NMMS MODEL TEST 2 (MAT) - EM - (2023 - 24)

TOTAL MARKS: 90   TIME : 90 MUNITES
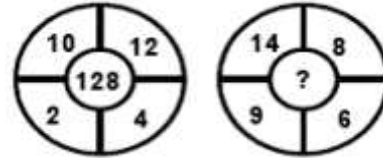
Direction: (Questions 1 to 7)

In each question, the numbers/letters are arranged based on some pattern or principle. Choose the correct answer for the term marked by the symbol (?)

1.   4, 10, ?, 82, 244, 730

(1) 24   (2) 28   (3) 77   (4) 218

2.   0, 1, 1, 2, 3, ?

(1) 4   (2) 7   (3) 5   (4) 6

3.   4, 13, 22, 31, 40, ?

(1) 47   (2) 48   (3) 49   (4) 50

4.   1, 3, 12, 60, ?

(1) 220   (2) 360   (3) 240   (4) 230

5.   20, 20, 19, 16, 17, 13, 14, 11, ?, ?

(1) 10, 10   (2) 10,11   (3) 13, 14   (4) 13, 16

6.   AAB, DCC, IEE, PGH, ?

(1) YKI   (2) YYK

(3) YIL   (4) YKK

7.   bc _ b _ c _ b _ ccb

(1) cbcb   (2) bbcb

(3) cbbc   (4) bcbc

Direction: (Question No: 8 - 13)

In each of the following figures, numbers / letters are written according to some patterns. One number / letter is missing. Find the missing number / letter that replaces the question mark (?).
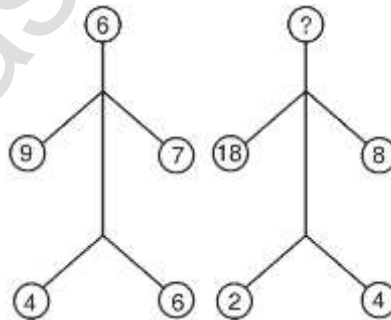
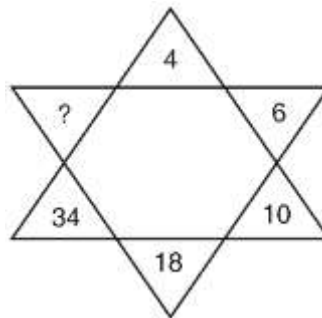8.

(1) 166   (2) 58   (3) 12   (4) 21

9.

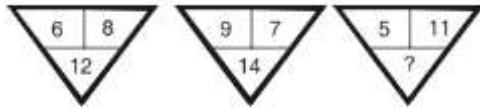

(1) 541   (2) 937   (3) 678   (4) 422

10.

(1) 10   (2) 20   (3) 12   (4) 16
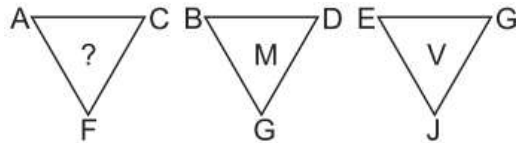
11.

(1) 60   (2) 62   (3) 64   (4) 66

12.

1

(1) 22   (2) 16   (3) 14   (4) 10

13.

(1) I   (2) J   (3) K   (4) L

Direction: (Question No: 14 - 17)

Each question consists of four groups. One group is different from the other three in some way. Find out the different group.

14. (1) 396   (2) 427   (3) 671   (4) 264

15. (1) 73 - 61   (2) 69 - 57
     (3) 42 - 29   (4) 59 - 47

16. (1) Eye   (2) Nose   (3) Lips   (4) Chest

17. (1) Pituitary   (2) Pancreas
     (3) Thalamus   (4) Adrenal

Direction: (Question No: 18 - 21)

In the following questions, there are three words. The first two words to the left of (::) are related in some way. The same relationship holds between the third word to the right of the sign (::) and of the responses (1), (2), (3) or (4). Identify the correct related word.

