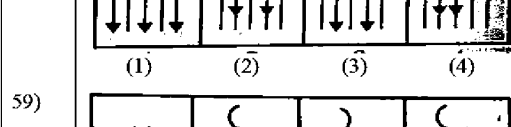
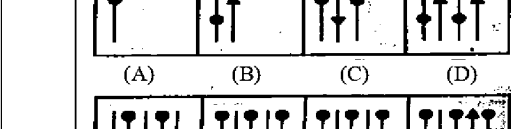
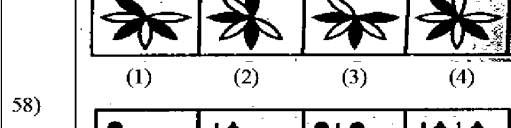
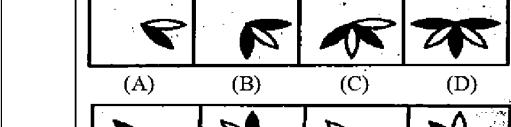
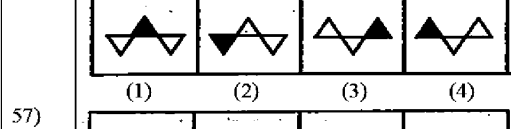
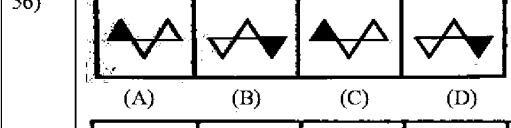
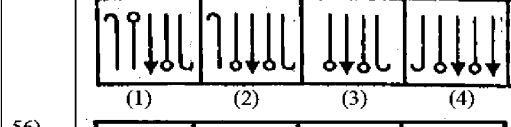
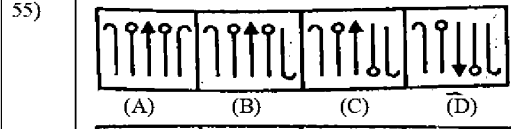
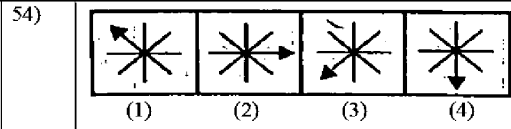
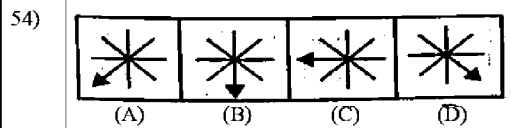
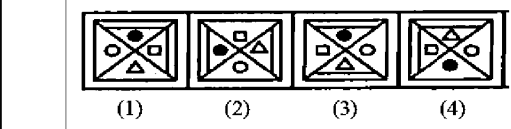
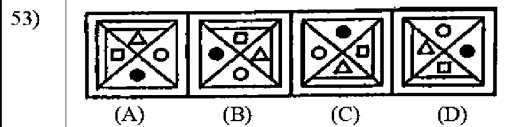
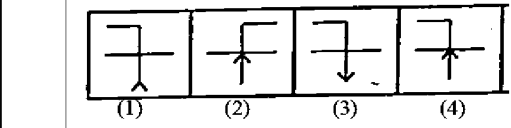
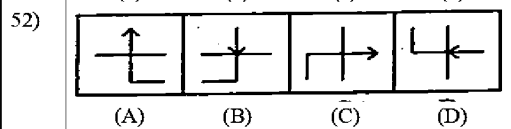
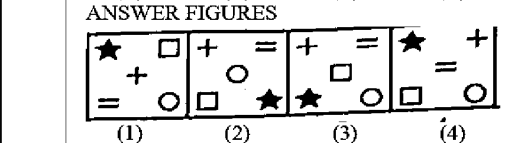
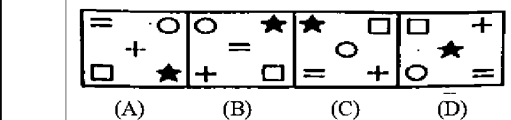
- 23) 
(1) 184 (2) 241
(3) 210 (4) 425
- 24) 
(1) 19 (2) 25
(3) 23 (4) 31
- 25) 
(1) 15 (2) 17
(3) 16 (4) 18
- 26) 
(1) 84 (2) 240
(3) 195 (4) None of these
- 27) 
(1) 6 (2) 12
(3) 9 (4) 18
- 28) 
(1) 262 (2) 631
(3) 622 (4) 824
- 29) 
(1) 1 (2) 6
(3) 2 (4) 10
- 30) 
(1) 27 (2) 54
(3) 35 (4) 64

