Anurag University

B Tech III Year I-Semester Regular & Supplementary Examinations, Oct/Nov-2023
Course: Computer Systems-II
(Common to AI & AIML)

Time: 3Hours   **Max Marks: 60**
Section –A (Short answer type questions)
- **Answer all questions:**   **(10 x 2 =20Marks)**

1. Define Operating System. List the objectives of an operating system.
2. Illustrate the primary purpose for a user interface.
3. What is a File? Describe the attributes of a file.
4. Define mounting. What is the need for mounting in a file system?
5. Differentiate between preemptive and non preemptive scheduling.
6. Outline the functions of memory management?
7. State three major general characteristics that define data communication.
8. Compare and contrast LAN. MAN, and WAN
9. Show the IPV4 datagram format.
10. Summarize quality of service.

Section—B (Essay answer type questions)
- **Answer all questions:**   **(5 x 8 =40 Marks)**

11. A) Discuss in details different types of operating systems.
                          OR
    B) With a neat sketch describe the services provided by operating system

12. A) Demonstrate various file access methods with suitable examples.
                          OR
    B) Explain the following with relevant diagrams: i) Tree-Structured Directories ii) Acyclic-Graph Directories

13. A) Summarize the following process scheduling algorithm i) Priority scheduling ii) Shortest job first scheduling
                          OR
    B) Illustrate with a diagram the steps involved in handling page faults

14. A) Name the four basic network topologies and explain each topology with relevant examples
                          OR
    B) Discuss the trade-offs between circuit switching, packet switching, and virtual circuit switching

15. A) Demonstrate OSI Model with diagram in detail
                          OR
    B) Describe the role of a DNS on a computer network with reference to its components?