

OPERATING SYSTEM AND SYSTEM PROGRAMMING

(Code : CST-402)

Full Marks : 80

Time : 3 hours

Answer any **five** questions including **Q.Nos.1 & 2**

Figures in the right-hand margin indicate marks

1. Answer *all* the questions in briefly : 2 × 10
 - (a) Define process.
 - (b) What is semaphore ?
 - (c) Define page.
 - (d) Write the function of interpreter.
 - (e) What is context switching.
 - (f) Name two operating system.
 - (g) What is spooling ?
 - (h) Write the difference between Appl. software and System software.
 - (i) Give one example of Deadlock situation.
 - (j) Write two file access method.

2. Answer any *five* questions : 6 × 5
 - (a) Identify the functions of operating system and explain each.
 - (b) What is a process ? Draw the process state diagram to explain each state.
 - (c) Define swapping. Explain the principle of swapping by suitable diagram.
 - (d) What do you mean by device management ? Explain the techniques of device management.
 - (e) State and explain Banker's Algorithm.
 - (f) What is an Assembler ? Write the function.
 - (g) What is a file ? Explain file organisation.

3. What is the function of compiler ? Write the seven phases of compiler. 10

4. How deadlock occurs ? How it is detected recovered and prevented ? 10

5. Define device allocation techniques. Explain function and working of I/O scheduler. 10

(2)

6. Define virtual memory. Explain virtual memory using segmentation method of memory management. 10
 7. State and explain job scheduling. 10
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