(2)

    (c) What is Real time operating system?   2

    (d) Differentiate between ++a and a++.   2

6. (a) What is 'size of' operator?   2

    (b) Write the statement using conditional operator—

        if (a > b)

            x = a;

        else

            x = b;   2

    (c) Write an algorithm for disk scheduling.   6

7. Write a C Program to print fibonacci series along with the sum of the series.   10

8. Write a C Program to find out factorial of any number.   10

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2013

COMPUTER SCIENCE (General)

Fourth Paper

Full Marks : 50   Time : Two Hours

The figures in the margin indicate full marks.

        Answer any *five* questions :   5×10=50

2. (a) What is Round Robin Scheduling?   2

    (b) What is deadlock?   2

    (c) Describe four ways to prevent deadlock by observing the condition required for deadlock.   6

2. Write a C program to implement stack.   10

3. Write a C program to print the series the sum of the series—

$$1 + x/1! + x^2/2! + x^3/3! + ...$$ 10

4. (a) Define getchar ( ) & putchar ( ).   3

    (b) Explain with an example conditional operator.   4

    (c) Difference between % C & % S and % U & % X.   3

5. (a) What is demand paging?   3

    (b) In C what is difference between static and global variable.   3

P.T.O.

2014

COMPUTER SCIENCE (General)

Fourth Paper

Full Marks : 50   Time : Two Hours

The figures in the margin indicate full marks.

Answer *five* questions, from the following.

10×5=50

1. Write a program to add first n odd numbers using

   (i) for loop

   (ii) while loop.   2½×2=5

   Hence explain the difference of execution of 'for loop' and 'while loop'.   3

   Modify the same program with do while loop.   2

2. (i) Explain the use of call by 'value' and call by 'reference' with programming code in C.

   (ii) Explain with example the unary and binary operators in C.   5+5=10

3. (i) What is address of a variable ? What is 'pointer' and what is 'pointer-to-pointer' ?

P.T.O.

(ii) Write a C program to access the elements of an array (two dimensional) using pointer variable.

(iii) What is void function ?   (1+1+1)+5+2=10

4. (i) What are the functions of an operating system ?

(ii) Do you think of a computer system without an OS ? Justify.

Explain the terms 'multitasking', 'multiuser' and 'time sharing'.

(iii) Compare the features of windows and unix operating system.   2+2+3+3=10

5. (i) What do you mean by CPU scheduling ?

Compare the advantages and disadvantages of shortest job first and round-robin scheduling.

(ii) What is a Semaphore Variable ? What do you mean by 'Critical Region' ?

Explain how a Critical Region problem can he solved with semaphore variable.   (2+3)+(1+1+3)=10

6. (i) What is 'Deadlock' situation ?

(ii) Write down the conditions of a deadlock situation.

(iii) How deadlock can he prevented ?   2+6+2=10

7. Write short notes on (any *two*) :   5×2=10

(i) Multiprogramming.

(ii) Page replacement algorithms FIFO and NRU.

(iii) Virtual Memory.

(iv) Cache Memory.

———————

6. Write short notes on (any *two*) :   5×2=10

    (i) Resource allocation Graph.

    (ii) Demand paging.

    (iii) Pointer in C.

    (iv) Structure and Union in C.

7. (a) Discuss different type of if-then-else statement using C code.

    (b) What is multiway branching ? Explain with example.   6+4=10

2015

COMPUTER SCIENCE (General)

Fourth Paper

Full Marks : 50   Time : Two Hours

The figures in the margin indicate full marks.

            Answer any *five* questions.   10×5=50

1. Discuss operator precedence and associativity in C. What is operator ?   8+2=10

2. What is keyword ? What is token ? Discuss different type of C token give example.   2+2+4+2=10

3. Write a C Program to print first 10 fibonacci number.   10

4. What is operating system ? Give example. What is process ? Discuss different state of a processes.   2+1+2+5=10

5. (a) What is CPU scheduling technique ?

    (b) Discuss different type of CPU scheduling technique with example.

    (c) What do you understand about page replacement techniques ?   2+5+3=10

                                  P.T.O.