CREST Reasoning Olympiad (CRO)

Previous Year Paper (2022-23)

Class 9 (Set - A)

Time Allowed: 1 hour   **Maximum Marks: 60**

- Additional **10 minutes** will be allotted to fill up information on the OMR Sheet, before the start of the exam.
- Fill in all the mandatory fields clearly on the OMR Sheet.
- There are a total of **50 questions** in this booklet comprising **2 sections** namely the **Logical Reasoning and Achievers' Section** consisting of **40 questions (1 mark each) & 10 questions (2 marks each)** respectively.
- There is no negative marking. The use of a calculator is not permitted.
- There is **only ONE correct option** to a given question.
- Use **HB Pencil / Ball point pen (Blue / Black) only** for marking the correct choice of answers on the OMR Sheet.
- Rough work is to be done in the space provided in the test booklet. Extra plain sheet may be provided by the school for the rough work.
- The OMR Sheet is to be handed over to the invigilator at the end of the exam.
- No candidate is allowed to carry any textual material, printed or written, bits of paper, any electronic device, digital watches, etc. inside the examination hall.
- The use of unfair means may result in the cancellation of the exam. Any such instances must be reported at **+91-98182-94134** or **info@crestolympiads.com**

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

FILL IN THE DETAILS

Candidate Name: _____

Class: _____ Section: _____

CREST ID: _____

1. In a certain code, REVOLUTION is written as VUTROONLIE. How is OPERATION written in that code?
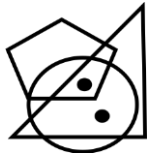
  a. RTPOONIEA   b. AEINOOPRT
  c. AIENOOPRT   d. TRPOONIEA

2. Select the answer figure in which the question figure is embedded/hidden.

a.

b.

c.

d.

3. Select the option figure which satisfies the same conditions of the placement of dots as in the question figure.
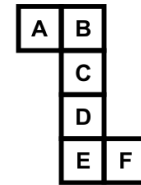
a.

b.

c.

d.

4. In the following question, a series of numbers is given. Observe the pattern given in the series and find the missing term of the series.
840, 168, 42, 14, _

  a. 2   b. 12
  c. 6   d. 7

5. Choose the box that will be formed by folding the sheet of paper given in fig(i).

A	B
	C
	D
E	F

(i)

(ii)   **(iii)**   **(iv)**   **(v)**

  a. Only (iii)   b. Only (iv)
  c. Only (v)   d. (ii), (iii)

6. Identify the diagram that best represents the relationship among the classes given below:
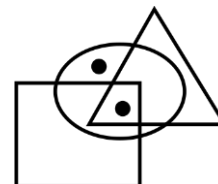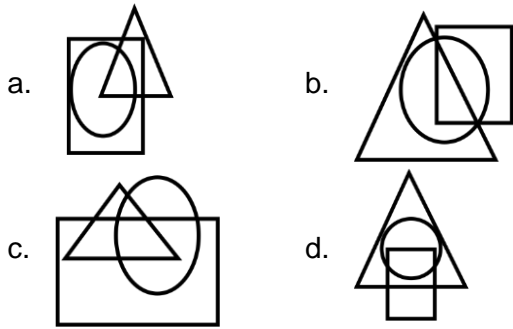Wolf, Elephant, Carnivore

a.

b.

c.

d.

