GLOBAL TALENT SEARCH EXAMINATION

MATHEMATICS

Class : VI

Max Marks : 80

Time : 9:00 to 10:30 a.m.

Instructions to Candidates :

01. This question paper has 40 objective questions. In addition to this question paper, you are also given an answer-sheet.

02. Read the instructions carefully for each section before attempting it.

03. For each correct answer **2 marks** will be awarded and there is no negative marking.

04. On the answer-sheet, fill up all the entries carefully in the space provided, **ONLY IN BLOCK CAPITAL LETTERS**.

05. Incomplete / incorrect / carelessly filled information may disqualify your candidature.

06. On the answer-sheet, use **PENCIL / BLUE or BLACK BALL PEN.**

07. No extra sheet will be provided for rough-work. Use the space available in the paper for your rough- work.

08. Use of calculator is not permitted.

09. No student is permitted to leave the examination hall before time is complete.

10. Use of unfair means shall invite cancellation of the test.

Roll No.

Centre No.

Male / Female _____

Name of the candidate : (In English only, as you would like it to be printed on the certificate).

_____

_____

_____

_____

Signature of the invigilator

Signature of the candidate

AMITY INSTITUTE FOR COMPETITIVE EXAMINATIONS

Each question has four alternatives marked (A), (B), (C) and (D), but only one of these alternatives is the correct answer.

In the following *two* questions, alphabets have been written in a particular order. The order of the alphabets is different in different questions.

Which one of the four alternatives, given below each question, should replace the sign ...?... such that the order of the alphabets is maintained ?

1. ACD, FHI, KMN, PRS, ...?...

   (A) VXY   (B) VWX

   (C) UVW   (D) UWX

2. AZ, XW, UT, ...?..., ON

   (A) RQ   (B) QP

   (C) SR   (D) PO

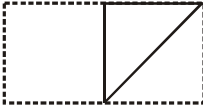**3.** In the following operation of division, what digits are given by the alphabets *A*, *B*, *C* and *D*, respectively ?

   (A) 4 7 6 8

   (B) 4 7 6 8

   (C) 6 7 6 8

   (D) 6 7 7 8

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                  4 3 C D
          13 ) 5 A B 9 4
               5 2
               4 B
               * 9
               8 9
               7 *
              1 1 4
              * * *
                1 0
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4. $1 - \dfrac{1}{2} + \dfrac{2}{3} - \dfrac{3}{4} + \dfrac{4}{5} - \dfrac{5}{6}$ is equal to
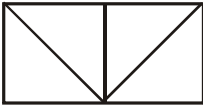
   (A) $\dfrac{37}{60}$ (B) $\dfrac{27}{60}$

   (C) $\dfrac{23}{60}$ (D) $\dfrac{13}{60}$

5. A paper is folded twice (shown as *Folded*). After both the folds are removed the sheet takes the unfolded form (shown as *Unfolded*).
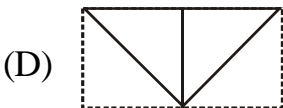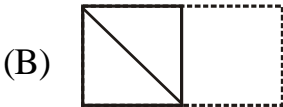

Folded   *Unfolded*

If only one fold is removed, then the paper will look like

(A)   (B)

(C)   (D)

6. Six faces of a cubical dice are marked 1, 2, 3, 4, 5 and 6. On the dice, the numbers of its sides, in three different cases, are as under :

The number on the opposite side of 6 is

(A) 2   (B) 3

(C) 2 or 3   (D) 4

7. Find the unknown numbers x and y such that the sum of the numbers along each row, along each column and along each diagonal of the grid is 81

(A) $x = 25$, $y = 29$

(B) $x = 26$, $y = 25$

(C) $x = 29$, $y = 24$

(D) $x = 29$, $y = 25$

28	x	
		31
30	y	

8. The same digit has to be put in all the empty boxes of a five-digit number shown below, such that the number becomes divisible by 3 and 9.

7				5

Which one of the following digits should be used ?

