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C – 1374

Reg. No. : .....

Name : .....

Sixth Semester B.Sc. Degree Examination, April 2017
First Degree Programme under CBCSS
PHYSICS
Core Course – XII
PY 1644 : Computer Science
(2013 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions, **each** carries **1** mark.

1. Convert the following binary numbers into its decimal equivalent.
   i) 101101
   ii) 110111
2. What do you understand by universal gate ?
3. What is a Flip flop ?
4. What are super computers ?
5. What is SIMM ?
6. What is the function of scanners ?
7. Write a note on UNIX operating system.
8. What is the significance of declaring a constant unsigned in C programming ?
9. What is the function of 'return' statement in C language ?
10. How can we make sure that the Newton-Raphson method converges faster ?

(10×1=10 Marks)

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SECTION – B

Answer **any eight**, **each** carries **2** marks.

11. What is the advantage of Hexdecimal number system over BCD system ?
12. What is a tristate logic gate ? Explain.
13. What is the advantage of JK flip-flop over SR flip-flop ?
14. What is an operating system ?
15. Explain the concept of cache memory.
16. What is the principle of storing digital information on a hard disk ?
17. What is a graphical accelerator ?
18. Describe the five fundamental data types that C compiler supports.
19. What are standard input-output header files in C programming ?
20. Give the general form of if-else statement in C programming.
21. Write the general format for the functions used to draw the circle and ellipse in C graphics.
22. Distinguish between getchar and scanf functions in C language. **(8×2=16 Marks)**

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SECTION – C

Answer **any six**, **each** carries **4** marks.

23. With an example show how 2's complement can be used to represent the negative of a binary number.
24. What are logic gates ? Explain AND and OR gates with their truth tables.
25. Explain a binary adder-subtracter circuit with sketches.
26. With truth table explain an SR flip-flop.

27. What are the two classes of memory ? Give examples.

28. Explain the organization of bit cells in a memory chip.

29. Describe the structure of C program.

30. What are the rules for scanf function ?

31. What is a pointer ? How is it initialized ? **(6×4=24 Marks)**

SECTION – D

Answer **any two**, **each** carries **15** marks.

32. Using Karnaugh map realize a full adder circuit.

33. With block diagram explain the basic functional units of a computer.

34. Describe the construction and working of a
    i) SRAM
    ii) DRAM.

35. i) Write a C program to generate Fibnoacci series using for loop. **8**
    ii) With illustrations explain how to find the root of a curve f(x) using Newton-Raphson method. **7**

(15×2=30 Marks)

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