B.C.A. (Part-II) EXAMINATION – 2018

(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 do you mean by the Database Management System?

   (ii) Explain Direct Memory Access buffering.

   (iii) Write different between serial processing and batch processing.

   (iv) Write any two function of Operating System.

   (v) How Operating System control I/O management.

   (vi) What do you understanding by client-server structure of Operating System?

   (vii) Define FCFS.

   (viii) Write the definition of program.

   (ix) What is "Scheduler" ?

   (x) Write about Turnaround Time (TAT)

Part – II

Attempt all questions. Each question carries 4 marks.

2. What is Process? Describe five state of process. Also illustrate diagram. 4

3. Write in brief- 4

   (a) Long term Scheduler

   (b) Short term Scheduler

   (c) Medium term Scheduler

4. What is the different between non-preemptive and preemptive scheduling? 4

5. Explain the "Process Synchronization" in brief. 4

6. What do you mean by Semaphore? Discuss. 4

Part – III

7. What do you mean by Multi-processor solution [bakery solution]? Describe all points with complete example. 12

OR

What is Critical Selection problem? Also describe all possible solution of critical section problem. 12

8. What is Thread? Write in details about life cycle of Thread with Diagram. 12

OR

Writer in detail "Banker's Algorithm". Also give an example. 12

9 Differentiate Single Instance Resource Type and Multi Instance Resource Type. Explain method of deadlock recovery in brief. 12

OR

Explain in detail partition selection algorithm strategies. 12

10 Write in details about “paging” with examples. 12

OR

What is “Thrashing”? Write causes of thrashing. Give two preventions also. 12

11 Discuss the “Directory Implementation”. Also describe its two methods. 12

OR

Writes short notes on: 12

(i) Message Passing

(ii) Remote Procedure call

(iii) Encryption