Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Voc. (Electronics & Information Technology) (Sem.–4)

OPERATING SYSTEMS

Subject Code : BVET-403-20

M.Code : 91665

Date of Examination : 24-12-2022

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) Distinguish between a Pipe and Output redirection

b) What is a batch mode computing?

c) Why it is necessary to reallocate a program in memory

d) What is a Shell command?

e) What is the Swapping process?

f) Why protection of file is required?

g) What is a Thread?

h) What is a Time sharing system?

i) Name **any two** multiuser operating systems

j) What is the use of a process control block?

SECTION-B

2. **EXPLAIN the following:**

   a) Batch Processing

   b) Multiprocessing

   c) Multitasking

3. Explain the following page replacement algorithms

   a) LRU Algorithm

   b) Optimal Replacement

4. What are the various free space management techniques. Discuss with example

5. What is round robin scheduling? Explain taking any example. Can it be useful for a single user system?If yes, then explain . If no, then why not?

6. Explain difference between internal and external fragmentation

SECTION-C

7. Suppose that the following processes arrive for execution at the times indicated. Each process will run the listed amount of time. In answering the question, use non-preemptive scheduling and base all decisions on the information you have at the time the decision must be made

Process	Arival Time	Burst Time
P1	0.0	8
P2	0.4	4
P3	1.0	1

   What is the average turnaround time for these processes with the FCFS scheduling algorithm?

8. A computer uses an 18 bit address system, with 6 bits used as a page address and 12 bits used as a displacement. Calculate the total number of pages and express the following address as a paging address:-001111000000111000

9. What is Fragmentation. Explain difference between Internal and External fragmentation

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.