JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2024

MSc (Physics)

COURSE CODE (CREDITS): 24MS3PH301 MAX. MARKS: 35

COURSE NAME ELECTRONICS-II

COURSE INSTRUCTORS: SKK MAX. TIME: 2 Hours

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***Note:*** *(a) All questions are compulsory.*

*(b) All questions carry equal marks*

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1. Sketch the circuit diagram of Weighted Resistor D/A Converter. Explain its working with input output table.
2. Explain the successive approximation of A/D converter with example.
3. An 8 bit D/A converter provides analog output which has a maximum value of 10V. the output may have an error of $\Delta V$ due to drift in component values, temperature etc, how large can $\Delta V$ be before the least significant bit would no longer be significant?
4. What is difference between A/D converter using voltage to frequency conversion and voltage to time conversion.
5. For a memory M words storage, find the number pins required for addressing and the address range in binary format for each of the following cases M=4, 16, 64, 256, 1024
6. Explain the working of charge coupled device (CCD) memory
7. Draw a 16-bit ROM array and explain its working