IV Directions (Q31 to Q40): In each of the following questions, there is a certain relationship between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives, having the same relation.

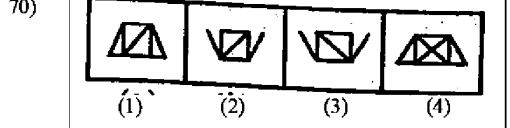
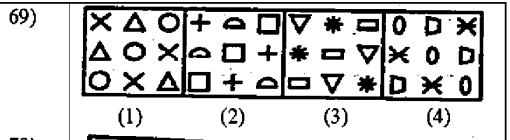
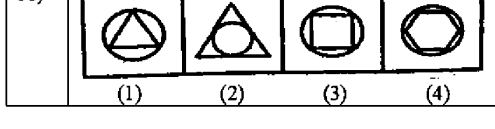
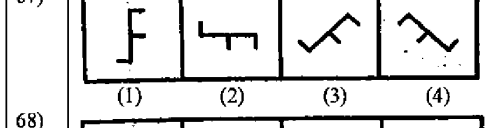
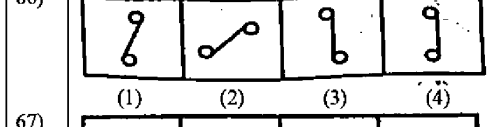
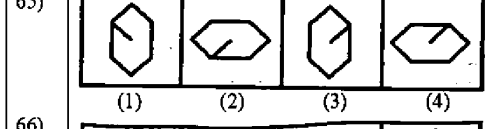
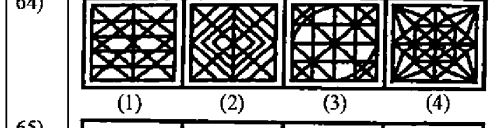
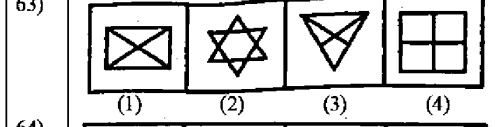
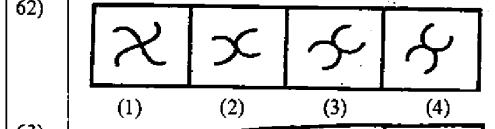
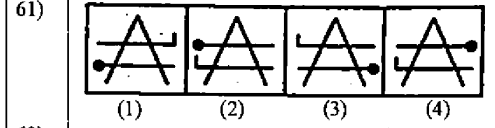
- 31) Ornaments : Gold :: Needle : ?
(1) Stich (2) Steel
(3) Prick (4) Thread
 - 32) Skirmish : War :: Disease : ?
(1) Medicine (2) Epidemic
(3) Patient (4) Infection
 - 33) Sorrow : Death :: Happiness : ?
(1) Love (2) Cry
(3) Dance (4) Birth
 - 34) Breeze : Cyclone :: Drizzle : ?
(1) Earthquake (2) Flood
(3) Storm (4) Downpour
 - 35) Ship : Sea :: Camel : ?
(1) Forest (2) Mountain
(3) Land (4) Desert
 - 36) Line : Square :: Arc : ?
(1) Ring (2) Circle
(3) Sphere (4) Ball
 - 37) Pork : Pig :: Beef : ?
(1) Farmer (2) Cow
(3) Herd (4) Lamb
 - 38) Proteins : Growth :: Carbohydrates : ?
(1) Energy (2) Resistance
(3) Strength (4) Diseases
 - 39) Bread : Yeast :: Curd : ?
(1) Fungi (2) Germs
(3) Bacteria (4) Virus
 - 40) Cub : Lion :: Colt : ?
(1) Doe (2) Leopard
(3) Stag (4) Stallion
- V. Directions (Q41 to Q50):** The following questions are based on simple arithmetic calculations. There are 4 alternatives given under each question. After identifying the right answer, indicate it as per instructions.
- 41) $55555 + 5555 + 555 = ?$
(1) 60655 (2) 60605
(3) 61665 (4) 61655
 - 42) $159 + \dots = 15900$
(1) 10.0 (2) 0.001
(3) 0.1 (4) 0.01
 - 43) $7500 + \frac{1250}{50} = ?$
(1) 7775 (2) 7525
(3) 7575 (4) 7550
 - 44) $\sqrt{625} - x = 10$, then $x = ?$
(1) 10 (2) 15
(3) 5 (4) 25
 - 45) $\frac{5}{7}$ of 245 = ?
(1) 175 (2) 195
(3) 185 (4) 165
 - 46) $\frac{5x + 215}{3} = 4x + 60$, then $x = ?$
(1) 2 (2) 4
(3) 3 (4) 5

