# PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
## BSc DEGREE EXAMINATION DECEMBER 2018
(Fifth Semester)

Branch - **INFORMATION TECHNOLOGY**

## OPERATING SYSTEM

Time : Three Hours                                                   Maximum : 75 Marks

### SECTION-A (20 Marks)
Answer **ALL** questions
**ALL** questions carry **EQUAL** marks          ( 1 0 x 2 = 20)

1    What is the function of CPU Scheduler?
2    What is a system resource-allocation graph?
3    Define Segmentation.
4    How optimal page replacement algorithm works?
5    Define seek time and rotational latency in disk scheduling.
6    What are the four main object types defined by the Linux VFS?
7    What is the difference between break and continue command?
8    List the low-level functions used to access the device drivers, by the system calls.
9    What is the use of difftime function?
10    What is termios?

### SECTION - B (25 Marks)
Answer **ALL** Questions
**ALL** Questions Carry⁷ **EQUAL** Marks ( 5 x 5 = 25)

11  a Expand SJF and describe it.
                         OR
    b Explain the possible ways to recover from the deadlock.

12  a Discuss on basic method for implementing paging.
                         OR
    b Write a brief account on LRU page replacement algorithm.

13  a How FCFS scheduling algorithm works? Explain.
                         OR
    b Explain briefly in what way indexed allocation of disk space differ linked
       allocation.

14  a Give a brief account on directory functions.
                         OR
    b Discuss on Linux File Structure.

15  a Elaborate on environment variables and its uses.
                         OR
    b Explain how the input and output modes in the termios structure are
       manipulated.

### SECTION - C (30 Marks)
Answer any **THREE** Questions
**ALL** Questions Carry **EQUAL** Marks ( 3 x 1 0 = 30)

16    How deadlock is prevented? Explain it briefly.

17    Discuss about Segmentation with paging.

18    Explain the structures and operations used to implement file-system operations.

1A                    Tnmit anH OiitTMit ɪihrpirv functions used in Linux.