18. Earth   : Sun   :: Moon : ?
     (1) Star   (2) Earth
     (3) Orbit   (4) Sky

19. Race   : Fatigue   :: Fast : ?
     (1) Run   (2) Food

(3) Hunger   (4) Weakness

20. South   : North-West :: East : ?
     (1) South-East   (2) South-West
     (3) North   (4) West

21. GINGER   : GERGIN   :: LAPTOP : ?
     (1) TOPPAL   (2) APLTOP
     (3) TOPLAP   (4) POTLAP

22. 35 : 48   :: 99 : ?
     (1) 110   (2) 112   (3) 115   (4) 120

23. In a certain code MONKEY is written as XDJMNL. How is TIGER written in the same code?
     (1) SHFDQ   (2) HFDSQ
     (3) QDFHS   (4) PQRST

24. If the word LEADER is coded as 20-13-9-12-13-26, then how would you write LIGHT in the same coding system?
     (1) 20 - 16 - 17 - 15 - 27
     (2) 20 - 15 - 16 - 18 - 23
     (3) 20 - 17 - 15 - 16 - 28
     (4) 20 - 16 - 15 - 17 - 22

25. In a certain code STARS is written as 6-9-22-5 and SUN is written as 20-8-18-5-5. How is MOON written in the same code?
     (1) 6 - 15 - 3 - 12
     (2) 6 - 15 - 21 - 18
     (3) 13 - 15 - 15 - 14
     (4) 23 - 6 - 8 - 10

26. In a certain code language, INDIAN MISSILE is written as 472417 6488453, then how is 'ALL MEN SMILE' written in that code?
     (1) 422 634 8612   (2) 155 637 86124
     (3) 155 634 86456   (4) 155 637 86453

2

27. If the word 'DOG' can be written as 13, then how can be the word 'MAT' be written in that code?

(1) 17   (2) 34   (3) 24   (4) 26

28. In a certain code language, '617' means 'Sweet and hot', '735' means 'Coffee is sweet' and '263' means 'Tea is hot'. In that language,' which of the following would mean "Coffee is hot"?

(1) 731   (2) 536   (3) 367   (4) 753

29. If banana is apple, apple is grapes, grapes is orange, orange is nuts, nuts is guava, which of the following is a yellow fruit?

(1) Mango   (2) Grapes   (3) Apple   (4) Nuts

30. Assuming that the following statements are true, find the correct conclusion from the four alternatives.

Statements:

All questions are answers.

Some answers are problems.

Conclusions:

I) Some problems are questions.

II) Some answers are questions

(1) Only I follows

(2) Only II follows

(3) Either I or II follows

(4) Neither I nor II follows

31. Find the word that cannot be made using the letters of the word CARPENTER.

(1) NECTAR   (2) CARPET

(3) PAINTER   (4) REPENT

Direction: (Question No. 32)

In the following question, a word has been given followed by four other words are of which can be formed by using the letters of the given word. Find that word.

32. CONSECUTIVE

(1) SECTOR   (2) LIVE

(3) EXECUTIVE   (4) CUTE

33. A meaningful word ending with N is made from the third, sixth, seventh and eighth letter of the word 'MARATHON'. What is the first letter of the word?

(1) O   (2) R   (3) H   (4) A

34. The unit digit of $(8903156)^{203}$ is _____.

(1) 6   (2) 4   (3) 8   (4) 3

35. The correct arrangement of alphabetical order of the words.
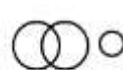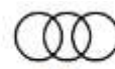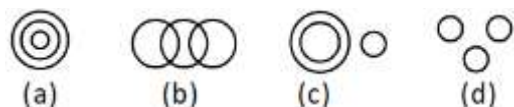
a) Music   b) Monk   c) Minimum   d) Maximum

(1) d, a, c, b   (2) a, c, d, b

(3) d, c, a, b   (4) d, c, b, a

Direction: (Question No. 36 - 40)

There are given eight logical diagrams (a, b, c, d, e, f, g and h). Select one which best illustrates the relationship among three classes in each of the following question.

36. Language, Tamil, German

(1) a   (2) e   (3) g   (4) h

37. Doctor, Specialist doctors, Patients

(1) f   (2) g   (3) h   (4) c

38. Males, Father, Human being

(1) d   (2) a   (3) g   (4) c
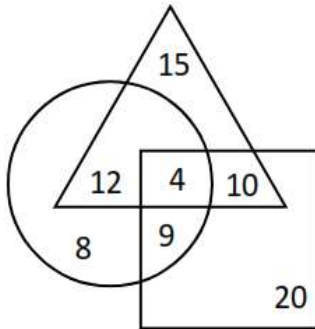
39. Women, married persons, Wives who work

(1) b   (2) g   (3) e   (4) d

40.   Cabinet, Minister, Home minister

    (1) a   (2) g   (3) d   (4) e

Direction: (Question No. 41 to 45)

In the diagram given below, the circle stands for 'literate', Triangle for 'unemployed' and Square for 'villagers'. Study the diagram carefully and answer the following questions.

