

Civil Engineering-Gate 2021-Analysis

S.No.	Section Name	1Mark			2Marks			
		MCQ	NAT	Total	MCQ	NAT	MSQ	Total
1	Engineering Mathematics	4	1	5	2	2	0	4
2	Engineering Mechanics	0	0	0	0	1	0	1
3	Solid Mechanics	1	1	2	1	1	0	2
4	Structural Analysis	0	1	1	0	1	0	1
5	Construction Materials and Management	1	0	1	0	2	0	2
6	Concrete Structures	1	0	1	0	1	0	1
7	Steel Structures	0	0	0	1	0	0	1
8	Soil Mechanics	2	0	2	2	2	0	4
9	Foundation Engineering	0	1	1	0	1	0	1
10	Fluid Mechanics	1	1	2	1	2	0	3
11	Hydrology	0	1	1	0	1	0	1
12	Irrigation	0	0	0	0	1	0	1
13	Environment Engineering	3	0	3	1	2	1	4
14	Transportation Engineering	3	1	4	0	3	0	3
15	Geomatics Engineering	1	1	2	1	0	0	1
Total No. of questions		17	8	25	9	20	1	30

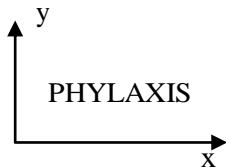
Total Number of NAT questions-- **28**

Total Number of MCQ questions-- **26**

Total Number of MSQ questions-- **1**

GENERAL APTITUDE

1.



The mirror image of the above text about the x-axis is

- (A) ƆHƧΓ∨X12
- (B) P HƧΓ∨X12
- (C) P HƧΓ∨X12
- (D) ƆHƧΓ∨X12

2. Four persons PQRS seated in a row. R should not be seated at the second position from the left. The number of distinct seating arrangements possible

- (A) 6
- (B) 18
- (C) 9
- (D) 24

- 3.
- 1. Arun and Aparna are here
 - 2. Arun and Aparna is here
 - 3. Arun's families is here
 - 4. Arun's family is here

Which of the above sentences grammatically correct?

- (A) 2 and 4
- (B) 1 and 3
- (C) 1 and 4
- (D) 3 and 4

4. \oplus and \odot are two operators on number p & q such the $p \odot q = p - q$ & $p \oplus q = p \times q$

Then $(9 \odot (6 \oplus 7)) \odot (7 \oplus (6 \odot 5)) =$

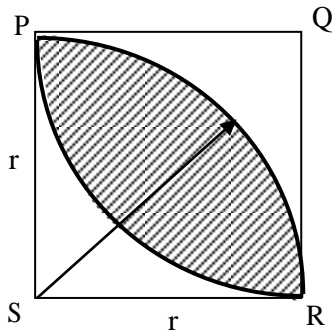
- (A) -33
- (B) -40
- (C) 40
- (D) -26

5. In an equilateral triangle PQR, side PQ divided into 4 equal parts, side QR divided into 6 equal parts, and side PR divided into 8 equal parts. The length of each subdivided part in cm is an integer.

The minimum area of triangle PQR possible in cm^2 .

- (A) $144\sqrt{3}$ (B) $48\sqrt{3}$ (C) 18 (D) 24

6.



In the figure shown above PQRS square shaded portion is formed by intersection of circles with radius equal to the side of the square and centers of the square S & Q. Probability that any point picked randomly within the square falls in the shaded area

- (A) $\frac{\pi}{4}$ (B) $4 - \frac{\pi}{2}$ (C) $\frac{1}{2}$ (D) $\frac{\pi}{2} - 1$

7. 1. Some football player play cricket.
2. All cricket players play hockey.

Among the options given below, the statement that logically follows from the two statements (1) and (2) about is

- (A) All Hockey players plays football (B) No football players plays hockey
(C) Some football players plays Hockey (D) No Hockey players plays football

Engineering Mathematics

1. If k is a constant, the general solution of $\frac{dy}{dx} - \frac{y}{x} = 1$ will be in the form of
(A) $y = x \ln(kx)$ (B) $y = xk \ln k$, (C) $y = k \ln(kx)$ (D) $y = x \ln x$
2. The value of $\lim_{x \rightarrow \infty} \frac{x \ln(x)}{1 + x^2}$
(A) 0.5 (B) 0 (C) ∞ (D) 1
3. The rank of the matrix is $\begin{bmatrix} 5 & 0 & -5 & 0 \\ 0 & 2 & 0 & 1 \\ -5 & 0 & 5 & 0 \\ 0 & 1 & 0 & 2 \end{bmatrix}$
(A) 3 (B) 1 (C) 2 (D) 4
4. Numerically integral $f(x) = 10x - 20x^2$ from lower limit $a = 0$ to upper limit $b = 0.5$. Use trapezoidal rule with five equal subdivisions. The value of obtained is _____.
5. The value of $\int_{-1}^1 x e^{|x|} dx$ _____

Disclaimer: Based on student test experiences in the stream of CE, we have analyzed the questions which will help you understand the pattern and will give you an edge in your upcoming exam.

