B.C.A. (Part-II) EXAMINATION – 2019

(Faculty of Science)
(Three-Year Scheme of 10+2+3 Pattern)

OPERATING SYSREM – 203

Time Allowed: Three Hours | Maximum Marks: 100

Question paper consists of three parts.
All THREE parts are compulsory

Part - I (very short answer) consists 10 questions of two marks each with two questions from each unit. Maximum limit for each question is up to 40 words.

Part - II (short answer) consists 5 questions of four marks each with one question from each unit. Maximum limit for each question is up to 80 words.

Part - III (Long answer) consists 5 questions of twelve marks each with one question from each unit with internal choice.

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

Part – I

Attempt all questions. Each question carries 2 marks. **10 x 2=20**

1. (i) What is the different between Job and Process?

   (ii) What is PCB?.

   (iii) What is the Belady's Anomaly?

   (iv) Explain different services of Operating System.

   (v) What is system calls? Explain different categories of System calls with example.

   (vi) What is semaphores?

   (vii) What is distributed operating system?

   (viii) Distinguish between logical address and physical address?

   (ix) Define resource. List some resources that a process might need for its execution.

   (x) Describe context switching.

Part – II

Attempt all questions. Each question carries 4 marks.

2. What is Process Scheduling? What criteria affect the scheduler's performance? 4

3. What is virtual memory? How is it implemented? 4

4. What is the Process? Draw and explain Process State diagram. 4

5. Explain the various file types and file operation. 4

6. Explain various disk scheduling algorithm. 4

Part – III

7. Write short note on: 12

(i) Direct Memory Access

(ii) Interrupts

(iii) Device Drivers

OR

Explain the Following: 12

(i) Time sharing OS

(ii) Multi Programming OS

(iii) Real Time OS

8. Explain various type of Process Scheduling techniques. 12

OR

What is Deadlock? What are the necessary condition for deadlock? 12

9 Explain various types of Memory Management strategies. 12

OR

When does a page fault occur? Explain various page replacement strategies/algorithms. 12

10 Explain various authentication and protection mechanism of user files. 12

OR

Writes short notes on any two: 12

(i) Database Management System

(ii) Structured sequential file

(iii) Multimedia documents

11 Explain any two Operating Systems: 6
(a) Linux (b) Unix (c) Windows 7

OR

Writes short notes on any two: 12

(i) Message Passing

(ii) Remote Procedure call

(iii) Parallel Processing