(A) 9   (B) 8

(C) 6   (D) 3

9. Number P is 8 more than three-times the number Q. If the difference of numbers P and Q is 32, find number P.

(A) 44   (B) 40

(C) 36   (D) 32

10. The value of $\dfrac{\left(\dfrac{1}{5} \div \dfrac{1}{5}\right) \times \dfrac{1}{5}}{\left(\dfrac{1}{5} \times \dfrac{1}{5}\right) \div \dfrac{1}{5}}$ is equal to

(A) 125   (B) 25

(C) 5   (D) 1

11. $\sqrt{\dfrac{0.324 \times 0.081 \times 0.625}{0.0729 \times 0.144}}$ simplifies to

(A) 25   (B) 12.5

(C) 2.5   (D) 1.25

12. When 75 is subtracted from 75 % of a number, the result is 75. The number is

(A) 400   (B) 300

(C) 200   (D) 150

13. If B = 2 and BAT = 23, then BALL is equal to

(A) 27   (B) 25

(C) 30   (D) 35

In the following *four* questions, numbers in the cells of each square follow some rule. Find the number, which when replaced by the symbol ..?.., maintains the same rule.

14.   (A) 14

     (B) 12

     (C) 10

     (D) 8

13	17	4
18	24	6
31	41	..?..

15.   (A) 51

     (B) 49

     (C) 47

     (D) 45

7	10	14
19	25	32
40	..?..	59

16.   (A) 16

     (B) 18

     (C) 20

     (D) 24

3	9	6
10	18	14
21	27	..?..

17. (A) 18

(B) 17

(C) 15

(D) 14

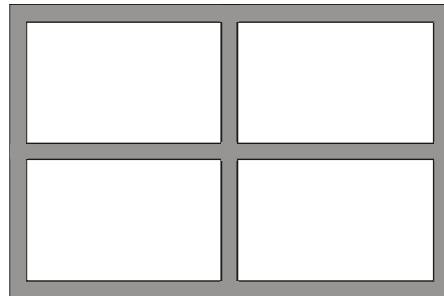| 12	5	19
18	..?..	25
24	29	31

18. In a large park of length 400 metres and breadth 200 metres, there is a track of width 4 metres around the park as well as in the middle, as shown, for the persons to take morning and evening walks. Find the total area of this complete track.

(A) 9344 sq m

(B) 8056 sq m

(C) 7064 sq m

(D) 7056 sq m

19. You are given the following 8 numbers and no number is to be repeated for addition in the problem :

1, 5, 9, 14, 23, 35, 48, 54

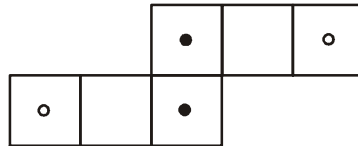How many numbers can be added to get a sum of 80 ?
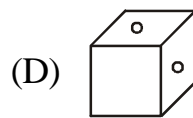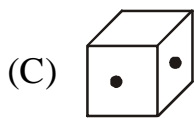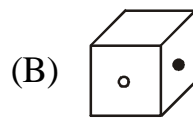
(A) 3   (B) 4

(C) 5   (D) 6
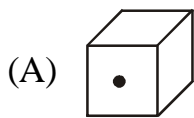
20. The following pattern can be folded into a figure to look like a die (after proper pasting).

Which one of the following figures is *not* possible to be seen for this die ?

(A)   (B)

(C)   (D)