- 47) $\sqrt{16} + \sqrt{x} = 20$, then $x = ?$
 (1) 196 (2) 36
 (3) 256 (4) 16
- 48) 30% of 60 =
 (1) 30 (2) 12
 (3) 18 (4) 1800
- 49) $0.5 \times 0.0008 = ?$
 (1) 0.004 (2) 0.00004
 (3) 0.04 (4) 0.0004
- 50) $8.512 - 4.4011 = ?$
 (1) 4.0109 (2) 4.1109
 (3) 4.1119 (4) 4.1110

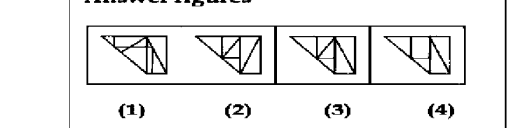
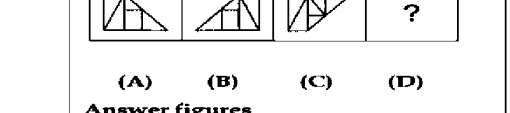
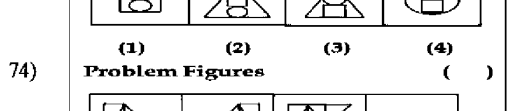
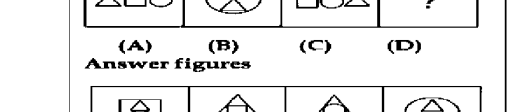
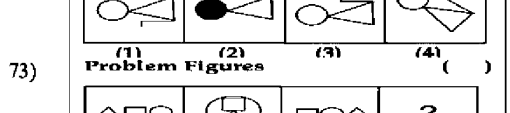
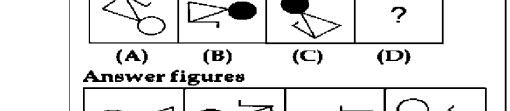
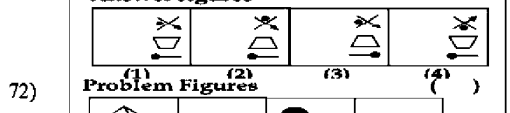
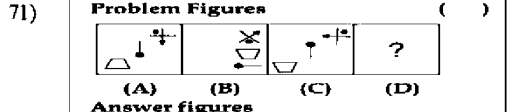
VI. **Directions (51 to 60):** Each of the following questions consists of four problem figures marked A, B, C and D and four answer figures marked 1, 2, 3 and 4. select a figure from amongst the answer figures which will continue the series established by four problem figures.



