

Subject Code: R13107/R13**Set No - 4**

- 6.(a) Find the Fourier transform of $e^{-|x|}$
(b) Using Regula Falsi method find a real root of $f(x) = 2x^7 + x^5 + 1 = 0$ correct upto two decimal places. [8]
- 7.(a) Find $z\left(\frac{1}{n!}\right)$ and hence evaluate $z\left(\frac{1}{(n+1)!}\right)$ and $z\left(\frac{1}{(n+2)!}\right)$
(b) Find a real root of $f(x) = x + \log x - 2$ using Newton-Raphson method. [8]