Total No. of printed pages = 7

END SEMESTER EXAMINATION, NOVEMBER-2018

Semester – 5th

Subject Code : Co-505

OPERATING SYSTEM

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

PART – A

Marks – 25

Questions on PART–A are compulsory.

1. Fill in the blanks : 1×10=10

   (a) The principal _____ devices are magnetic tape and disk storage device.

   (b) A _____ is essentially a deadlock avoidance strategy which puts very few restriction on processes competing for resources.

[Turn over

(c) A process is in "Blocked" state waiting for some I/O service and when the service is completed, it goes to the _____ state.

(d) BSAM stands for _____.

(e) Job scheduling is the process of _____ system resources to many different tasks by an operating system.

(f) The size of a page is typically _____.

(g) A process is in the _____ state if the last event of interest to the process was a request made by it to the system.

(h) A problem encountered in multitasking when a process is perpetually denied necessary resources is called _____.

(i) The _____ table contains the base address of each page in physical memory.

(j) File type can be represented by _____.

2. Multiple choice questions : 1×10=10

(a) Which scheduling algorithm allocates the CPU first to the process that requests the CPU first ?

(i) First-come, first-served scheduling.

(ii) Shortest job scheduling.

(iii) Priority scheduling.

(iv) None of the mentioned.

(b) PMT stands for

(i) Program Map Table

(ii) Page Map Table

(c) The systems which allows only one process execution at a time, are called

(i) uniprogramming systems

(ii) uniprocessing systems

(iii) unitasking systems

(iv) None of the mentioned.

(d) What is the ready state of a process ?

(i) When process is scheduled to run after some execution.

(ii) When process is unable to run until some task has been completed.

(iii) When process is using the CPU.

(iv) None of the mentioned.

(e) In non-preemptive scheduling

(i) a scheduling decision is made every time some job in the system finishes its execution.

(ii) a scheduling decision can be made even while execution of a job.

(f) The processes that are residing in main memory and are ready and waiting to execute are kept on a list called

(i) job queue (ii) ready queue

(iii) execution queue (iv) process queue

(g) Every address generated by the CPU is divided into two parts :

(i) frame bit and page number

(ii) page number and page offset

(iii) page offset and frame bit

(iv) frame offset and page offset

(h) Physical memory is broken into fixed-sized blocks called _____.

(i) frames

(ii) pages

(iii) backing store

(iv) None of the mentioned.

(i) Process scheduling is the function in the processor management hierarchy

(i) Low level scheduling

(ii) High level scheduling

(j) The address of the next instruction to be executed by the current process is provided by the

(i) CPU registers (ii) Program counter

(iii) Process stack (iv) Pipe

3. State true or false : 1×5=5

(a) The segment details active in memory is stored in segment map table.

(b) The page map table contain the information of page currently in memory.

(c) A process is called in a running state when a process in not in execution.

(d) A page fault occurs when a page is not in residing in the main memory.

(e) In shortest job next scheduling the shortest job is get priory in execution.

PART – B

Marks – 45

Answer any *three* questions. 15×3=45

1. What is process scheduling? State about the different sub-function in process scheduling.

2. What is job scheduling? Explain the different job scheduling criteria.

3. What is paging memory management system? Explain in details about it.

4. Explain about the function of information management of OS. Explain in details about physical IOCS, logical IOCS and file system.

5. State about a process states. Explain in details about state transition diagram.