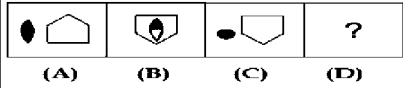
VII. **Directions (61 to 70):** In each of the following problem, out of four figures marked 1, 2, 3 and 4, three are similar in a certain manner. However, one figure is not like the other three. Choose the figure which is different from the rest (find out odd figure).



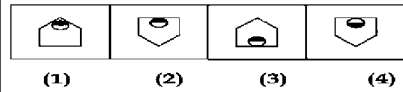
VIII. **Directions (71 to 80):** Each of the following questions consists of two sets of figures. Figures A, B, C and D constitute the problem set while figures 1, 2, 3 and 4 constitute the answer set. There is a definite relationship figures A and B. Establish a similar relationship between figures C and D by selecting a suitable figure from the answer set that would replace the question mark(?) in figure D.



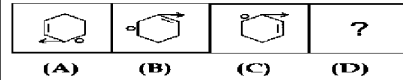
75) Problem Figures ()



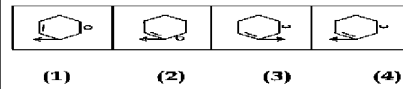
(A) (B) (C) (D)



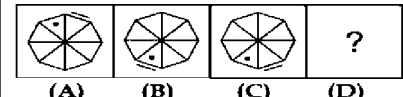
76) Problem Figures ()



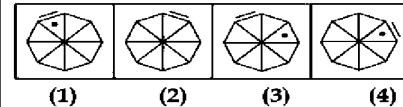
(A) (B) (C) (D)



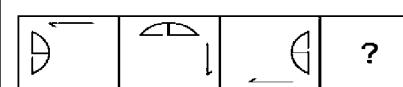
77) Problem Figures ()



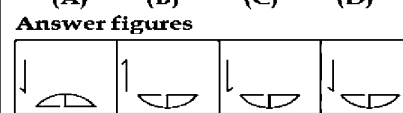
(A) (B) (C) (D)



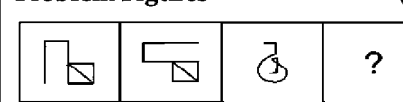
78) Problem Figures ()



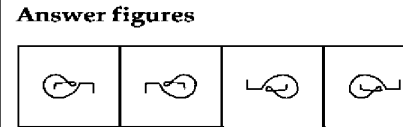
(A) (B) (C) (D)



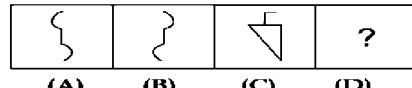
79) Problem Figures ()



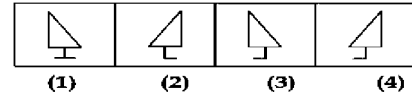
(A) (B) (C) (D)



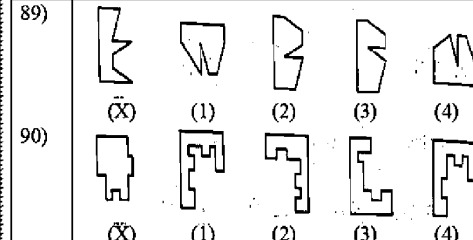
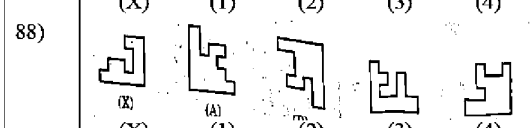
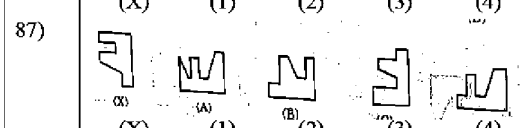
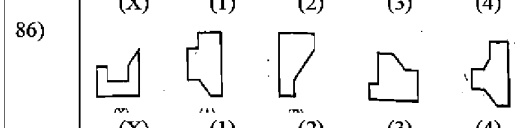
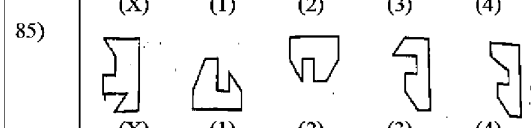
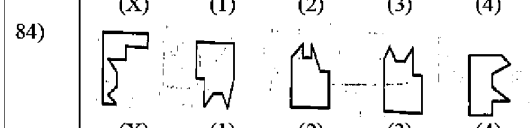
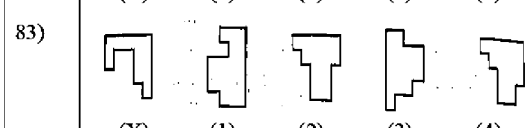
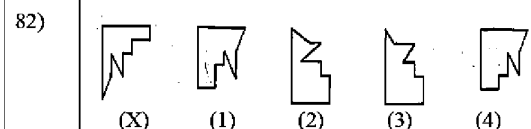
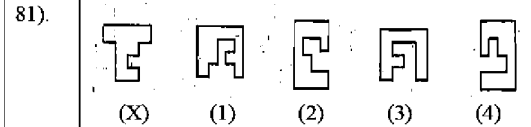
80) Problem Figures ()



