Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 97092

B.E./B.Tech. DEGREE EXAMINATION, DECEMBER 2015/JANUARY 2016

First Semester

Civil Engineering

CS 1101 — FUNDAMENTALS OF COMPUTING AND PROGRAMMING

(Common to Mechanical Engineering)

(Regulation 2008)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Difference between digital and analog quantities?

2.   Do AND operation.
     101101
     011011

3.   Convert Hexadecimal number C9D into decimal number.

4.   What are the advantages of binary representation of data?

5.   Subtract 1010 from 1000 using 2's complement method.

6.   What are device drivers?

7.   Define DSL and give its classification.

8.   What are the Common types of Networks?

9.   What are identifiers?

10. Compare scanf and printf function.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe the components of computer system in detail. (6)

    (ii) How a source code is translate to executable code. Explain the three language translators along with linker and loader module. Give its pros and cons. (10)

Or

    (b) Describe CPU and its interaction with other units. State the function of various CPU register and its typical organization. (16)

12. (a) (i) What is Gray code? Discuss in detail about:

        (1) Binary to Gray code conversion.

        (2) Gray-to-Binary code conversion (10)

    (ii) Convert the $37.8125_{(10)}$ decimal number to its binary number. (3)

    (iii) Add the BCD Numbers 00010110 and 00010101. (3)

Or

    (b) (i) Discuss in detail about arithmetic operations with signed numbers using examples. (10)

    (ii) Express +39 and −39 in Sign-Magnitude Form and 2's complement Form. (6)

13. (a) Write brief note on the following:

    (i) Optical input devices. (5)

    (ii) Application software (5)

    (iii) Storage devices. (6)

Or

    (b) Write brief note on the following:

    (i) Memory devices (5)

    (ii) Audio visual input devices (5)

    (iii) Graphics and multimedia (6)

14. (a) Name some of the basic services provided by the internet. Explain how each of these services helps the internet users. (16)

Or

    (b) Explain in detail about computer network basics and structure and its types. (16)

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15. (a) (i) Write C program to find a Fibonacci serious for a given number. (8)

(ii) Write C program to manipulate addition of two matrices. (8)

Or

(b) (i) What is different between structures and unions? (3)

(ii) Discuss in detail about looping (While, Do – while, for) concepts with suitable example. (13)

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