Printed Pages : 8

P.G. (Vocational) (Sem.-II) Examination, 2021

OPERATING SYSTEM AND SHELL PROGRAMMING

[PPU-CS-23]

Time : Three Hours]   [Maximum Marks : 70

Note : Candidates are required to give their answers in their own words as far as practicable the figure in the margin indicate full marks.

Part-A

(Objective Type Questions)

Note : Attempt **all** questions. Each questions carries 2 marks :

[2×10=20]

1. (i) Operating system is a collection of :

   (a) Software routines

   (b) Input-output devices
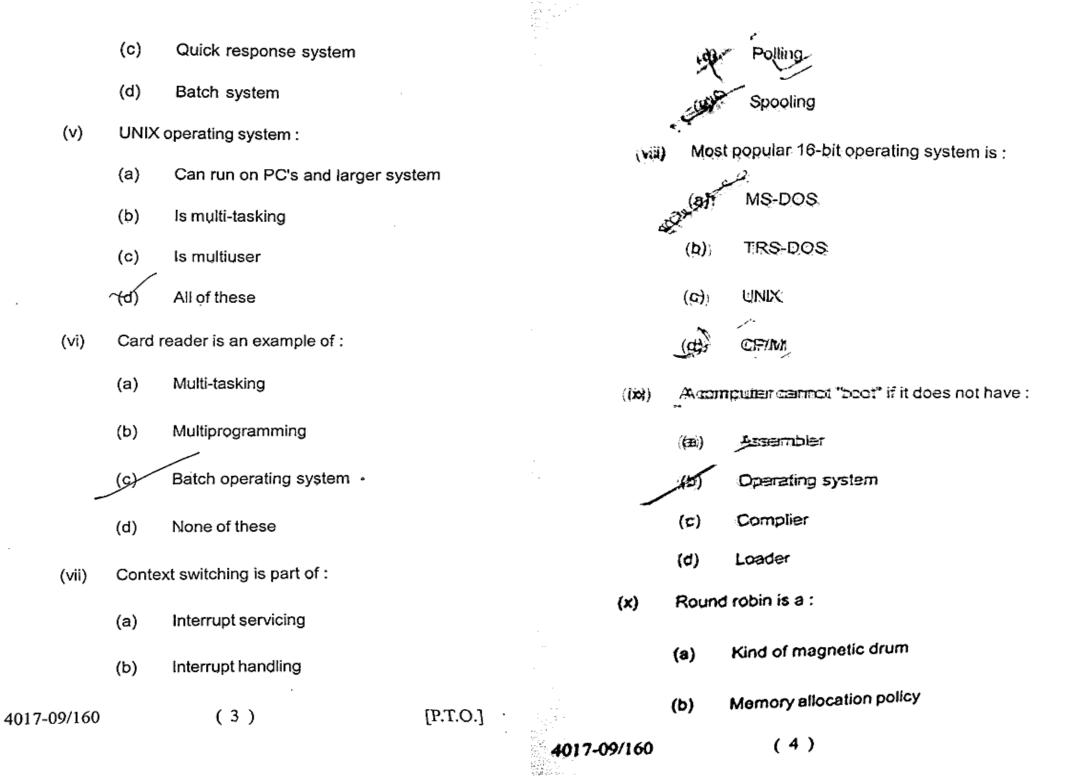
   (c) Hardware components

   (d) All of these

   (ii) Which of the following is not an operating system ?

   (a) UNIX

   (b) MS-DOS

   (c) CP/M

   (d) PASCAL

   (iii) FIFO scheduling is :

   (a) Fair-share scheduling

   (b) Deadline scheduling

   (c) Non-preemptive scheduling

   (d) Preemptive scheduling

   (iv) What is the name of the operating system that reads and reacts in terms of actual time ?

   (a) Real time system

   (b) Time sharing system

(c) Quick response system

(d) Batch system

(v) UNIX operating system :

    (a) Can run on PC's and larger system

    (b) Is multi-tasking

    (c) Is multiuser

    (d) All of these

(vi) Card reader is an example of :

    (a) Multi-tasking

    (b) Multiprogramming

    (c) Batch operating system .

    (d) None of these

(vii) Context switching is part of :

    (a) Interrupt servicing

    (b) Interrupt handling

(c) Polling

(d) Spooling

(viii) Most popular 16-bit operating system is :

    (a) MS-DOS

    (b) TRS-DOS

    (c) UNIX

    (d) CP/M

(ix) A computer cannot "boot" if it does not have :

    (a) Assembler

    (b) Operating system

    (c) Complier

    (d) Loader

(x) Round robin is a :

    (a) Kind of magnetic drum

    (b) Memory allocation policy

(c) Process scheduling policy

(d) Process synchronization policy

Part-B

(Short Answer Type Questions)

Note: Attempt any four questions. Each question carries 5 marks. [4×5=20]

1. Differentiate between pre-emptive and non-pre-emptive scheduling.

2. What is an operating system ? List the typical functions of operating systems.

3. What are the disadvantages of FCFS scheduling algorithm as compared to shortest job first (SJF) scheduling ?

4. What data structure is used by an operating system to keep track of process information ? Explain.

5. Categorized the CPU scheduling algorithms ? Explain Round Robin scheduling ?

6. Differentiate between Batch Operating System and Time Sharing Operating System ?

Part-C

(Long Answer Type Questions)

Note : Attempt any three questions. Each question carries 10 marks. [3×10=30]

1. Explain the Main function of Operating System with example.

2. What is the function of process management ?

3. List and perform any two of the following commands.

   (i) ls & $ls-1$

   (ii) cp & rm

   (iii) chdir & mkdir

4. What is internal and External Fragmentation ? Also explain the process of Memory Management.

5. What is Deadlock ? How it is pregvented in Operating System.

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