SM – 429

IV Semester B.A./B.Sc. Examination, May/June 2018
(CBCS) (Semester Scheme) (F + R) (2015-16 and Onwards)
COMPUTER SCIENCE – IV
Operating System and Unix

Time : 3 Hours Max. Marks : 70

***Instruction** : Answer **all** the Sections.*

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks. **(10×2=20)**

1) What is spooling ?
2) What is semaphore ?
3) What are the necessary conditions for deadlock ?
4) What is dynamic linking ?
5) What is bit-vector ?
6) What is paging ?
7) What is a shell ? Name the types of shell.
8) What are read-only variables ? Give example.
9) What is the use of expr command ? Give example.
10) What is the use of fork () function in unix ?
11) Explain nohup command.
12) Write the syntax of if-else-if with an example.

SECTION – B

II. Answer **any five** questions. **Each** question carries **ten** marks. **(5×10=50)**

13) a) What are the functions of operating system ? Explain. **5**
b) What is a scheduler ? Explain the different types of schedulers. **5**

14) a) Explain Shortest-Job-First-Scheduling (SJF) algorithm with example. **5**
b) Write a short note on swapping. **5**

15) a) Explain deadlock avoidance with an example. **5**
b) Briefly explain segmentation. **5**

P.T.O.

16) a) Briefly explain file protection. 5

b) Consider the track request in disk queue [98, 183, 37, 122, 14, 124, 65, 67], head starts at position 53. Explain and compute the total head movement using SSTF. 5

17) a) Explain salient features of unix. 5

b) Explain filter commands. 5

18) a) Explain the types of process used in unix with examples.

b) Explain different file related commands in unix with syntax and example. (4+6)

19) a) Explain different variable types in unix.

b) Write a shell script to reverse a given number and check whether it is palindrome or not. (4+6)

20) a) Explain the different looping statements in unix.

b) Write a shell script to count the number of vowels in a given string. (5+5)
