



Dnyaneshwar Vidyapeeth (Trust)

CENTRAL EXAMINATION BOARD

ASSIGNMENT OF DIGITAL SIGNAL PROCESSING

SUB -CODE- (COM-G700) COURSE: ADVANCED TECH-QUIC PROGRAM SESSION - WINTER
ASSIGNMENT NO. 1 (Assignment Based on Topic No. 1,2) BRANCH – Elect/E&TC/Comp

Q.1 Answer the following (Questions for 2 marks)

- 1) Define Continuous time signal
- 2) State the various applications of DSP.
- 3) Define Sampling
- 4) State the formula for Linear convolution.

Q.2 Answer the following (Questions for 4 marks)

- 1) Draw and explain the basic elements of Digital Signal Processing.
- 2) Explain the properties of Linear Time - Invariant Systems.
- 3) Write a note on Quantization Error.
- 4) Explain Infinite Length Sequence.
- 5) In what respect unilateral z-transform is different from bilateral z-transform?
- 6) Explain frequency domain sampling.
- 7) Check whether the systems described by following equations are casual or non casual:
(i) $y(n) = x(n) + x(n-1)$ (ii) $y(n) = x(n) + x(n+1)$ (iii) $y(n) = x(2n)$

Q.3 Answer the following (Questions for 6 marks)

- 1) What are the advantages of DSP over ASP?
- 2) State and prove Linearity property.
- 3) Give the classification of signals.
- 4) Determine zero input response of system described by second order difference equation
 $y[n] - 3y[n-1] - 4y[n-2] = 0$
