

GLOBAL OPEN TALENT FOUNDATION

MATHEMATICS

Max Marks : 40

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.**

Roll No.

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Centre No.

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Male / Female

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

Rough Work

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

1. A period from January 1, 2008 to December 31, 2020 will contain

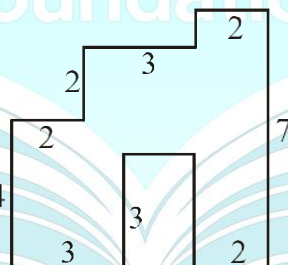
(A) 4750 days (B) 4749 days
(C) 4748 days (D) 4745 days

2. If $A = 1$, $B = 2$, $O = 15$, $Z = 26$, then SONIA has a numerical value of $19 + 15 + 14 + 9 + 1 = 58$. Likewise, the numerical value of AMITY is

(A) 68 (B) 58
(C) 65 (D) 56

3. In the following closed shape in the plane, numbers show lengths in centimetres. Find the area enclosed by the figure.

(A) 30 sq cm
(B) 32 sq cm
(C) 34 sq cm
(D) 36 sq cm

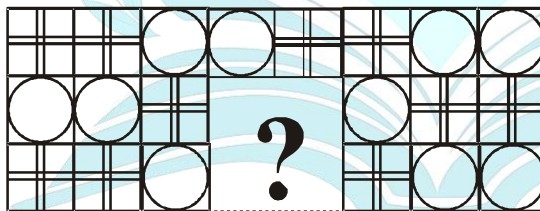


4. In the following operation of division, what digits are given by the alphabets P , Q , R and S , respectively ?

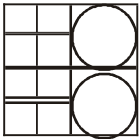
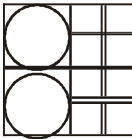
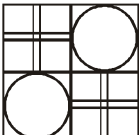
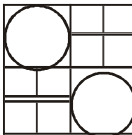
					2 Q 2 R
	P	Q	R	S	23) 5 P 0 5 9
					* *
(A)	7	5	4	7	1 2 0
					* 1 *
(B)	8	4	5	7	5 5
					4 6
(C)	8	5	4	8	* 9
					* *
(D)	8	5	4	7	S

Rough Work

5. The number 949 can be expressed in roman numerals as
- (A) CMIL (B) DCCCCIL
- (C) CMXLIX (D) CMXXXXIX
6. If $\frac{3}{5}$ of a number is 135, then one-third of this number is
- (A) 80 (B) 75
- (C) 70 (D) 65
7. A clock takes exactly 1 second to strike 3 O'clock and the strikings are uniformly spaced. To strike 12 O'clock, the same clock will take
- (A) 4.5 seconds (B) 5.5 seconds
- (C) 4 seconds (D) 5 seconds
8. In the following pattern, some part is missing.



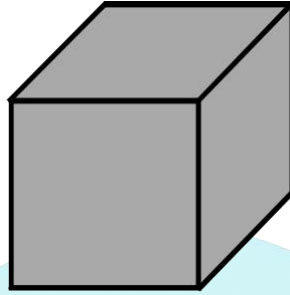
The missing part of the pattern is

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

Rough Work

9. Payal had a thin wire of length 48 cm. She cut it into wires of equal lengths. With these smaller wires she made a skeleton of a cube and covered it with paper to form a hollow cube. Find the minimum area of the paper to form this cube.

- (A) 192 sq cm
(B) 144 sq cm
(C) 128 sq cm
(D) 96 sq cm



10. A 4-digit number is divisible by 60. This number may not be divisible by

- (A) 12
(B) 20
(C) 24
(D) 30

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

- (A) $\frac{13}{18} < \frac{5}{8} < \frac{7}{9}$
(B) $\frac{5}{8} < \frac{7}{9} < \frac{13}{18}$
(C) $\frac{7}{9} < \frac{5}{8} < \frac{13}{18}$
(D) $\frac{5}{8} < \frac{13}{18} < \frac{7}{9}$

12. In the following series, all the alphabets except one follow some pattern.

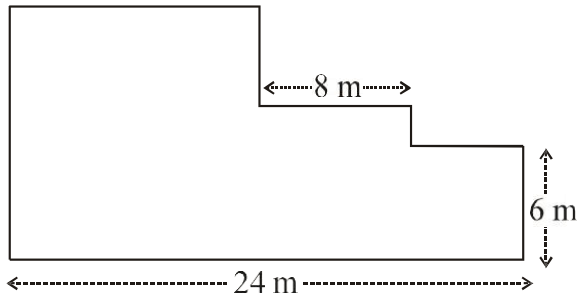
A, F, I, M, Q, U

Find that alphabet which does not follow the same pattern.