7. In a certain code, FAKE is written as 2&3@ and REAL is written as *@&4. How is LEAK written in that code?

  a. 4@3&   b. 2@3&
  c. 4@&3   d. 23@&

8. Select the option figure which satisfies the same conditions of the placement of dots as in the question figure.
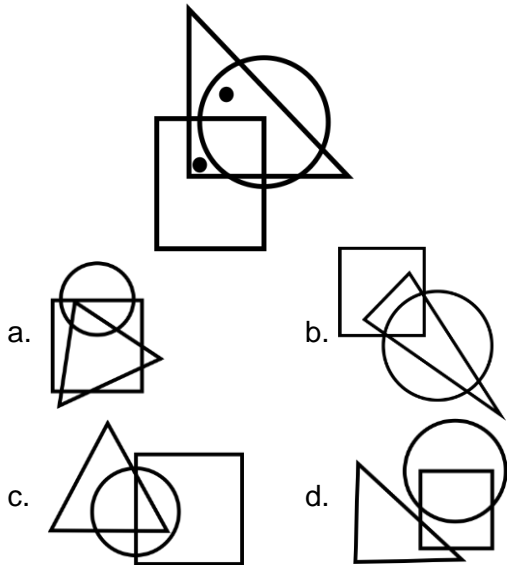
a.   b.

c.   d.

9. In this question, choose the alternative which represents the most meaningful arrangement of the following words.
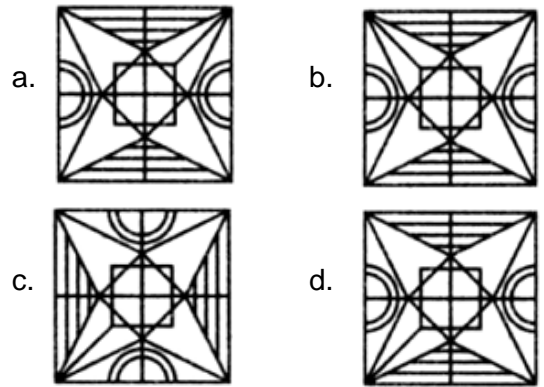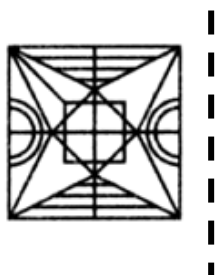1. Insect
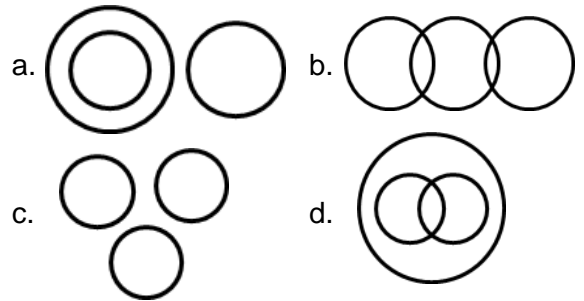2. Frog
3. Eagle
4. Snake

a. 1243
b. 1234
c. 1342
d. 3124

10. Choose the option figure which satisfies the similar condition of dots placement as shown in the question figure.

a.   b.

c.   d.

11. Which of the following will be the correct mirror image of the given figure?

a.   b.

c.   d.

12. Identify the diagram that best represents the relationship among the classes given below.
Gold, Metal, Diamond

a.   b.

c.   d.

13. If '%' means 'x', '#' means '÷', '&' means '+' and '@' means '-'. Then what will be the result of 28&15#5@4%2?

a. 23
b. 37
c. 0
d. 9

14. P is brother of Q. E is brother of F. Q is sister of E. How is F related to Q?

a. Sister
b. Cousin
c. Brother
d. Cannot be determined

15. How many meaningful words can be formed by using the first, second, third and fifth letters of the word 'OWNERSHIP'?

a. None
b. One
c. Two
d. Three

16. Which of the following will be the correct water image of the given figure?

SELECTION

a. ИОІГСЕГЕƧ

b. ƧЕГЕСЛІОИ

c. ƧЕГЕСЛІОИ

d. ƧЕГЕСЛІОИ

17. In the following question, two statements are given followed by two conclusions numbered I and II. You have to assume everything in the statements to be true even if they seem to be at variance from commonly known facts and then decide which of the two given conclusions logically follows from the information given in the statement.
Statements:
I. All wire are hard.
II. Some hard are not copper.
Conclusions:
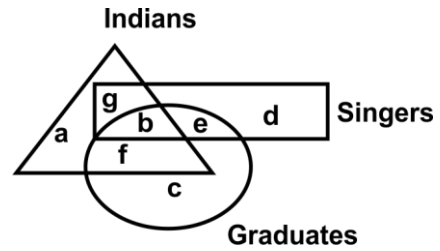I. Some wire are not copper.
II. Some copper are not hard.

