22SSP642

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc(SS) DEGREE EXAMINATION DECEMBER 2025
(Sixth Semester)

Branch – **SOFTWARE SYSTEMS (five years Integrated)**

OPEN-SOURCE TECHNOLOGIES

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 What is GNU?
(i) Greek Needed Unix (ii) General Unix
(iii) GNU's Not Unix (iv) General Noble Unix

2 Which loop command is used to iterate over a list of items?
(i) while (ii) until
(iii) for (iv) select

3 Which keeps state information about the use of I/O components?
(i) Disk (ii) Kernel
(iii) CPU (iv) Shell

4 Which system call creates the new process?
(i) fork (ii) start
(iii) create (iv) new

5 What is Inter-Process Communication (IPC)?
i) Allows processes to communicate and synchronize their actions
ii) Allows processes to only communicate without synchronizing
iii) Allows processes to only synchronize without communicating
iv) Communication within the same process

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Write about basic commands available in Unix.
OR
b Describe the following commands. i)head ii)tail.

7 a Illustrate the command which is used to create special file?
OR
b Explain decision making statements in Unix with example shell script.

8 a Describe the file system architecture with neat diagram.
OR
b Elucidate the scenarios of buffer retrieval with example.

Cont...

9 a Discuss about the Daemon process in detail.

OR

b Analyze various process states with neat diagram.

10 a Discuss about the IPC using pipes

OR

b State the concept of Demand paging in detail.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a Discuss about the command which will change permission of the file.

OR

b Elucidate about directory and file commands in Unix.

12 a Describe the command line arguments with example program.

OR

b Explain the file system calls with example program.

13 a Summarize Kernel architecture with neat diagram.

OR

b Elucidate the redirection commands with example.

14 a What are signals? Discuss about various signals in Unix.

OR

b Describe about the state transition diagram in Unix with neat diagram.

15 a Explain about IPC using shared memory.

OR

b Analyze the concept of Page stealer & page faults.

Z-Z-Z END