ST. JOSEPH'S COLLEGE, PRAYAGRAJ

FIRST UNIT TEST 2025-26

MATHEMATICS

TIME: 1 Hour **CLASS – X** **MM: 30**

SECTION – A [6 Marks]

Q 1) Mohit opened a recurring deposit account in a bank for 2 years. He deposits ₹1000 every month and receives ₹25500 on maturity. The interest he earned in 2 years is

a. ₹13500 b. ₹3000 c. ₹24000 d. ₹1500

Q 2) Joseph has a recurring deposit account in a bank of ₹1000 every month for two years at the rate of 8% p.a. simple interest, then the total amount deposited in the bank is:

a. ₹25000 b. ₹24000 c. ₹26000 d. ₹23000

Q 3) The largest value of x for which, $3(x-2) \leq 6-x$, where $x \in W$, is

a. 3 b. 4 c. 5 d. 6

Q 4) The solution set of $3x+1>5x-7$, where $x \in R$. Is

a. $\{x: x<4; x \in R$ b. $\{x: x>4, x \in R\}$ c. $\{x: x<8, x \in R\}$ d. $\{x: x>8. x \in R\}$

Q 5) If $p(x) = x3 - 3x2 - 4x + 10$ is divided by $(x+2)$, the remainder is

a. 0 b. – 1 c. 2 d. – 2

Q 6) If $(x+2)$ is a factor of the polynomial $x3 - kx2 - 5x + 6$, then the value of k is

a. 1 b. 2 c. 3 d. – 2

SECTION – B [12 Marks]

Q 7) Mr. Gupta opened a recurring deposit account in a bank. He deposited ₹2500 per month for 2 years. At the time of maturity, he gets ₹67500, find

a. The total interest earned by Mr. Gupta
b. The rate of interest per annum.

Q 8) Jaya opened a cumulative deposit account for 20 months. The rate of interest is 9% per annum and Jaya receives ₹441 as interest at the time of maturity. Find the amount Jaya deposited each month.

Q 9) Solve the following inequation and write its solution set.

$2x - 5 \leq 5x + 4 < 11; x \in I$

Q 10) Solve the below inequality and write the solution set

$2y - 3 < y + 1 \leq 4y + 7; y \in R$

Q 11) What must be added to $2x^3 - 3x^2 - 8x$ so that it leaves a remainder 10 when divided by $(2x+1)$?

Q 12) If $(x-2)$ is a factor of $2x^3 - x^2 - px - 2$, find the value of p.

SECTION – C [12 Marks]

Q 13) Using factor theorem, factorise $2x^3 + 19x^2 + 38x + 21$ completely

Q 14) If $x^3 - 2x^2 + ax + b$ has a factor $(x+2)$ and leaves a remainder 9 when divided by $(x+1)$, find the values of a & b.

Q 15) Solve the inequation given below, write the solution set and represent it on the number line

$$2x - 1 \geq x + \frac{7-x}{3} > 2, x \in R$$

Q 16) Miraj has an RD account of ₹340 per month at 6% p.a. If he gets ₹7157 at the time of maturity, find the total time for which the account was held.

“Your first experience with programming shapes how you see it forever”

Right teacher can make coding fun, clear, and exciting, else it becomes confusing and frustrating.
That's why we focus on making sure beginners get the right guidance from the start so they don't lose interest, they gain confidence.

Online videos are good for learning syntax but they usually skip the harder parts of programming logic in each topic.

Why? Because difficult concepts can lead to negative comments and fewer views. But real learning happens when those tricky topics are explained clearly and patiently. That's what we focus on teaching what matters, not just what's easy to teach.

Learn your first programming language only at

I want to join

Location on map

8-D, Kutchery Road
Ph: **9415368884**

EXPERTS' INSTITUTE