



UNICUS
OLYMPIADS

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Sample Paper



Class 9

Unicus Critical Thinking Olympiad (UCTO)

Time: 60 minutes

Pattern and Marking Scheme			
Section	Total Questions	Marks per Question	Total Marks
Classic Section	40	1	40
Scholar Section	10	2	20
Grand Total	50		60

Classic Section (Each Question is 1 Mark)

1. In the following question, choose the pair which shows a relationship similar to the one expressed in the given pair:

G*M : 7*13

- | | |
|---------------|----------------|
| a. B*D : 4*2 | b. L*O : 11*15 |
| c. X*F : 25*6 | d. P*T : 16*20 |

2. In the following question, there is a certain relationship between the two words on the left side of (::) and one word is given on the other side of (::). From amongst the four given alternatives, choose the one which completes the second pair:

Optimist : Pessimist :: Filthy : ?

- | | |
|----------|----------|
| a. Clean | b. Dirty |
| c. Muddy | d. Airy |

3. Find the two missing terms in the given boxes:

YBI	XDH	WFG	VHF	?	?
-----	-----	-----	-----	---	---

- | | |
|-------------|-------------|
| a. USA, UPA | b. UAE, UPS |
| c. UJE, TLD | d. TJD, UAE |

4. Choose the odd one out:

Bus	Motorcycle	Bicycle	Car
(a)	(b)	(c)	(d)

- | | |
|------|------|
| a. a | b. b |
| c. c | d. d |

5. If RESANO is coded as S1T2O3, then MORALE will be coded as:

- | | |
|-----------|-----------|
| a. SN2S1M | b. NSM123 |
| c. 123NSM | d. N3S2M1 |

6. Consider the following alphabetical series and answer the question that follows:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

If the above alphabets are written in the reverse order, which letter will be twelfth to the left of the sixteenth letter from your left?

- | | |
|------|------|
| a. D | b. V |
| c. W | d. X |

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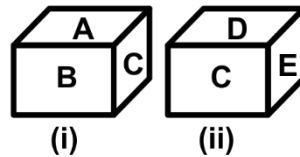
7. In the following question, arrange the words in a meaningful and logical order and then select the appropriate sequence from the alternatives provided below:

1. Table
2. Wood
3. Tree
4. Plant
5. Seed

- a. 4, 5, 3, 2, 1
c. 1, 3, 2, 4, 5

- b. 5, 4, 3, 2, 1
d. 1, 2, 3, 5, 4
-

8. Two positions of a dice, whose faces are marked as A, B, C, D, E and F are given below. Find the letter opposite to A:



- a. B
c. C

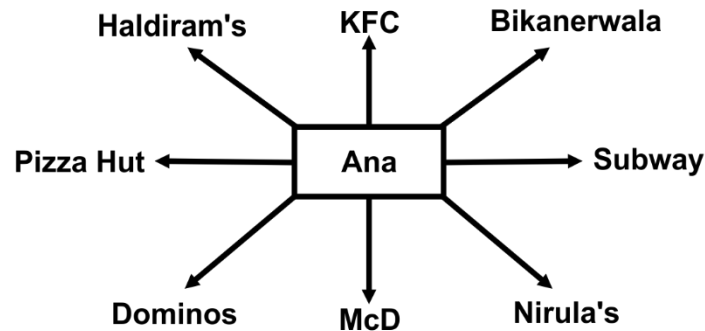
- b. E
d. D
-

9. If P is in the North of S and R is in the West of S, in which direction is P with respect to R?

- a. North-west
c. South-west

- b. North-east
d. South-east
-

10. Ana is facing KFC. What will he be facing, if he turns 225° anti-clockwise?



- a. McD
c. Subway

- b. KFC
d. Nirula's
-

11. Find the value of the following:

$$5 \times 4 \div 6 + 5 - 4$$

- a. 4.33
c. 8.5

- b. -5.5
d. 6
-

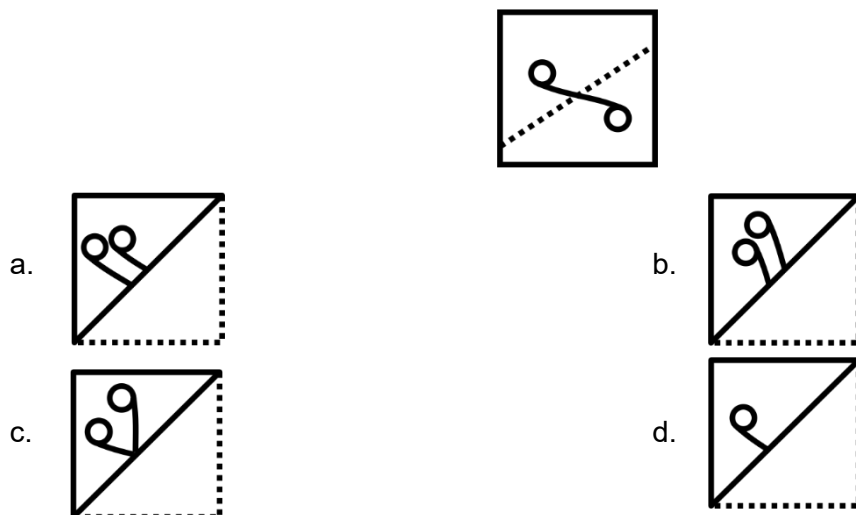
12. In the following figures, choose the odd one out:



13. In the following figure, choose the odd one out:



14. In the following question, a transparent sheet having a certain design on either side of the dotted line is given. One out of these four alternatives is obtained by folding the transparent sheet along the dotted line. Choose the correct option:



15. Which of the following will be the correct mirror image of the given figure if the mirror is placed vertically on the right?

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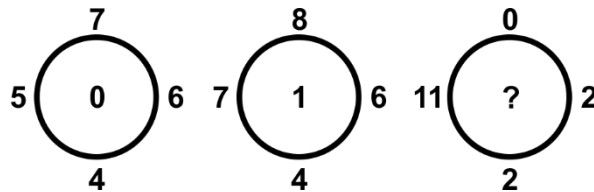
a. 3081

b. 1808

c. 1808

d. 3081

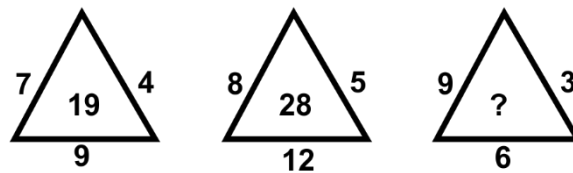
16. Select the missing number from amongst the options:



- a. 8
c. 10

- b. 9
d. 11

17. Choose the missing term to complete the given series:



- a. 2
c. 17

- b. 21
d. 28

18. Pointing toward a boy, Hannah said, "He is the son of the only son of my grandfather." How is the boy related to Hannah?

- a. Uncle
c. Brother

- b. Cousin
d. Friend

19. In the following question, you have to identify the correct response from the given premises stated according to the following symbols.

If + means \div , - means \times , \div means + and \times means -, then $63 \times 24 + 8 \div 4 + 2 - 3 = ?$

- a. 54
c. 87

- b. 66
d. 48

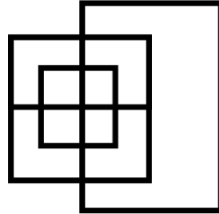
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20. Following equations are solved on the basis of a certain rule. Find out the correct answer for the unsolved equation on that basis:

$113 \div 5 = 5$, $4 \div 7 = 8$, $8 \div 7 = 6$ then, what should $9 \div 6$ be?

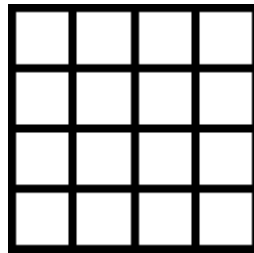
- a. 4
b. 9
c. 5
d. 6
-

21. Find the minimum number of straight lines used in forming the given figure in the following question:



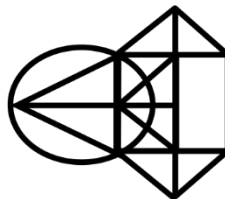
- a. 15
b. 14
c. 13
d. 11
-

22. Count the number of squares in the given figure:



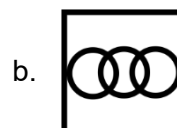
- a. 32
b. 30
c. 29
d. 28
-

23. Study the given figure carefully and count the number of triangles in the given figure:



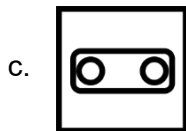
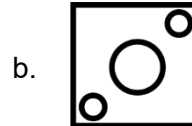
- a. 10
b. 12
c. 14
d. 16
-

24. Which of the diagrams given below correctly represents the students who learn law and music, music and dance, law and dance, and law, music and dance?