- (A) U
(B) M
(C) I
(D) F

Rough Work

13. What is the area of the plot of land, shown below ? The plot of land is made up of three squares.



- (A) 196 sq. m (B) 200 sq. m
(C) 210 sq. m (D) 240 sq. m
14. Only the following 8 numbers are to be used and no number is to be repeated :

2, 4, 12, 20, 25, 32, 40, 52

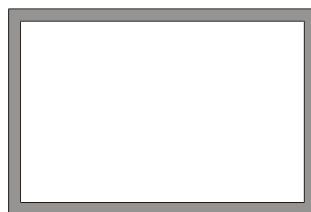
How many numbers can be added to get a sum of 75 ?

- (A) 2 (B) 3
(C) 4 (D) 5
15. $98765 - 56789 = 99 \times \dots? \dots$

In the above equation, the sign $\dots? \dots$ stands for

- (A) 444 (B) 424
(C) 404 (D) 324
16. Around a large park of length 300 metres and breadth 200 metres, there is a track of width 2 metres, for the persons to take morning and evening walks. Find the area of this track.

- (A) 1984 sq m
(B) 1992 sq m
(C) 1996 sq m
(D) 2000 sq m



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

3	10	17	24
9	16	P	30
15	Q	29	R
21	S	35	42

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

(A) 22 23 36 30 (B) 23 22 36 28

(C) 22 23 36 28 (D) 23 22 28 36

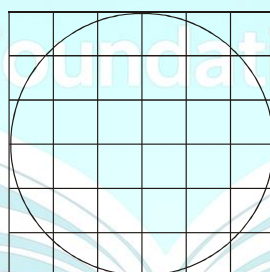
18. A circle is drawn on a graph paper, made of squares of side 1 cm each. Find the approximate area of the circle.

(A) 29 sq cm

(B) 28 sq cm

(C) 27 sq cm

(D) 26 sq cm



19. How many prime numbers lie between 10 and 50 ?

(A) 9

(B) 10

(C) 11

(D) 12

20. $1 + \frac{1}{2} - \frac{2}{3} + \frac{3}{4} - \frac{4}{5}$ is equal to

(A) $\frac{57}{60}$

(B) $\frac{52}{60}$

(C) $\frac{47}{60}$

(D) $\frac{37}{60}$

Rough Work

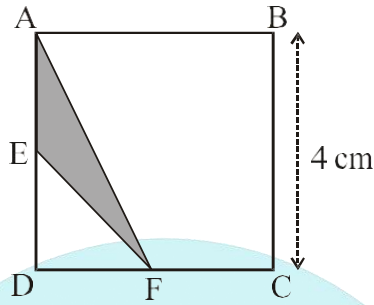
21. $ABCD$ is a square of each side 4 cm. E is the mid-point of AD and F is the mid-point of DC . Find the area of the triangle AEF .

(A) 1 sq cm

(B) 2 sq cm

(C) 4 sq cm

(D) none of these



22. A businessman dies and leaves a total of wealth of Rs. 81,64,800. He had two unmarried sons Ajay and Ajit and a married daughter Aparna. He left a will for the distribution of his wealth. The wealth is to be distributed among Aparna, Ajay and Ajit in the ratio 2 : 4 : 3. What wealth should Aparna get ?

