

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI  
Hanuman Vyayam Prasarak Mandals's  
College of Engineering & Technology, Amravati

Course: Information Technology

BE Four year 7th Semester (Information technology) Summer 2020 Exam

Subject: 7IT01- Digital Signal Processing

Assignment for ONLY BACKLOG STUDENTS

Instructions:

1. Solve **Any Two** Questions out of Four
2. Each Question Carries 10 Marks

**Question 1. Solve the Following– 10 Marks**

- |   |    |
|---|----|
| A. List & Explain all Standard Signals.                 | 2M |
| B. Write all properties of Convolution Sum.             | 2M |
| C. Give the Property of z- Transform for Time Reversal. | 2M |
| D. Define DTFT.   | 2M |
| E. Define Digital Filter.                               | 1M |
| F. Explain Realization of the System.                   | 1M |

**Question 2. Solve the Following – 10 Marks**

- |   |    |
|---|----|
| A. Write 5 Advantages of DSP.                           | 2M |
| B. Define Convolution sum.                              | 2M |
| C. Give the Property of z- Transform for Time Shifting. | 2M |
| D. What is mean by DTFT?                                | 2M |
| E. Give Classification of Filter.                       | 1M |
| F. Explain Lattice Structure                            | 1M |

**Question 3. Solve the Following – 10 Marks**

- |  |    |
|--|----|
| A. What are the Major Blocks in DSP System | 2M |
| B. Explain Linear Difference Equation.     | 2M |
| C. What is mean by z- Transform.           | 2M |
| D. What is FFT?                            | 2M |
| E. Define FIR Filter.                      | 1M |
| F. Explain Cascade Form Structure          | 1M |

**Question 4. Solve the Following -10 Marks**

- |  |    |
|--|----|
| A. Define Signal & its types.  | 2M |
| B. What is mean by Cross- Correlation                                  | 2M |
| C. Give the Property of z- Transform for Differentiation in Z- Domain. | 2M |
| D. State the Property of Time Shifting of Fourier Transform.           | 2M |
| E. List out Advantages of Digital Filters                              | 1M |
| F. Explain Frequency Sampling Structure.                               | 1M |