

S.S. Jain Subodh College of Global Excellence

Pre. – University Exam – 2022

BCA (Part – II)

OPERATING SYSTEM (PAPER III)

Max. Time - 3 H

Max. Marks - 100

PART – 1

(10 X 2 = 20)

- A. What is operating system ?
- B. What is scheduler?
- C. What is swapping?
- D. What is system call?
- E. Differentiate virus and worm?
- F. What is Semaphores?
- G. What is distributed operating system?
- H. Differentiate between file and directory?
- I. Enlist the various service provided by the OS.
- J. Write about turn around time (TAT)

PART – II

(5x4=20)

- Q.2 What is virtual memory? How is it implemented
- Q.3 What is process? Draw and explain process state diagram?
- Q.4 What are interrupts? How are they handling by the operating system?
- Q.5 What is mean by Boyse codd NF?
- Q.6 Discuss the file system in brief?

PART – III

(5 x 12 = 60)

- .Q.7 What is device management? explain techniques for device management.

OR

What is thread? Discuss different approaches for implementation of process threads.

Q.8 Write short note on

- A. Deadlock Prevention
- B. Page replacement

OR

Explain round robin scheduling with e.g

Q. 9 Write short note on any two .

- A. Parallel Processing
- B. RPC
- C. Message Passing

OR

When does a page fault occur? Explain various page replacement strategies algorithm?

Q. 10 What is deadlock? What are the necessary condition for deadlock?

OR

Write short load on

- A. Direct memory access (DMA)
- B. Device drivers
- C. Interrupts

Q.11 Differentiate between protection and security. Explain the technique used for protection of uses files.

OR

Differentiate between

- A. Internal and external fragmentation
- B. Paging and segmentation

END

This question paper contains 2 printed pages.

Roll No. 67 5009

Ope. Sys.

B.C.A. (Pt.-II)

203/233

B.C.A. (Part-II) Examination, 2023 401819

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

Operating System

Paper : 203/233

Time Allowed : 3 Hours

Maximum Marks : 100

Answer of all the questions (Short answer as well as are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before you start writing answers of questions.

Question paper consists of **Three** parts.

All Three parts are **Compulsory**

PART-I : (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

PART-II : (Short answer) consists of 5 questions of 4 marks each, Maximum limit for each question is up to 80 words.

PART-III : (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choices.

PART-I

1. Attempt all questions. Each question carries 2 marks.

10×2=20

- (a) What is Multitasking?
- (b) Define Operating System.
- (c) What is Multiprocessing?
- (d) What is Primary Memory?
- (e) Define Storage Devices?
- (f) What is Dead Lock?
- (g) What is Physical Address?
- (h) What is Swapping?
- (i) What is Page Fault?
- (j) What is Batch System?

PART-II

2. Attempt all questions. Each question carries 4 marks.

5×4=20

- (a) What is Real Time System? Explain with examples
- (b) Explain various components of operating system. Explain with examples.
- (c) What is semaphore? Explain Different types of semaphore.
- (d) What is Deadlocks? Explain with suitable example.
- (e) What is parallel Processing? Explain with suitable example.

PART-III

3. What is Operating System? Explain Multiprogramming system with suitable example. 12

Or

What is Devices Management? Explain with example.

4. What is Scheduling Mechanism? Explain with suitable example. 12

Or

Write short notes on the following :

3×4

- (a) Virtual Memory
- (b) Memory Allocation Strategy
- (c) Primary Memory

5. What is Database Management System? Explain Indexed sequential files with example. 12

Or

Write short notes on the following :

6+6

- (a) Protection Mechanisms
- (b) Paging and Segmentation

6. What criteria should be adopted for choosing types of file organization? 12

Or

What is computer virus? Explain how Prevent virus to Infected your file. 12

7. What is process management? Explain with suitable example. 12

Or

Write short notes on the following :

3×4

- (a) Windows Server
- (b) System Threats
- (c) Linux and Unix