41.   The total number of villagers is

    (1) 20   (2) 43   (3) 39   (4) 24

42.   The total number of unemployed literates who are not villagers?

    (1) 8   (2) 4   (3) 12   (4) 10

43.   Number of villagers who are literate and unemployed?

    (1) 10   (2) 4   (3) 9   (4) 20

44.   Total number of illiterate villagers who are employed is _____.

    (1) 10   (2) 9   (3) 8   (4) 20

45.   Total number of literate villagers is _____.

    (1) 12   (2) 13   (3) 23   (4) 17

46.   If P denotes ×, T denotes -, M denotes +, B denotes ÷; then the value of 12 P 6 M 15 T 16 B 4 =?

    (1) 70   (2) 83   (3) 75   (4) 110

47.   If '+' means minus, '-'means multiplied by, '÷ 'means plus, and '×' means divided by, then the value of (2 - 4 × 8) - 0 - 5 =?

    (1) - 35   (2) 30   (3) 1   (4) 0

48.   If 85 × 46 = 4865; 13 × 29 =?

    (1) 9123   (2) 1923   (3) 2319   (4) 2193

49.   There are five houses ABCDE in a row. A is right side of C and left side of E. E is the left side of B and B is the left sift side of D. Which house is in the middle?

    (1) B   (2) C   (3) D   (4) E

50.   3 + 5 = 16; 7 + 9 = 64; 10 + 12 = 121; then 11 + 3 =?

    (1) 56   (2) 48   (3) 49   (4) 196

51.   A is the brother of B. C is the father of D. E is the mother of B. A and D are brothers. Then what is the relationship between E and C?

    (1) Sister   (2) Sister-in-law

    (3) Niece   (4) Wife

52.   A and B are brothers, D is brother of E, C is father of A, E is daughter of B, then who is uncle of D?

    (1) A   (2) B

    (3) C   (4) D

53.   When the 55 students of a class were asked to stand in a line in the playground. Aiswarya was 19th from the left in the line and Vaishnavi was 31st from the right of the line. Then how many students are standing between Aiswarya and Vaishnavi?

    (1) 5   (2) 2   (3) 4   (4) 3

54.   Raj starts from his office facing West and walks 100m straight, then takes a right turn and walks 100m. Further he takes a left turn and walks 50m. In which direction is Raj now from the starting point?

    (1) North-East   (2) North-West

    (3) North   (4) South-East

55.   Find the number of quadrilaterals in the following figure.

4

(1) 10   (2) 11   (3) 12   (4) 13

56. How many times are the hands of a clock at right angles in 12 hours?

(1) 24 times   (2) 48 times

(3) 22 times   (4) 44 times

57. Five girls are sitting in a row. Sakthipriya is on the right of Monisha. Rithika is on left of Monisha, but is right of Keerthana. Sakthipriya is on the left of Anu. The girl on the extreme left is

(1) Anu   (2) Keerthana

(3) Sakthipriya   (4) Rithika

58. In the word JOURNEY, the 1st and 5th letters, 2nd and 6th letters, 3rd and 7th letter are interchanged. The 5th letter from your right after re-arrangement is:

(1) N   (2) E   (3) Y   (4) J

59. If $2 \times 2 = 16$, $2 \times 3 = 36$, $2 \times 4 = 64$ then $2 \times 6 = ?$

(1) 72   (2) 80   (3) 96   (4) 144

60. How many odd numbers are there in the following number sequence which are immediately preceeded and also followed immediately by an even number?

8 7 6 1 4 5 1 9 3 2 6 7 8 5 2 3 4 9

(1) Four   (2) Two

(3) Five   (4) Three

61. If yesterday's tomorrow was Thursday, what day falls on the day tomorrow's yesterday?

(1) Friday   (2) Saturday

(3) Thursday   (4) Sunday

62. Ravi and Saravanan start travelling in their bike in the opposite directions. Ravi travelled 3km and Saravanan travelled 4 km. Then Ravi turned right and travelled 4 km and Saravanan turned left and travelled 3 km. How far is each from the starting point?

