Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India

(Autonomous College Affiliated to University of Mumbai)

Mid Semester Examination

March 2019

Max. Marks: 20 | **Duration: 60 Min**

Class: T.E. | **Semester: VI**

Course Code:CE64 | **Branch: Computer Engineering**

Name of the Course: Digital Signal Processing

Instruction:

(1) All questions are compulsory

(2) Draw neat diagrams

(3) Assume suitable data if necessary

Q No.		Max. Marks	CO
Q.1	Draw the graphical representation of the i) Unit step sequence u(n) **1 Mark** ii)performing right shift on Unit step sequence u(n) 1 **Mark** Performing the signal subtraction operation on i and ii **1 Mark** Sketching resultant signal. **1 Mark** Inferring the conclusion based on resultant signal that is unit impulse. **1 Mark** . **OR**	05	CO1
Q.1	Determining the 4 correct for values x(n) **4 Mark** Inferring the correct length L = 4 of a output signal. **1 Mark**	05	CO1
Q.2	Determining the 4 correct values y(n) **4 Mark** . Listing names of 4 correct steps **1 Mark** Folding Shifting Multiplication Summation	05	CO2
Q.3	Justify the special case when we have the auto correlation of x(n), that is where y(n)= x(n) **0.5 Mark** Determining the correct auto-correlation sequence. **3.5 Mark** Inferring the significance of value obtained at y(0), that is energy of a signal. **1 Mark**	05	CO2
Q.4	IDFT formula. **1 Mark** Determining the 4 correct values. **4 Mark**	05	CO3