a. Either I or II follows
b. Neither I nor II follow
c. Only II follows
d. Only I follows

18. A boy is moving towards North-East. After travelling 30 m he turned towards his right and moved 30 m further. After this he turned towards his right once again. In which direction is he facing towards now?

a. North-West   b. South-East
c. North-East   d. South-West

19. This question is based on the figure given below. In the figure, triangle represents Indians, rectangle represents singers and circle represents graduates. Identify the area which represents Indians which are not singers.
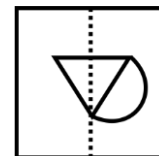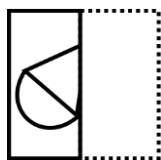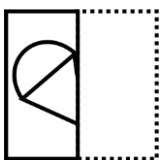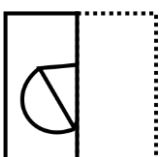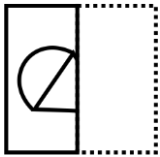

a. a + g   b. a + b
c. a + f   d. a

20. In the following question, there are three numbers. The first two numbers to the left of (::) are related in some way. The same relationship holds between the third number to the right of the sign (::) and one of the options. Identify the correct related number.
20 : 395 :: 25 : ?

a. 630   b. 620
c. 495   d. 295

21. From the given four alternatives, select the one which indicates the pattern formed by folding the following transparent sheet of paper along the dotted line:

a.   b.

c.   d.

22. R is sister of N; N is father of P. P is brother of Q. How is P related to R?

a. Niece
b. Nephew

c. Son-in-law
d. Cannot be determined

23. Find the missing term:
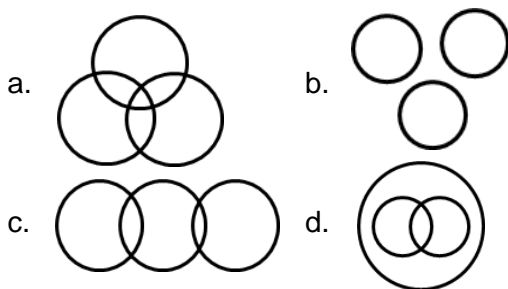DLP, GNS, JPV, ?

a. ORY
b. MRY
c. NRY
d. MRZ

24. If '+' stands for division, '-' stands for multiplication, 'x' stands for addition, and '÷' stands for subtraction, then which of the following equation is correct?

a. 17 x 12 + 3 ÷ 19 = 12
b. 24 − 8 - 4 x 10 = 12
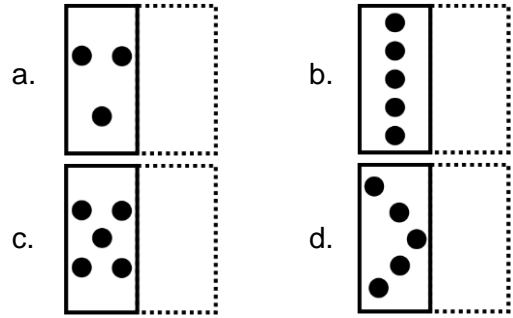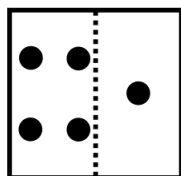c. 8 - 3 x 9 ÷ 10 + 5 = 31
d. 38 x 15 + 5 ÷ 4 - 2 = 9

25. In a certain code, BACKUP is written as CADLUQ. How is AWARDS written in that code?

a. AXASTE
b. AAXSET
c. AXASET
d. AXATES

26. Identify the diagram that best represents the relationship among the classes given below:
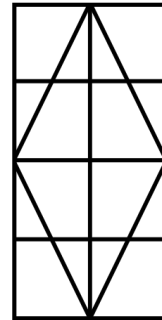Men, Doctor, Brother

