Y—474—2019

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

(CBCS Pattern)

COMPUTER SCIENCE

Paper-IV

(Operating System)

(MCQ + Theory)

(Saturday, 14-12-2019)   **Time : 2.00 p.m. to 4.00 p.m.**

Time— Two Hours   *Maximum Marks—40*

N.B. :— (i)   Attempt *All* questions.

(ii) Assume suitable data, if necessary.

(MCQ)

1.   Select the *correct* alternative :   10

(i)   What is operating system ?

(a)   Collection of programs that manages hardware resources.

(b)   System service provider to the application programs

(c)   Link to Interface the hardware and application program.

(d)   All of the above

(ii)   To access the services of operating system the interface is provided by :

(a)   System calls   (b)   API

(c)   Library   (d)   Assembly Instructions

P.T.O.

(*iii*) Thread processor affinity is a set of :

    (*a*) Processes   (*b*) Processors

    (*c*) Programs   (*d*) Application

(*iv*) ....state indicates that the process is waiting to be assigned to a processor.

    (*a*) Ready   (*b*) Waiting

    (*c*) Now   (*d*) Running

(*v*) The main function of command interpreter is :

    (*a*) To get and execute next user specified command

    (*b*) To private interface between the API and application program

    (*c*) To handle the files in operating system

    (*d*) None of the above

(*vi*) DRAM stands for ....

    (*a*) Data random access memory

    (*b*) Dynamic random access memory

    (*c*) Double register access memory

    (*d*) Dynamic register access memory

(*vii*) ....Interface serves as the link to system calls mode available by operating system.

    (*a*) Graphical user   (*b*) Command line

    (*c*) System calls   (*d*) Program

(*viii*) Which of the following is not a real time operating system ?

    (*a*) V_x Works   (*b*) Windows CE

    (*c*) RT Linux   (*d*) Palmos

(*ix*) In paging every address generated by CPU is divided into two parts one .... and other is page off set.

    (*a*) page ID   (*b*) process offset

    (*c*) process ID   (*d*) page No.

(*x*) Fork () system call is used to....................... .

    (*a*) Create new process   (*b*) Execute process

    (*c*) Kill process   (*d*) Change process state

(Theory)

2. (*a*) Explain computer system organization.   5

    (*b*) Explain memory management.   5

Or

    (*c*) Explain operating system operations.   5

    (*d*) Explain virtual machines in detail.   5

3. (*a*) Explain operating system services in details.   5

    (*b*) Explain Multithreading models.   5

Or

    (*c*) Explain virtual memory.   5

    (*d*) Explain implementation of Access control.   5

4. (*a*) Explain Interprocess communication.   5

    (*b*) Explain protection in operating system.   5

Or

    (*c*) Explain contiguous memory allocation.   5

    (*d*) Explain file sharing protections.   5