Q.No.	DAY - 57
353	**EXERCISE 8.2** 1. Find differential dy for each of the following functions : (i) $y = \dfrac{(1-2x)^3}{3-4x}$ (ii) $y = (3 + \sin(2x))^{2/3}$ (iii) $y = e^{x^2 - 5x + 7} \cos(x^2 - 1)$
354	3. Find Δf and df for the function f for the indicated values of $x, \Delta x$ and compare (i) $f(x) = x^3 - 2x^2 ; x = 2, \ \Delta x = dx = 0.5$
355	8. In a newly developed city, it is estimated that the voting population (in thousands) will increase according to $V(t) = 30 + 12t^2 - t^3, \ 0 \le t \le 8$ where t is the time in years. Find the approximate change in voters for the time change from 4 to $4\dfrac{1}{6}$ year.
356	10. A circular plate expands uniformly under the influence of heat. If it's radius increases from 10.5 cm to 10.75 cm, then find an approximate change in the area and the approximate percentage change in the area.
357	11. A coat of paint of thickness 0.2 cm is applied to the faces of a cube whose edge is 10 cm. Use the differentials to find approximately how many cubic centimeters of paint is used to paint this cube. Also calculate the exact amount of paint used to paint this cube.
	End of chapter 8