(1) 6 km   (2) 5 km   (3) 8 km   (4) 10 km

63. A group of 1200 persons consisting of teachers and students is travelling in a train. For every 15 students, there is one teacher. Find the number of teachers in the group.

(1) 85   (2) 80   (3) 75   (4) 70

64. The ratio of the father's age to his son's age is 7:3. The product of their ages is 756. The ratio of their ages after 6 years will be _____.

(1) 5 : 2   (2) 2 : 1

(3) 11 : 7   (4) 13 : 9

65. Write the following words in a correct sequence.

a) Earth   b) Continent   c) Solar system

d) Universe   e) Country

(1) c, d, e, a, b   (2) d, c, a, b, e

(3) a, b, e, c, d   (4) b, c, a, e, d

Direction: (Question Number 66 - 70)

Study the following information carefully and answer the questions. P, Q, R, S, T, V and W are seven friends. Each of them likes a particular fruit, viz Apple, Banana, Pear, Guava, Orange, Mango and Watermelon and each of them has a favorite city, viz Mumbai, Pune, Delhi, Kolkatta, Chennai, Hydrabad and Cochin.

The choices of fruit and favorite city of the seven friends are not necessarily in the same order. Q likes Mango and his favorite city is Chennai. The one whose favorite city is Pune likes Watermelon. T's favorite city is Kolkatta and likes banana. R likes Guava and his favorite city is not Mumbai and Hydrabad. W's favorite city is Cochin and he does not like either banana or Pear. P's

5

favorite city is neither Pune nor Mumbai and he likes Apple. S's favourite city is Mumbai.

66. Who likes Apple?

    (1) W   (2) T   (3) V   (4) P

67. Which fruit does S like?

    (1) Apple   (2) Orange

    (3) Pear   (4) Watermelon

68. Which is R's favorite city?

    (1) Mumbai   (2) Pune

    (3) Hydrabad   (4) Delhi

69. Which of the following is the combinations of Person - Fruit - City is correct?

    (1) R - Guava - Delhi

    (2) V - Watermelon - Hydrabad

    (3) P - Orange - Cochin

    (4) S - Mango - Mumbai

70. Which is V's favorite city?

    (1) Hydrabad   (2) Mumbai

    (3) Pune   (4) None of the above

Direction: (Question No: 71 - 74)

    The following questions are based on the figures in series. Pick from the options what will come next.

71.
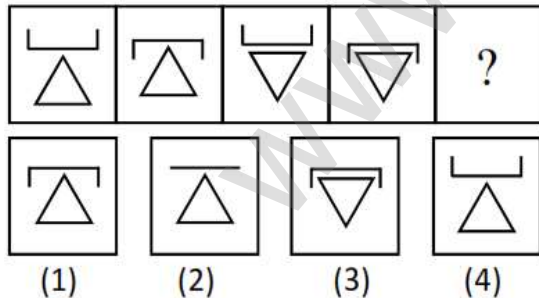
72.
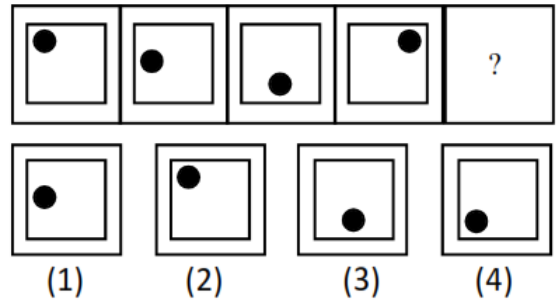
73.
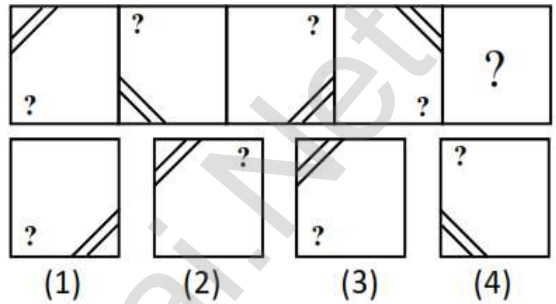
74.
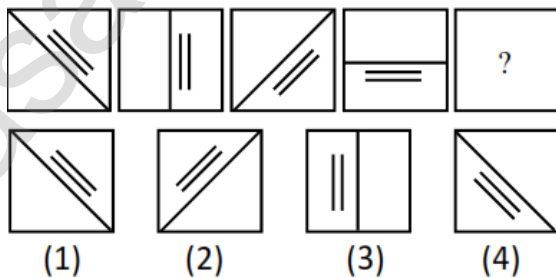
Direction: (Question Number 75 - 78)

