**ST. JOSEPH’S UNIVERSITY, BENGALURU -27**

Registration Number:

Date & session: 13-12-2022 (1pm)

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**BCA – I SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**CA 1121 – FUNDAMENTALS OF COMPUTER**

**Time: 2 Hours Max Marks: 50**

**This paper contains ONE printed page and THREE parts**

**PART-A**

**Answer ALL the following question. (5 x 1 = 5)**

1. What is the 2’s Complement of 23.
2. What is rotational latency?
3. What is the importance of Kernel in an operating system?
4. Differentiate the usage of char and varchar in a database.
5. Define Artificial Intelligence.

**PART B**

**Answer any FIVE of the following questions. (5 x 3 = 15)**

1. Explain XOR gate with its circuit diagram and truth table for 3 inputs.
2. Compare and contrast between a compiler and interpreter.
3. Mention the characteristics of mainframe computers.
4. Abbreviate EEPROM. Explain.
5. What is the functionality of linker and loader in the computer environment.
6. How is the ALTER command used in modifying the Database Schema. Explain.
7. Write a note on the types of IoT applications based on their usage.

**PART C**

**Answer any THREE of the following questions. (3 x 10 = 30)**

1. With a suitable example explain how instructions are executed in the CPU.
2. Convert
   1. ABCD(16) to octal
   2. 798(10) to binary
   3. 110110.0110(2) to decimal
3. a. Who is a Database End-user? Write a short note on different types of users. (5m)

b. Mention any five file handling UNIX command. (5m)

1. a. Differentiate between logical and physical address. (5m)

b. Explain any one application of Data mining with a suitable case-study. (5m)