BCM SCHOOL BASANT AVENUE DUGRI ROAD
LUDHIANA
XII SC(MATHS)
ANSWER KEY
Application of derivative

	Answer key of application of derivative
1	C
2	A
3	A
4	Thus, the length of the shadow is reducing at the rate of 1 m/sec when the man is $3\frac{1}{3}$m from base of light.
5	Increasing in $(1,2)\cup(3,\infty)$ and decreasing in $(2,3)\cup(-\infty,1)$
6	the required rate at which the string is being let out is 8 m/s.
7	Decreasing in $[0,\frac{\pi}{4}]$ and increasing in $[\frac{\pi}{4},\frac{\pi}{2}]$
8	the maximum volume of box is $\frac{C^3}{6\sqrt{3}}$ cubic units
9	the company should increase the subscription fee by ₹ 1(has maximum profit.
10	(i)$4(x^3-24x^2+144x)$ (ii) side of the square piece to be cut from each corner of the board is 4 cm (iii) 1024 cm^3