

This question paper contains 2 printed pages.

B.C.A. (Part - II)

Roll No. \_\_\_\_\_

233

Ope. Sys.

**B.C.A. (PART II) EXAMINATION - 2018**  
**(Faculty of Science)**  
**(Three-year Scheme of 10 + 2 + 3 Pattern)**  
**Paper - 233**  
**OPERATING SYSTEMS**

**Time allowed : Three Hours**

**Maximum Marks : 100**

**PART - I: Each question is of 2 marks. Words limit for the answers is 40 words.**

**PART - II: Each question is of 4 marks. Words limit for the answers is 80 words.**

**PART - III: Each question is of 12 marks.**

**PART - I**

1. Give short answers to the following- [10 x 2 = 20]
- (a) What do you mean by Database Management System?
  - (b) Explain Direct Memory Access Buffering.
  - (c) Write difference between Serial Processing and Batch Processing.
  - (d) Write any two functions of operating system.
  - (e) How operating system control I/O management?
  - (f) What do you understand by Client-Server structure of operating system?
  - (g) Define FCFS.
  - (h) Write the definition of Program.
  - (i) What is "Scheduler" ?
  - (j) Write about Turn Around Time [TAT].

**PART - II**

2. What is a Process? Describe five state of process. Also illustrate diagram. [4]
3. Write in brief- [1½+1¼+1¼] = [4]
  - (i) Long Term Scheduler
  - (ii) Short Term Scheduler
  - (iii) Medium Term Scheduler
4. What is the difference between non-preemptive and preemptive scheduling? (Min. 3 differences) [2x2] = [4]
5. Explain "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 [Bak-erry solution]? Describe all points with complete example. [12]

**OR**

What is Critical Section Problem? Also describe all possible solutions of Critical Section Problem.

8. What is Thread? Write in detail about life cycle of Thread with Diagram [12]

**OR**

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

9. Differentiate Single Instance Resource type and Multiple Instance Resource Type. Explain method of Deadlock Recovery in brief. [12]

**OR**

Explain in detail Partition Selection Algorithm Strategies

10. Write in detail about "Paging" with examples. [12]

**OR**

What is "Thrashing"? Write causes of Thrashing. Give two preventions also.

11. Discuss the "Directory Implementation". Also describe its two methods. [12]

**OR**

Write short notes on-

- (a) Remote Procedure call
- (b) Message Passing
- (c) Encryptions
- (d) Parallel Processing [Any Two]