PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BCA DEGREE EXAMINATION DECEMBER 2019
(Third Semester)

Branch - COMPUTER APPLICATIONS

LINUX PROGRAMMING

Time: Three Hours   Maximum: 75 Marks

SECTION-A (IQ Marks!
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 1 = 10)

1   Which command is used to set limits on file size?
     (i)   fsize   (ii)   flimit
     (iii) ulimit   (iv)   usize

2   Which one of the following is not a valid shell variable?
     (i) _san   (ii)   san_2
     (iii) _san_2   (iv)   2 san

3   What command is used to remove files?
     (i) rm   (ii)   dm
     (iii) delete   (iv)   erase

4   Which one provide command interpreter environment?
     (i) kernel   (ii)   shell
     (iii) CPU   (iv)   Hardware

5   The signal sent to a process when the Ctrl-C key is presses is_____ .
     (i) KILL   (ii)   TSTP
     (iii) Term   (iv)   INT

6   Signals are identified by_____ .
     (i) Signal identifiers   (ii)   Signal handlers
     (iii) Signal actions   (iv)   Signal name

7   What is interprocess communication?
     (i)   communication within the process
     (ii) communication between two processes
     (iii) communication between two threads of same process
     (iv) communication between two threads of different process

8   Message queues are created in   .
     (i) User space   (ii)   Kernel space
     (iii) User space & kernel space (iv)   Admin space

9   Which one of the following is not system VIPC?
     (i) Shared memory   (ii)   Semaphores
     (iii) FIFO   (iv)   Message Queues

10   Private data that is used by a single-processor, then shared data are used by

     (i) single processor   (ii) multi processor
     (iii) single tasking   (iv) multi tasking

Cont...

SECTION - B *(25* Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain about the file handling utilities in LINUX. Give examples.
OR
   b Summarize on the concept of shell meta characters with example.

12 a Illustrate with examples on the concept of fchmod and fchown functions.
OR ,
   b Explain on the concept of scanning directories with example.

13 a Compare thread and processes with example.
OR
   b Narrate on signal generation and signal handling.

14 a Explain about IPC between processes on different systems.
OR
   b Sketch about APIs for message queues.

15 a Summarize on API for shared memory with example.
OR
   b Explain about Sbtcokopt and fcntl system. Give example.

SECTION -C (40 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 8 = 40)

16 a Elucidate on Pipes and redirections with example.
OR
   b Justify with examples on the concept of sed and awk commands.

17 a Comprehend about I/O opertions in LINUX. Give examples.
OR
   b Elucidate on creating, removing and changing directories with example.

18 a Analyze on environment list and variables with examples.
OR
   b Highlight in detail on signal functions with examples.

19 a Discuss in detail on creating of IPC between related processes using FIFO.
OR
   b Elucidate in detail on semaphores with example.

20 a Discuss on client - server model with a neat diagram.
OR
   b Compare various IPC mechanisms with example.