21. In the following operation of product, what digits are given by the alphabets *A*, *B*, *C* and *D*, respectively ?

(A) 9 2 9 2

(B) 9 2 9 3

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    B 3 5 7
        7 A
  ─────────
  1 2 2 1 3
  C 4 9 9
  ─────────
  1 0 7 D 0 3
```

(C) 9 1 9 3

(D) 9 1 9 2

22. In the equation $\dfrac{0.75}{1.20} = \dfrac{205}{301 + x}$, the value of *x* is

(A) 14   (B) 19

(C) 27   (D) 34

23. In the following grid, numbers in each row are written in particular different patterns. Four numbers in the grid are missing and are represented by *P*, *Q*, *R* and *S*.

3	10	17	P
9	17	Q	33
15	R	33	42
21	31	S	51

Understand the patterns of each row and find the values of *P*, *Q*, *R* and *S*, respectively.

(A) 24 24 25 41

(B) 24 25 24 40

(C) 24 26 24 41

(D) 24 25 24 41

24. In the following series of numbers, all the numbers follow a regular pattern except one.

$$2 \quad 3 \quad 7 \quad 14 \quad 24 \quad 38 \quad 53 \quad 72$$

Find that number which does not follow the same pattern.

(A) 72

(B) 53

(C) 38

(D) 24

25. $1 - \cfrac{1}{3 - \cfrac{2}{3 - \cfrac{2}{3 - 2}}}$ can be simplified as

(A) $\dfrac{2}{3}$

(B) $\dfrac{1}{3}$

(C) 0

(D) none of these

26. In a medicine bottle of 200 mL, the medicine and water are in the ratio 1 : 3. But for better result, the doctor advises the patient to have the ratio of medicine and water as 1 : 9. How much water is to be added to the whole of the medicine, transferred to a bigger bottle, to get the required ratio ?

(A) 200 mL   (B) 300 mL

(C) 400 mL   (D) 450 mL

27. If $x + y = 40$, $y + z = 58$ and $z + x = 52$, then find the value of z.

(A) 35   (B) 33

(C) 25   (D) 23

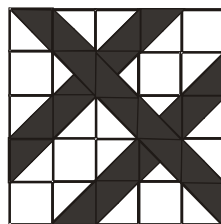**28.** Only the following 8 numbers are to be used and no number is to be repeated :

$$1, \ 6, \ 11, \ 16, \ 26, \ 35, \ 42, \ 54$$

How many numbers can be added to get a sum of 75 ?

(A) 5   (B) 4

(C) 3   (D) 2

29. What percentage of the total area is shaded black ?

(A) 46 %

(B) 44 %

(C) 42 %

(D) 40 %

30. Difference between 2^{3^2} and 2^{2^3} is

(A) 2   (B) 256

(C) 128   (D) 0

31. A whole number n is divided by another whole number d, giving quotient q and remainder r. Which one of the following *cannot* be possible ?
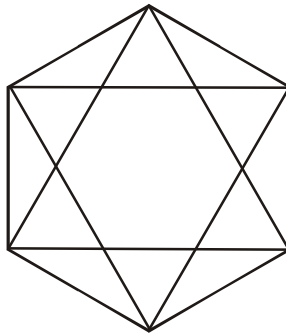
(A) $r > d$

(B) $r < q$

(C) $r > q$

(D) $r < d$

32. Which one of the following is a correct statement ?

(A) $\dfrac{31}{36} > \dfrac{7}{9} > \dfrac{5}{8} > \dfrac{13}{18}$

(B) $\dfrac{13}{18} > \dfrac{7}{9} > \dfrac{5}{8} > \dfrac{31}{36}$

(C) $\dfrac{13}{18} > \dfrac{5}{8} > \dfrac{31}{36} > \dfrac{7}{9}$

(D) $\dfrac{31}{36} > \dfrac{7}{9} > \dfrac{13}{18} > \dfrac{5}{8}$

33. In the following figure, the number of triangles is

(A) 32

(B) 29

(C) 28

(D) 26

34. Two numbers P and Q are in the ratio 2 : 3, while numbers Q and R are in the ratio 4 : 5. If the sum of the numbers P, Q and R is 105, then the number Q would be

(A) 30

(B) 32

(C) 36

(D) 40

35. In a certain code, if ONE can be written as 213 and TWO as 452, then TEN can be written as

(A) 341   (B) 413

(C) 432   (D) 431

36. In the following series, numbers follow a particular pattern. Try to understand the pattern and find the number which should replaced the sign ...?... so that the pattern remains the same

3, 6, 12, 21, ...?..., ...?..., 66

(A) 33, 48   (B) 33, 49

(C) 32, 48   (D) 32, 49

37. At present, Tanushri is 26 years younger to her mother. After 16 years she will be half as old as her mother. Find the present age of Tanushri's mother.

(A) 40 years   (B) 36 years

(C) 32 years   (D) 30 years

38. Difference between two integers is 21. If the ratio of the two numbers 3 : 4, then one of the numbers is

(A) 63   (B) 42

(C) 35   (D) 21

39. $\dfrac{1\dfrac{8}{11} \times 2\dfrac{2}{19} \times 1\dfrac{3}{8}}{1\dfrac{8}{17} \times 1\dfrac{8}{9} \times 3\dfrac{3}{5}}$ of $\left[3\dfrac{8}{9} \times 1\dfrac{2}{7} \times 3\dfrac{1}{5} \right]$ equals

(A) 8

(B) 4

(C) 2

(D) 1

40. In the equation $6\,\dfrac{1}{A} \times B\,\dfrac{3}{11} = 20$, the values of A and B

are respectively

(A) 8, 3

(B) 11, 3

(C) 9, 3

(D) 9, 2

ANSWERS : CLASS VI MATHS

1	D	2	A	3	C	4	C	5	C
6	B	7	D	8	B	9	A	10	B
11	D	12	C	13	A	14	C	15	B
16	D	17	B	18	D	19	A	20	A
21	D	22	C	23	D	24	C	25	C
26	B	27	A	28	B	29	C	30	B
31	A	32	D	33	A	34	C	35	D
36	A	37	B	38	A	39	A	40	C