Find the figure which is not matching with others.
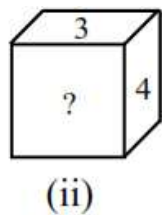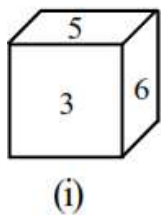
75.

76.

77.

(1)　　(2)　　(3)　　(4)

78.

(1)　　(2)　　(3)　　(4)
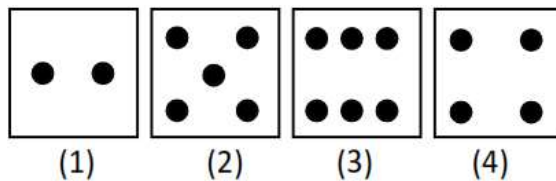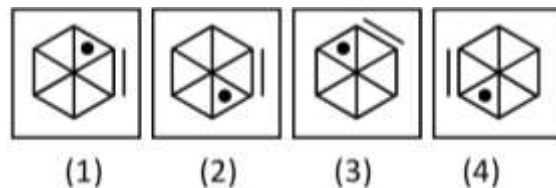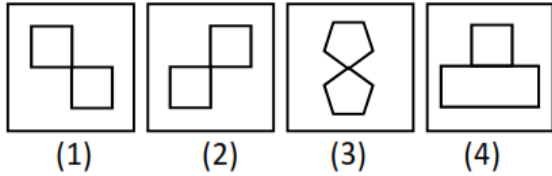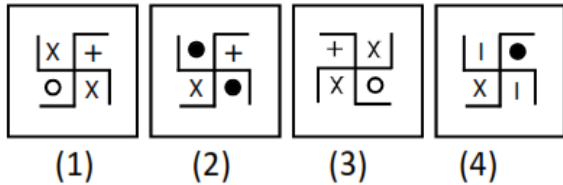
79. Two different positions of a solid cube are shown in the figure. In the figure (ii) digit 2 is there on the base surface of the cube. Replace the question mark (?) in the figure by choosing the correct alternative.

(i)　　　　　(ii)

(1) 1　　　(2) 5

(3) 6　　　(4) all alternatives are correct

80. What angle is formed by the hour and minute hands of a clock when the time is 10:10?

(1) 100^0　(2) 115^0　(3) 120^0　(4) 60^0

81. Find the water image.

KARUPPAYI

(1) IYAPPURAK
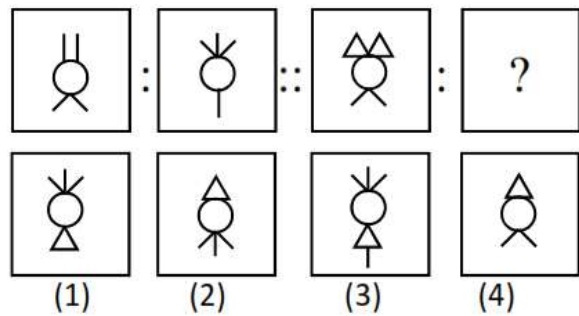
(2) IYAPPURAK

(3) KARUPPAYI

(4) KARUPPAYI

Direction: (Question No: 82 - 85)

In the each of the given figures, there is a relationship between first two figures (A) and (B). The same relation is between the next two figures (C) and (D), but one is missing. Find the missing figure from the given alternatives.
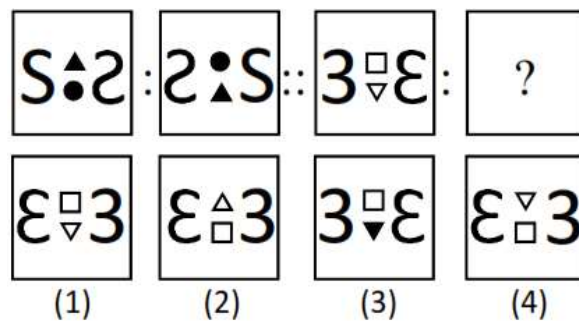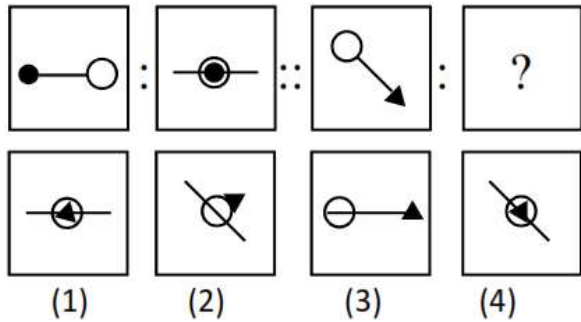
82.

