Unit 5 : Z -Transform

Assignment 5

Year/Sem : II/III

Branch: Common to All branches except B.Tech (Business Systems)

Total marks: 20Marks

PART B (10x2=20 marks)

1. Find $Z(na^n)$.

2. Find $Z(r^n cosn\theta)$.

3. Find $Z(n(n-1))$.

4. Find $Z\left(Cos\left(\frac{n\pi}{2}\right)\right)$.

5. Find $Z(sinn\theta)$.

6 .Find $Z(r^n e^{in\theta})$.

7. Find the residue of $F(z)z^{n-1} = \frac{z}{(z-1)(z-2)}$ at its Smallest pole.

8. Find $Z^{-1}\left(\frac{8z}{z-2} + \frac{5z}{z+4}\right)$.

9. Find f(0) if $F(z) = \frac{8z}{(z-4)(z-3)}$.

10. Find $Y(z)$ if $y_{n+2} + y_n = 0$, $y_0 = 0$, $y_1 = -3$