(A) Rs. 18,14,400

(B) Rs. 19,14,400

(C) Rs. 22,32,800

(D) Rs. 23,32,800

23. Which of the following sets of three numbers gives the maximum value on addition ?

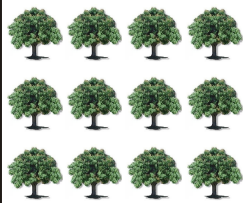
(A) 213, 364, 435

(B) 231, 346, 453

(C) 312, 364, 345

(D) 123, 463, 453

24. The area of a square field is $400 \text{ m} \times 300 \text{ m}$. The mango trees are to be planted in a regular manner. If each mango tree requires an area of $6.25 \text{ m} \times 6.25 \text{ m}$, then how many mango trees can be planted in this field ?

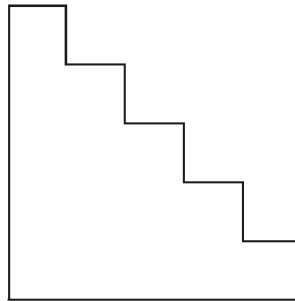


- (A) 2880 (B) 2944
(C) 3008 (D) 3072
25. Tick-mark (\checkmark) the incorrect statement.
- (A) All the three angles in a equilateral triangle are equal
(B) A triangle can have only one obtuse angle
(C) A right-angled triangle cannot have an obtuse angle
(D) All the three angles of a triangle must be acute
26. If $A = 1$, $B = 2$, $T = 20$, $Z = 26$, then in the equation $O^2 + H^2 = (?)^2$. The symbol ? represents which one of the following alphabets ?
- (A) P (B) S
(C) Q (D) W

Rough Work

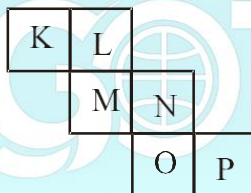
27. Width and height of each step is 13 cm in the following diagram, drawn on a paper. The area enclosed by the figure is

- (A) 2435 sq cm
(B) 2535 sq cm
(C) 2635 sq cm
(D) 3525 sq cm



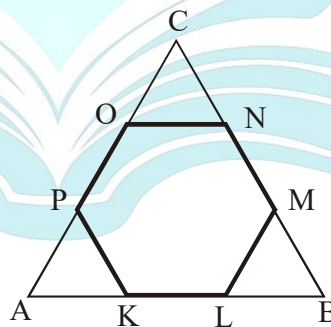
28. When folded along the lines, the following spread will form a hollow cube. The face P of the hollow cube will be opposite to which of the following faces ?

- (A) K
(B) L
(C) M
(D) N



29. A regular hexagon $KLMNOP$ is placed over an equilateral triangle ABC , as shown below. What fraction of the area of the triangle does the hexagon cover ?

- (A) $5/8$
(B) $5/9$
(C) $3/4$
(D) $2/3$



30. In the following problem, the values of P , Q , R and S are respectively

- (A) 7 3 8 7
(B) 8 3 8 7
(C) 8 3 7 8
(D) 8 3 7 7

$$\begin{array}{r} 7 \ P \ 9 \ 5 \\ - \ 9 \ 2 \ 0 \ Q \\ + \ 8 \ 6 \ R \ 4 \\ \hline S \ 3 \ 6 \ 6 \end{array}$$

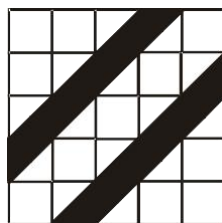
31. What fraction of the total area is shaded black ?

(A) 30 %

(B) 28 %

(C) 25 %

(D) 24 %



32. A dealer, dealing in second-hand goods, purchased a colour TV set for Rs. 2450/- from a house and spent Rs. 50 as freight charges to bring the TV set to his workshop. He spent Rs. 650 for replacing old parts and improving the look of TV. At what price should he sell the TV set to earn a profit of 40 % ?

(A) Rs. 3430

(B) Rs. 3500

(C) Rs. 4340

(D) Rs. 4410

33. In the following series, all the numbers except one follow some pattern.

189, 171, 155, 144, 135, 129, 126

Find that number which does not follow the same pattern.

(A) 126

(B) 135

(C) 144

(D) 155

34. Deepa has some number of ten-rupee notes and half the number of five-rupee notes. If total money with Deepa is Rs. 1375, then find the number of her ten-rupee notes.



