

**First Semester FYUGP Degree (Reg/Sup) Examination
November 2025**

**KU1DSCCSC107 - ESSENTIALS OF INFORMATION
TECHNOLOGY**

2024 Admission onwards

Time : 1.5 hours

Maximum Marks : 50

Section A

Answer any 6 questions. Each carry 2 marks.

1. Define application software and give two examples.
2. Explain the difference between Retail and Open-Source software licensing.
3. Define a computer network and list its advantages.
4. Differentiate between digital and analog signals in data communication.
5. What is the importance of CPU in Computer system?
6. Explain the purpose of cache memory in a computer system.
7. What is the significance of 1's complement and 2's complement in binary numbers?
8. Write notes on how IEEE floating-point standard is used to represent real numbers.

Section B

Answer any 4 questions. Each carry 6 marks.

9. Explain the Fetch-Decode-Execute cycle in detail and its importance in CPU operation.
10. Describe the components of a computer system and their functions.
11. What are the differences between primary memory and secondary memory? Provide examples of each.
12. Explain binary addition and subtraction with appropriate examples.
13. Explain Gray code, ASCII code and Unicode.
14. Explain floating-point number representation in binary using the IEEE standard.

Section C

Answer any 1 questions. Each carry 14 marks.

15. (a) Describe the different types of software, including system software, application software, and operating systems.
(b) Explain the different software licensing models such as OEM, shareware, and open-source software.
16. Explain the different transmission modes (simplex, half-duplex, and full-duplex) and transmission media used in data communication systems. Compare digital and analog signals.

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