Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 21466

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

First Semester

Civil Engineering

GE 2112/CS 16/080230001 — FUNDAMENTALS OF COMPUTING AND PROGRAMMING

(Common to all Branches)

(Regulation 2008)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Distinguish between analog and digital computer.

2.   Find the decimal equivalent of the binary number $(10110011)_2$.

3.   What are the types of web browsers?

4.   List some of the internet applications.

5.   What is an algorithm?

6.   What are the advantages of flowchart?

7.   Name the basic data types used in C.

8.   What are the various I/O functions in C?

9.   What is array?

10. How is a pointer variable initialized?

PART B — (5 × 16 = 80 marks)

11. (a) (i)   Explain the various generations of computers.   (10)

          (ii) Briefly explain the characteristics of a computer.   (6)

Or

(b) (i) Draw the block diagram of a computer and explain. (10)

(ii) Convert the decimal number 698.125 into the binary and octal equivalent. (6)

12. (a) (i) Explain about the types of software. (10)

(ii) Write about URL. (6)

Or

(b) (i) Discuss the software development steps. (10)

(ii) Explain the common types of internet connections. (6)

13. (a) (i) Explain the features of Microsoft Word. (10)

(ii) Draw a flowchart to find the largest of three numbers. (6)

Or

(b) (i) Discuss the features of Microsoft Excel. (8)

(ii) What is pseudo code? Explain its guidelines and benefits. (8)

14. (a) (i) Explain the different types of operators available in C. (8)

(ii) Write a C program to evaluate the following series. (8)

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \ldots + \frac{x^n}{n!}.$$

Or

(b) (i) What are constants? Explain the various types of constants in C. (8)

(ii) Write a C program to find the number of and sum of all integers greater than 100 and less than 200 that are divisible by 7. (8)

15. (a) (i) Write a C program to find sum of the diagonal elements of a matrix. (10)

(ii) Write a C program to count the number of words in a string using pointers. (6)

Or

(b) (i) Explain the various storage classes in C. (8)

(ii) Write a C program to exchange the values of two variables using function. (8)