**Assignment 02**

**Discipline: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Batch: \_\_\_ Semester: \_\_\_**

**Roll no & Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Instructions**

Solve following questions.

Mention all steps clearly.

Draw graphs and diagrams where necessary.

**Question no.1: (CLO-3)**

**Solve and find the Fourier transform for the signal.**

**Question no.2: (CLO-2)**

**Write down the properties of Fourier transform.**

**Question no.3: (CLO-1)**

**Define discrete time Fourier series (DTFS).**

**Question no.4: (CLO-1)**

**Define discrete Fourier transform and it is properties.**

**Question no.5: (CLO-2)**

**What is Decimation in time algorithm? Prove this algorithms,**

**Question no.6: (CLO-2)**

**What is application of FFT? Write its two algorithms?**