(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 199225 Roll No. | | | | | | | | | |

B.TECH.

Theory Examination (Semester-II) 2015-16

COMPUTER SYSTEM & PROGRAMMING IN C

Time : 3 Hours *Max. Marks : 100*

Note: Attempt questions from all sections as per directions.

Section-A

Attempt all parts of this section. Answer in brief. (2×10 = 20)

1. (a) Give the layout of a typical C program.

   (b) What do you mean by Algorithm?

   (c) What are the various components of Operating system?

   (d) Convert the octal number 2354 to equivalent hexadecimal number.

   (e) Write a short note on Android Operating system.

(f) Give the architecture of UNIX.

(g) Differentiate between RAM and ROM.

(h) What do you mean by Software?

(i) Write a short note on structured programming.

(j) Define storage class in 'C'.

Section-B

2. Attempt any five questions from this section. (10×5 = 50)

(a) What is special about void pointer?

(b) What do you mean by parameter passing mechanism?

(c) Write a program in C to print the following pattern:

```
A B C D E F G F E D C B A
A B C D E F     F E D C B A
A B C D E         E D C B A
A B C D             D C B A
A B C                 C B A
A B                     B A
A                         A
```


(d) Write a program to check whether the given character is in upper case, lower case or non alphabetic character.

(e) What are the disadvantages of if-else-if ladder?

(f) What are the principles of recursion? Explain in detail.

(g) Describe the relation between structures and pointers.

(h) What are the enumerated data types? Explain in detail.

Section-C

Attempt any two questions from this section. (15×2 = 30)

3. What are pre-processor directives? Explain any three of them.

4. (i) Explain loading and linking of a program in detail.

   (ii) Write a program in 'C that will read a positive number from the keyboard and print it in reverse order.

   Ex: 24578 output: 87542

5. Suppose a file contains students records with each record containing name and age of a student. Write a 'C' program to read these records and display them in sorted order by name.