27. From the given four alternatives, select the one which indicates the pattern formed by folding the following transparent sheet of paper along the dotted line:

28. In the following question, there are three numbers. The first two numbers to the left of (::) are related in some way. The same relationship holds between the third number to the right of the sign (::) and one of the options. Identify the correct related number.
11 : 117 :: 15 : ?

a. 210
b. 221
c. 226
d. 230

29. How many triangles are there in the following figure?

a. 22
b. 20
c. 21
d. 19

30. Mr. Burns started walking from point A. After moving 3 m in a certain direction, he reached point B from where he turned towards his left and walked 0.5 m ahead to reach point C. From point C he again turned towards his left and walked 3 m ahead to reach point D from where he turned towards his right and walked 8 m ahead to reach point E. What is the shortest distance (in m) between point A and E?

a. 11
b. 10.5
c. 7.5
d. 8

31. In the following question, two statements are given followed by two conclusions numbered I and II. You have to assume everything in the statements to be true even if they seem to be at variance from commonly known facts and then decide which of the two given conclusions logically follows from the information given in the statement.
Statements:
I. All gill are fin.
II. No fin is fish.
Conclusions:
I. No gill are fish.
II. Some fish are gill.

a. Neither I nor II follows
b. Both I and II follows
c. Only II follows
d. Only I follows

32. In the following question, 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 one of the options. Identify the correct related word:
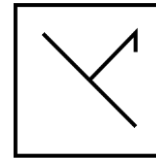GIB : HHD :: RMS : ?

a. SLU
b. LLU
c. STU
d. RKV

33. If '%' means 'x', '#' means '÷', '&' means '+' and '@' means '-'. Then what will be the result of 9 @ 14 % 2 & 38 # 2?

a. 57
b. 19
c. 0
d. 20

34. How many meaningful words can be formed by using the tenth, thirteenth, sixteenth and twenty-first letters of the English alphabetical series?

a. None
b. One
c. Two
d. Three

35. Which of the following will be the correct water image of the given figure?

a.
b.
c.
d.

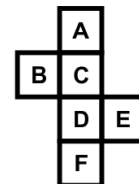**36.** In the following question, one term in the number series is wrong. Find out the wrong term:
8, 20, 33, 46, 62, 78

a. 20
b. 46
c. 62
d. 78

37. How many such pairs of letters are there in the word 'champion' which has as many letters between them in the word (in both forward and backward direction) as they have between them in the English alphabetical series?

a. One
b. Three
c. Four
d. Five

38. Choose the box that cannot be formed by folding the sheet of paper given in fig(i).

(i)

(ii)   (iii)   (iv)   (v)

a. Both (iii) and (iv)   b. Only (ii)

c. Both (iv) and (v)   d. Only (v)

c. Only II follows

d. Neither I nor II follows

39. In the following question, two statements are given followed by two conclusions numbered I and II. You have to assume everything in the statements to be true even if they seem to be at variance from commonly known facts and then decide which of the two given conclusions logically follows from the information given in the statement.
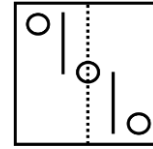
Statements:

I. All cats are old.

II. All old are cute.

Conclusions:

I. All cats are cute.

II. All old are cats.

a. Both I and II follows

b. Only I follows

40. From the given four alternatives, select the one which indicates the pattern formed by folding the following transparent sheet of paper along the dotted line:

a.   b.

c.   d.

Achievers' Section (Each Question is 2 Marks)

41. In the following question, there is a certain relationship between the two given numbers on one side of (::) and one number is given on another side of (::) where another number is to be found from the given alternatives, having the same relationship with this number as the numbers of the given pair have. Choose the best alternative:
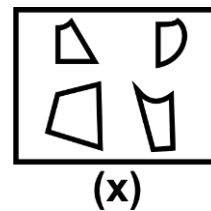
1 : 36 : : 2 : ?

a. 69   b. 49

c. 81   d. 70

42. A cube is coloured green on all its faces. It is then cut in to 64 smaller cubes of equal sizes.

How many of the smaller cubes have no coloured face?

a. 8   b. 12

c. 10   d. 4

43. In the following question, find out which of the figures (a), (b), (c) and (d) can be formed from the pieces given in fig. (X).