25. Which of the following Venn diagram is correct for the given things?
Water, Salt and Sugar



26. Jamie is performing yoga with her head down and legs up. Her face is facing towards the south. In which direction will her right hand be?

- a. East
c. North

- b. West
d. South

27. A man is standing on a tower and looks towards two peaks which are in north-east and north-west directions respectively; the distance between the tower and both the peaks are the same. Now, he looks towards the other peak by climbing on the peak located in north-east. In which direction is he looking now?

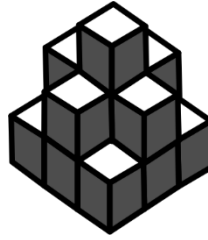
- a. South
c. South-west

- b. West
d. North-west

28. Which of the following answer figures is exactly the mirror image of the given figure when the mirror is held at MN?



29. How many cubes are unseen in the given figure?



- a. 5
- c. 10

- b. 6
- d. 15

30. In the following question, find out the correct pair of words which will make an appropriate analogical relationship between the two words to the left of the (::) and the same relationship between the two words to the right of the (::):

AB : ZY :: CD : ?

- a. VU
- c. UV

- b. WX
- d. XW

31. If in a certain code language, 'TRUE' is coded as 'USSQVTFD', then what is the code for 'PRAY' in the same language?

- a. QSOQBZXZ
- c. QOSQBZZX

- b. QOSQBZXZ
- d. QOSBQZZX

32. Kate ranks 18th in a class of 49 students. What is her rank from the last?

- a. 31
- c. 35

- b. 28
- d. 32

33. In making decisions about important questions, it is desirable to be able to distinguish between 'strong' arguments and 'weak' arguments. 'Strong' arguments are those which are both important and directly related to the question. 'Weak' arguments are those which are of minor importance and also may not be directly related to the question or may be related to a trivial aspect of the question. The question below is followed by two arguments numbered I and II. You have to decide which of the arguments is a 'strong' argument and which is a 'weak' argument.

Statement - Should there be a complete ban on the manufacture of firecrackers in India?

Arguments

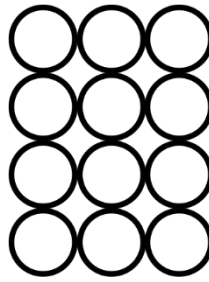
I. No, this will render thousands of workers jobless.

II. Yes, the firecracker manufacturers use child labour to a large extent.

- a. Only Argument I is strong
- c. Either I or II is strong

- b. Only Argument II is strong
- d. Both I and II are strong

34. In the given figure, if the centres of all the circles are joined by horizontal and vertical lines, then find the number of squares that can be formed:



- a. 6
c. 8
- b. 7
d. 9

-
35. In the following question, there is a certain relationship between two given words on one side of (::). Find the word on the other side so that the second pair has a similar relationship with the first pair:

AFHO : GBDJ :: CHFM : ?

- a. GBIM
c. GPLD
- b. GBLD
d. IDBH

-
36. In the following question, some groups of letters are given, all of which except one, share a common similarity while one is different. Select the odd one:

- a. EHG
c. PSR
- b. JML
d. UYX

-
37. If in a certain code language, 'NATURAL' is coded as 'MZGFIZO', then how will 'CARE' be written in that language?

- a. XZIV
c. XVZI
- b. XZVI
d. XIZV

-
38. Jack read a book on Sunday. Susan read that book one day prior to Alice but 4 days after Jack. On which day did Alice read the book?

- a. Friday
c. Tuesday
- b. Thursday
d. Wednesday

-
39. What comes in place of the question mark (?) in the following letter series?
L, N, R, Z, ?

- a. E
c. P
- b. J
d. O

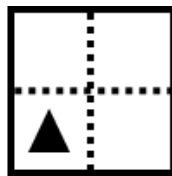
40. Which of the following will be the correct mirror image of the given figure, when the mirror is placed vertically to the right?