(A) 80

(B) 100

(C) 110

(D) 120

Rough Work

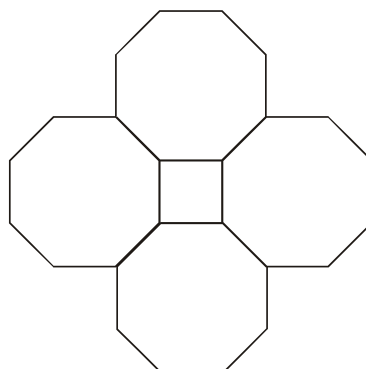
35. Four regular octagons (eight-sided closed figures) enclose a square as shown. If the area of the square is 36 sq. cm, then find the perimeter of this closed figure.

(A) 120 cm

(B) 144 cm

(C) 150 cm

(D) 168 cm



36. A manufacturer of handkerchiefs purchases long rolls of cloth; each roll being 31.85 m long and 1.4 m wide. How many square handkerchiefs of maximum size can be made from each roll of cloth ?

(A) 384

(B) 364

(C) 324

(D) 256

37. The same digit has to be put in the empty boxes of a 5-digit number shown below, such that the number becomes divisible by 3 and 9.

7	6			4
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Which one of the following digits should be used ?

(A) 8

(B) 6

(C) 5

(D) 2

38. A fruit-seller purchases 100 dozens of bananas at the rate of Rs. 15 per dozen. By evening he sold 80 dozens of bananas at the rate of Rs. 20 per dozen. During late evening, at what rate should he sell the remaining bananas to earn a net profit of 20% ?

(A) Rs. 8 per dozen

(B) Rs. 10 per dozen

(C) Rs. 12 per dozen

(D) Rs. 15 per dozen

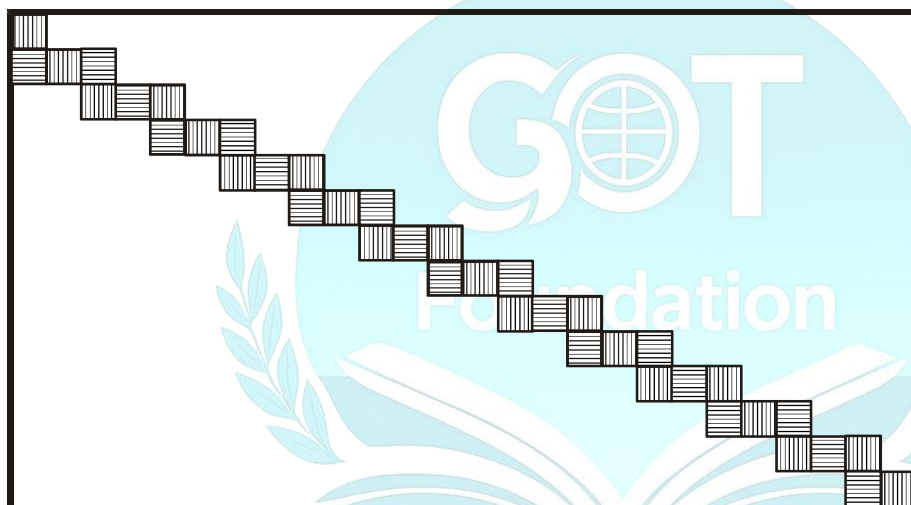
Rough Work

39. $\left[\frac{8}{25} \times 7 \frac{1}{7} \times 3 \frac{1}{11} \times 1 \frac{8}{17} \times \frac{7}{75} \right] \left[\frac{3}{20} \times 1 \frac{2}{3} \times 3 \frac{1}{5} \times 2 \frac{1}{2} \right]$

simplifies to

- (A) 4 (B) 2
(C) 1 (D) 0

40. Special square tiles, each of side 25 cm, are laid on the floor in the drawing room of a building, as shown. Find the area of the floor of this drawing room.



- (A) 22.75 sq m (B) 23.75 sq m
(C) 24.50 sq m (D) not possible to find

ANSWERS CLASS V MATHS

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

