Roll No......................　　　　　　　　**Total No. of Sections　：03**

　　　　　　　　　　　　　　　　　Total No. of Printed Pages ：03

Code No. : C-395

Annual Examination - 2018

BCA Part - III

BCA - 303

OPERATING SYSTEM

Max.Marks : 100

Time : 3 Hrs.　　　　　　　　　　　　　　　**Min.Marks : 40**

Note : Section 'A', containing 10 very short-answer-type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

Section - 'A'

Answer the following very short-answer-type questions in one or two sentences :　　　　　　　　**(2 × 10=20)**

Q.1　What do you understand by the term MULTI PROCESSOR?

Q.2　What is PROCESS?

Q.3　What is BATCH OPERATING SYSTEM?

Q.4　What is function of PCB?

Q.5　Define CACHE MEMORY.

Q.6　What do you mean by FCFS?

Q.7　What is directory? How is it different from a file?

Q.8　What is function of DEVICE DRIVER?

Q.9　What do you mean by MUTUAL EXCLUSION?

Q.10　What are the methods used for handling Deadlocks?

P.T.O.

Section - 'B'

Answer the following short-answer-type questions with word limit 150-200 :   **(6 5=30)**

Q.1   Write a note on Time Sharing System.

OR

What do you mean by the term OPERATING SYSTEM? Discuss main functions of operating system.

Q.2   Discuss process state and information stored in PCB.

OR

Consider following set of jobs with CPU burst time (in milliseconds).

$$P_1 \qquad 6$$
$$P_2 \qquad 8$$
$$P_3 \qquad 7$$
$$P_4 \qquad 3$$

(i) Using SJF (Shortest Job First) scheduling find average waiting time.

(ii) Also find the average waiting time, if they arrive in order
        P_1, P_2, P_3, P_4

Q.3   Comment on Paging.

OR

Write a note on Compaction.

Q.4   Write a note on file types.

OR

Explain Contiguous Allocation.

Q.5   Discuss the conditions which are necessary for deadlock formation.

OR

Write a note on Deadlock Detection.

Section - 'C'

Answer the following long-answer-type questions with word limit 300-350 :   **(10 5=50)**

Q.1   Define Real Time Operating System. Explain Process Management, I/O Management in Real Time Operating System.

OR

Describe Multiprogramming. What is Multiprocessing?

Q.2   Explain Process Scheduling. State objective of long term, short term & medium term Scheduler.

OR

Differentiate between SJF & FCFS.

Q.3   What is the difference between main memory and virtual memory? Explain.

OR

Explain Swapping and Fragmentation.

Q.4   Discuss the methods of File Allocation.

OR

Discuss Symbolic and Disk Based File Systems.

Q.5   Explain Deadlock prevention.

OR

Comment on Resource Allocation Graph and Deadlock Avoidance.

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