Pillow 

- a. **wolliP** b. **WOll!P**
c. **wolliq** d. **WOll!q**

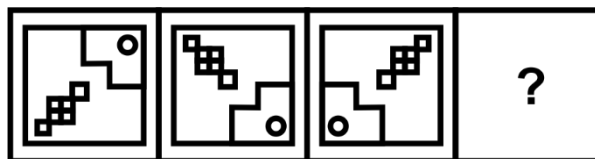
Scholar Section (Each Question is 2 Marks)

41. In the following question, a transparent sheet having a certain design on either side of the dotted line is given. One out of these four alternatives is obtained by folding the transparent sheet along the dotted line. Choose the correct option:



- a.  b. 
c.  d. 

42. Choose the correct alternative from the given options that will complete the series:



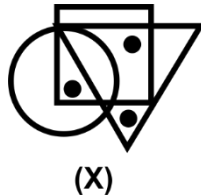
- a.  b. 
c.  d. 

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43. Sara is the niece of Michael. Michael's mother is Ana. Kate is Ana's mother. Kate's husband is George. Pam is the mother-in-law of George. How is Sara related to George?

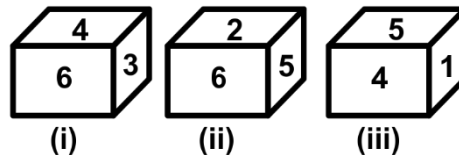
- a. Great grandson's daughter
- b. George is Sara's father
- c. Sara is George's great-granddaughter
- d. Grand-niece

44. A question figure is given below which has three dots. This figure is followed by four answer figures. As the position of dots is placed in the question figure, in the same way, one option of the answer figures displays the same relation. Find out the correct alternative:



- a.
- b.
- c.
- d.

45. Three different positions of a dice are shown in the figures given below:
Which numbers are hidden behind the numbers 6 and 5 in the position II?



- a. 4 and 3
- b. 1 and 2
- c. 1 and 4
- d. 1 and 3

46. This question has a statement followed by two conclusions I and II. Consider the statement and the following conclusions. Decide which of the conclusion follows from the statements:

Statements: $P > M > Q$, $Q > Z > N$

Conclusions:

I. $M \geq Z$

II. $N < P$

- a. Only conclusion I follow
- b. Only conclusion II follows
- c. Both conclusions I or II follows
- d. Neither conclusion I nor II follows

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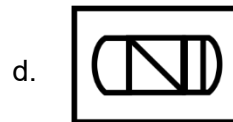
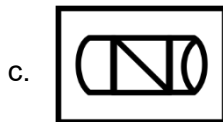
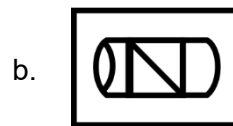
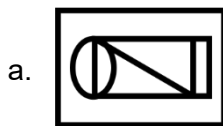
47. Answer the following question based on the statements given below:

- I. There are three poles on each side of the road.
- II. These six poles are labelled A, B, C, D, E and F.
- III. The poles are of different colours namely golden, silver, metallic, black, bronze and white.
- IV. The poles are of different heights.
- V. E the tallest pole, is exactly opposite to the golden coloured pole.
- VI. The shortest pole is exactly opposite to the metallic coloured pole.
- VII. F, the black coloured pole, is located between A and D.
- VIII. C, the bronze coloured pole, is exactly opposite to A.
- IX. B the metallic coloured pole is exactly opposite to F.
- X. A, the white coloured pole, is taller than C but shorter than D and B.

What is the colour of the pole diagonally opposite to the bronze coloured pole?

- a. White
- b. Silver
- c. Metallic
- d. Golden

48. In the following question, find the figure out of the answer choices figures, that can be formed by joining the pieces given in the question figure (figures are not to scale):



49. Read the following information carefully and answer the question given below:

A cube is painted red on two adjacent surfaces and black on the surfaces opposite to red surfaces and green on the remaining faces. Now, the cube is cut into 64 smaller cubes of equal size.

How many smaller cubes have less than three surfaces painted?

- a. 8
- b. 24
- c. 48
- d. 56

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50. In the question given below, there are four statements followed by two conclusions numbered I and II. You have to take the four given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions, logically follows from the four statements disregarding commonly known facts:

Statements

- I. Some computers are boards.
- II. Some boards are chalks.
- III. All chalks are bulbs.
- IV. No bulb is tubelight.

Conclusions

- I. Some bulbs are computers.
- II. No chalk is a tubelight.

- a. Only conclusion I follows
- c. Either conclusion I and II follows

- b. Only conclusion II follows
- d. Neither conclusion I nor II follows

Answer Key

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