LGS GROUP OF COLLEGES

[XII MATHEMATICS] Exercise 3.1 and 3.2

TEST# W-T-2

Paper Code: 1207	Name:.....	Roll No:
Time: 35 Minutes	Objective + Subjective	Marks = 15

OBJECTIVE TYPE

Q# 1. **Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.** **$(1 \times 4 = 4)$**

1	If $V = x^3$, then differential of V is: (A) $3x^2\ dx$ (B) $3x^2$ (C) $x^3\ dx$ (D) $3x^2\ dy$
2	$\int (3x^2 + 2x)dx$ is equal to: (A) $6x + 2$ (B) $x^3 + x^2$ (C) $3x + 2$ (D) $\frac{x^3}{3} + \frac{x^2}{2}$
3	$\int sin\ 5x\ dx =$ _____ (A) $-\frac{1}{a} cos\ x + c$ (B) $-\frac{1}{5} cos\ 5x + c$ (C) $\frac{1}{5} sin\ x + c$ (D) $\frac{1}{5} cos\ 5x + c$
4	$\int \frac{\sin 2x}{4 \sin x} dx =$ (A) $\sin 2\,x + c$ (B) $2 \sin 2x + c$ (C) $\frac{1}{2} \sin x + c$ (D) $2 \sin x + c$

SUBJECTIVE TYPE

SECTION - 1

Q# 2. Attempt ALL SHORT Questions: **$(2 \times 3 = 6)$**

i	Find δy if $y = \sqrt{x}$
ii	Find $\frac{dy}{dx}$ if $xy - \ln x = c$.
iii	Evaluate $\int \frac{\left(\sqrt{\theta} - 1\right)^2}{\sqrt{\theta}} d\theta$.

SECTION – II

Attempt LONG Question: **(5 × 1 = 5)**

Q# 3.	Evaluate $\int \frac{\cos 2x - 1}{1 + \cos 2x} dx$.