CLASS-11   RELATIONS AND FUNCTIONS   W.S (12)

1.Find the Domain of the following functions:

a) $f(x) = \sqrt{4 - x} + \frac{1}{\sqrt{x^2 - 1}}$

b) $f(x) = \frac{1}{1 - x^2}$

c) $f(x) = \frac{1}{\sqrt{x - |x|}}$

d) $f(x) = \frac{1}{\sqrt{x - [x]}}$

2. Find the Domain and Range of the following functions:

a) $f(x) = \frac{1}{2 - \sin 3x}$

b) $f(x) = 1 - |x - 2|$

c) $f(x) = \frac{|x - 4|}{x - 4}$

d) $f(x) = \frac{x}{1 + x^2}$

e) $f(x) = \frac{3}{2 - x^2}$

3.Sketch the graph of the following functions:

a) $f(x) = x^2 + 2$

b) $f(x) = \frac{1}{x - 2}$

c) $f(x) = \sqrt{x}$

4.Define the following functions:

a) $f(x) = [x]$

b) $f(x) = |x - 2|$