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



IX. Directions (Questions 81 to 90): In each of the following questions, a key figure marked (X) is given, followed by four other alternative figures marked (1), (2), (3) and (4). It is required to select one figure from the alternatives, which fits exactly into fig. (X) to form complete square



SCHOLASTIC APPTITUDE TEST
MATHEMATICS

90. (X) (1) (2) (3) (4)
- 91) Which of the following fraction is the largest?
 $\frac{3}{2}, \frac{7}{3}, \frac{5}{4}, \frac{7}{2}$
 (1) $\frac{3}{2}$ (2) $\frac{7}{3}$
 (3) $\frac{5}{4}$ (4) $\frac{7}{2}$
- 92) If $\frac{x}{529} = \frac{324}{x}$, then $x = ?$
 (1) 414 (2) 416
 (3) 408 (4) 404
- 93) If $\frac{1}{6.198} = 0.16134$, then the value of $\frac{1}{0.0006198}$ is
 (1) 0.016134 (2) 0.16134
 (3) 1613.4 (4) 16134
- 94) The arithmetic mean of 15 numbers is 41.4. Then the sum of these numbers is
 (1) 414 (2) 420
 (3) 620 (4) 621
- 95) If $\frac{9^x \times 3^{2x} \times (27)^3}{3 \times (81)^3} = 27$, then the value of x is
 (1) 1 (2) 2
 (3) 3 (4) 4
- 96) $[(\sqrt{81})^2]^2 = (x)^2$, $x = ?$
 (1) 81 (2) 9
 (3) 4096 (4) 6561
- 97) $58.621 - 13.829 - 7.302 - 1.214 = ?$
 (1) 31.254 (2) 35.272
 (3) 36.276 (4) 37.281
- 98) Seema and Meena divide a sum of ₹25000 in the ratio of 3:2 respectively. If ₹5000 is added to each of their shares, what would be the new ratio?
 (1) 2 : 3 (2) 3 : 4
 (3) 5 : 4 (4) 4 : 3
- 99) The area of rectangle is 252 cm^2 and its length and breadth are in the ratio of 9 : 7 respectively. What is its perimeter?
 (1) 64 cm (2) 68 cm
 (3) 96 cm (4) 128 cm
- 100) The least number which when divided by 4, 6, 8, 12 and 16 leaves a remainder of 2 in each case?
 (1) 46 (2) 48
 (3) 50 (4) 56

