Mid-West University
Examinations Management Office
Birendranagar, Surkhet
End Semester (Alternative/Physical) Examinations -2078

Bachelor level/ B.Sc CSIT /4th Semester   Full Marks : 60

Time: 3hrs   Pass Marks : 30

Subject : Operating System (COM441)

Candidates are required to give their answers in their own words as far as practicable. The figure in the margin indicates full marks.

Attempt <u>all</u> questions   **[6x10 = 60]**

1. Define scheduler in process scheduling. Why scheduling is required? Explain different types of process scheduling algorithms with example.

2. Write short note on following:
   a. Real time operating system
   b. Network operating system
   c. Distributed operating system

3. Differentiate between preemptable and non-preemptable resources. State and explain different deadlock handling methods. What are the advantages of time-sharing operating system?

OR

   a) Explain role of operating system in computer system. Differentiate between multitasking and multiprocessing with example.
   b) State and explain SCAN disk scheduling algorithm with example.

4. a) Why deadlock is problem in operating system? How deadlock can be prevented? Explain.
   b) What do you mean by demand paging? When does page replacement is necessity?

5. What is device controller? Explain different I/O request handling techniques.

OR

   a) Explain interprocess communication. What is the use of semaphores?
   b) Why paging is required? Explain the advantages of paging.

6. a) Explain system call in operating system. Define platters and tracks in disk.
   b) Write short note on:
   i) Linear file system
   ii) Hash table

THE END