(X)

a.   b.

c.   d.

44. If 'A $ B' means 'A is father of B', 'A # B' means 'A is daughter of B', 'A @ B' means 'A is sister of B' and 'A % B' means 'A is son of B', then how is M related to A in 'K % A # L @ M' ?
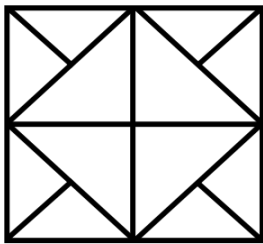
    a. Aunt
    b. Uncle
    c. Father-in-law
    d. Cannot be determined

45. In the following question, a series of numbers is given. Observe the pattern given in the series and find the missing term of the series.
7, 8, 11, 17, ? ,42

    a. 27   b. 28
    c. 31   d. 30

46. How many triangles are there in the following figure?
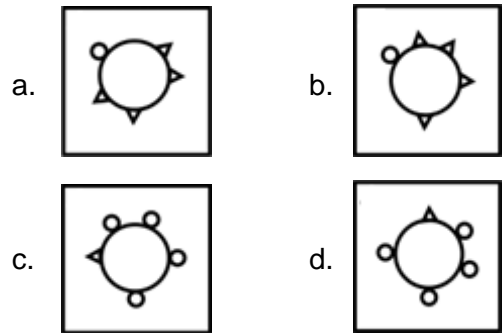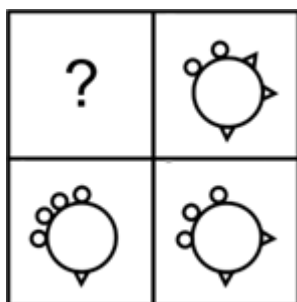

    a. 12   b. 22
    c. 20   d. 21

47. If EARTH is coded as 1, MERCURY is coded as 0, then MARS will be coded as?
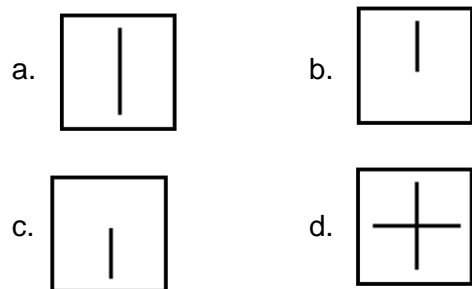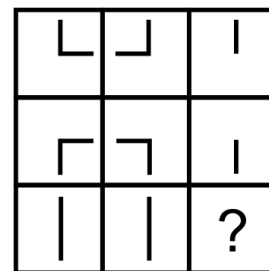
    a. 5   b. 3
    c. 1   d. 2

48. Choose the answer figure which completes the problem figure matrix.

49. Point A is 16 m to the west of point E. Point C is 8 m to the east of point B. Point B is to the north of point A. Point D is 5 m to the south of point C and 8 m to the east point A. Then what is the shortest distance between point D and E?

    a. 16 m   b. 12 m
    c. 13 m   d. 8 m

50. Choose the answer figure which completes the problem figure matrix.

Answer Key

1. d	2. c	3. d	4. d	5. d	6. d	7. c	8. c	9. a	10. b
11. a	12. a	13. a	14. d	15. b	16. d	17. b	18. d	19. a	20. b
21. c	22. b	23. b	24. c	25. c	26. a	27. c	28. b	29. a	30. c
31. d	32. a	33. c	34. b	35. c	36. b	37. b	38. c	39. b	40. b
41. b	42. a	43. a	44. d	45. a	46. c	47. d	48. b	49. d	50. a