- 101) What is 20% of 25% of 300?
 (1) 150 (2) 60
 (3) 45 (4) 15
- 102) The length of a rectangle is doubled while its breadth is halved. What is the percentage change in area?
 (1) 25% increase (2) 55% increase
 (3) 75% decrease (4) Remains same
- 103) If an angle of parallelogram is two-third of its adjacent angle, the smallest angle of the parallelogram is:
 (1) 108° (2) 54°
 (3) 72° (4) 81°
- 104) The sum of all exterior angles of a convex polygon of n sides is:
 (1) 4 right angles (2) $2n$ right angles
 (3) $(2n - 4)$ right angles (4) $\frac{n}{2}$ right angles
- 105) By selling an article for ₹480 a person lost 20%. For what should he sell it to make a profit of 20%?
 (1) ₹800 (2) ₹760
 (3) ₹720 (4) ₹680
- 106) Which one of the numbers 33^{33} , 3^{333} , 333^3 and 3^{333} is the greatest?
 (1) 33^{33} (2) 3^{333}
 (3) 333^3 (4) 3^{333}
- 107) In the adjacent figure PQ = QS, QR = RS and angle SRQ = 100° . Find $\angle QPS = ?$
 (1) 20° (2) 40°
 (3) 15° (4) 30°
- 108) If $2^{x+3} \times 4^{2x-5} = 2^{3x+7}$, then the value of x is:
 (1) 3 (2) 4
 (3) 6 (4) 7
- 109) What is the value of
 $2 + \frac{1}{3 + \frac{1}{4 + \frac{1}{5 + \frac{1}{19}}}}$ \times $\frac{1}{1 + \frac{1}{3 + \frac{1}{4 + \frac{1}{5 + \frac{1}{19}}}}}$
 (1) 1 (2) 1.25
 (3) 1.5 (4) None of these
- 110) The value of
 $\frac{5.32 \times 56 + 5.32 \times 44}{7.66^2 - 2.34^2}$
 (1) 8.5 (2) 7.2
 (3) 10 (4) 12

KEY SHEET FOR BVR NMMS GRAND TEST – 2024-25

1)	2	46)	4	91)	4	136)	3
2)	1	47)	3	92)	1	137)	2
3)	3	48)	3	93)	3	138)	4
4)	2	49)	4	94)	4	139)	3
5)	1	50)	2	95)	1	140)	2
6)	1	51)	3	96)	1	141)	3
7)	3	52)	3	97)	3	142)	4
8)	2	53)	4	98)	4	143)	2
9)	3	54)	1	99)	1	144)	4
10)	1	55)	2	100)	3	145)	1
11)	3	56)	4	101)	4	146)	1
12)	1	57)	1	102)	4	147)	3
13)	3	58)	2	103)	3	148)	2
14)	4	59)	3	104)	1	149)	4
15)	4	60)	4	105)	3	150)	2
16)	3	61)	2	106)	4	151)	1
17)	4	62)	1	107)	1	152)	1
18)	1	63)	2	108)	4	153)	2
19)	2	64)	3	109)	4	154)	3
20)	4	65)	3	110)	3	155)	2
21)	3	66)	4	111)	3	156)	2
22)	1	67)	4	112)	1	157)	1
23)	1	68)	2	113)	3	158)	2
24)	4	69)	4	114)	3	159)	2
25)	4	70)	4	115)	3	160)	1
26)	3	71)	3	116)	3	161)	4
27)	2	72)	3	117)	3	162)	1
28)	2	73)	3	118)	3	163)	1
29)	3	74)	3	119)	4	164)	1
30)	3	75)	1	120)	3	165)	2
31)	2	76)	4	121)	4	166)	4
32)	2	77)	3	122)	2	167)	2
33)	4	78)	4	123)	4	168)	3
34)	4	79)	3	124)	3	169)	3
35)	4	80)	2	125)	3	170)	2
36)	2	81)	3	126)	3	171)	1
37)	2	82)	4	127)	3	172)	3
38)	1	83)	4	128)	4	173)	2
39)	3	84)	3	129)	4	174)	1
40)	4	85)	3	130)	1	175)	2
41)	3	86)	1	131)	1	176)	1
42)	4	87)	4	132)	2	177)	2
43)	2	88)	4	133)	1	178)	3
44)	2	89)	2	134)	1	179)	3
45)	1	90)	4	135)	4	180)	1