(1)　　(2)　　(3)　　(4)

83.

(1)　　(2)　　(3)　　(4)
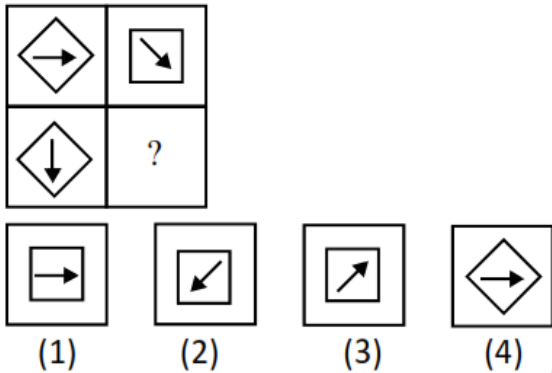
84.

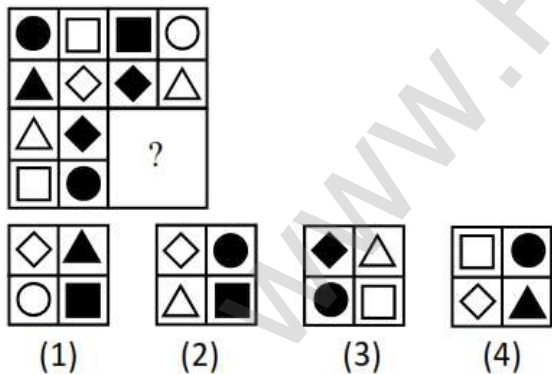(1)　　(2)　　(3)　　(4)

85.

7

(1)　(2)　(3)　(4)
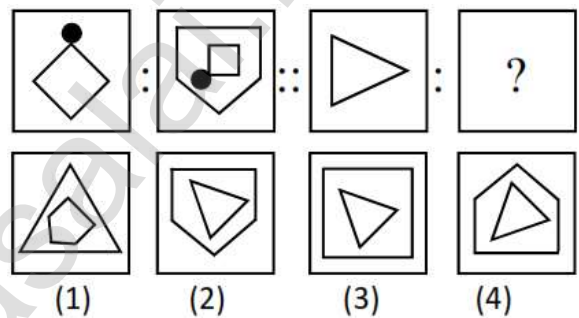
Direction: (Question Number 86 - 87)

In the following figures, a part of the figure is missing. Identify the missing part among the four alternatives given:
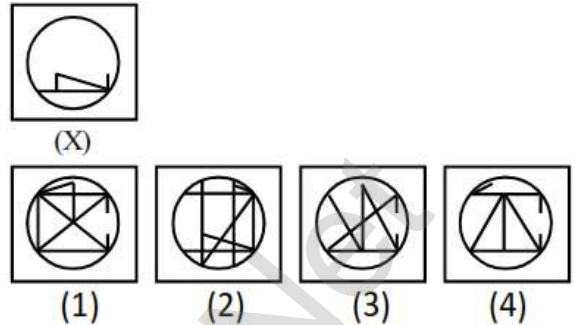
86.

(1)　(2)　(3)　(4)

87.

(1)　(2)　(3)　(4)

88.　The given figure (x) is followed by four figures 1, 2, 3, and 4 such that (x) is embedded in one of them. Trace out the correct alternatives.

(X)

(1)　(2)　(3)　(4)

89.　The mirror image of following word is

2 4 1 6 9

(1)　9 6 1 4 2
(2)　ƧｻﾊｶƎ
(3)　ｅａｌＴƧ
(4)　ａｅｌｻＳ

90.　The mirror image of the following figure is

(1)　(2)

(3)　(4)