GAT GENERAL TEST

English Verbal Expression (30 Questions)
This sections consists of Basic English Grammar, for example Antonyms, Synonyms, Pair of Words, Relations among words, Comprehension, propositions etc
(SOME SAMPLE QUESTIONS)
Choose from the following, the answer that is closest in meaning to the main word (Written in Capital letters).

1. **RESTIVE**
   A. Restful
   B. Restless
   C. Crucial
   D. Pause

Choose from the following, the answer that is opposite in meaning to the main word (Written in Capital letters).

3. **EFFICACY**
   A. Strange
   B. Well-known
   C. Inefficiency
   D. Effectiveness

Complete the following sentences with the correct option given below.

14. The board was amazed to see such an outstanding research by a mere _____ .
   A. doctorate student
   B. doctor
   C. scientist
   D. amateur

Read the following paragraphs carefully. Choose the correct answer from the options given below:

18. One surprising aspect of the waves discussed in the passage is the fact that they
   A. are formed in concentric patterns
   B. often strike during clear weather
   C. arise under conditions of cold temperature
   D. are produced by deep swells

ANTONYMS

19. FOE
   A. Friend
   B. Enemy
   C. Foul
   D. Fail
   E. Fraud

Analytical Reasoning (15 Questions)

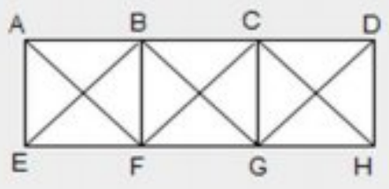
This sections consists of questions from Analytical reasoning and logical reasoning.

(SOME SAMPLE QUESTIONS)

31. Rahul travelled from a point and straight to Y at a distance of 90 m. He turned right and walked 40 m, then again turned right and walked 70 m. Finally, he turned right and walked 40 m. How far he is from the starting point?

A. 70
B. 10
C. 20
D. 30

40. In the following figure, find the total number of squares and triangles?



A. 3 squares and 28 triangles
B. 4 squares and 26 triangles
C. 4 squares and 30 triangles
D. 5 squares and 28 triangles

41. Pick the odd one out

A. B
B. D
C. E
D. F

Quantitative (20 Questions)

This section usually basic Mathematics questions are given.

(SOME SAMPLE QUESTIONS)

46. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through

A. 155°
B. 145°
C. 152°
D. 140°

47. Two numbers are in the ratio 2 : 3. If their L.C.M. is 48. what is sum of the numbers?

A. 28
B. 40
C. 64
D. 42

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56. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

A. 624
B. 702
C. 756
D. 812

57. Ten years ago, P was half of Q's age. If the ratio of their present ages is 3:4, what will be the total of their present ages?

A. 45
B. 40
C. 35
D. 30

60. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, find out the value of x

A. 15
B. 25
C. 18
D. 16

65. What is the average of x, y and z? If x+y=5,y+z=8 and x+z=11.

A. $\frac{11}{3}$
B. $\frac{1}{2}$
C. $\frac{13}{5}$
D. 4

NATIONALUNIVERSITY OF MODERN LANGUAGES
Faculty of Engineering & Computer Science
Department of Mathematics

MS (Mathematics) Admission Test
Max. Time: 60 Minutes
Total Marks: 25

Note: Attempt any FIVE questions. Each question carry equal marks. Use separate Sheet for each question and write your name and system ID on every sheet.

In this section, your subject familiarity is examined. Questions will be from Calculus, Linear Algebra, Ordinary Differential Equations, Real Analysis, Complex Analysis, Algebra, Numerical Analysis, Topology and Functional Analysis.

(SOME SAMPLE QUESTIONS)

Q.No.2 Linear Algebra.

Let $T : (R_3 , R) \rightarrow (R_2 , R)$ be defined by

$$T(x_1, x_2, x_3) = (3x_1 + 2x_2 - x_3, x_1 - 4x_2 + 2x_3) .$$

Then show that T is a linear transformation and also the corresponding transformation matrix.

Q.No.8. Topology.

Let τ_1, τ_2 be two topologies on a non-empty set X. Then prove that $\tau_1 \cap \tau_2$ is always a topology on X. What about $\tau_1 \cup \tau_2$?.