

Computer Systems and Programming In C (RCS-201)

Unit 1 Question Bank

From 2011-2012

Q.1. What is an Algorithm? What are different types of algorithm? Write its properties. Find largest of 3 numbers.

Q.2. Draw neat and clean diagram of digital computer.

Q.3. What is Operating system? Write about multiprogramming and multithreading.

Q.4 Perform the following:

$$(786)_{10} = ()_2$$

$$(10101.1101)_2 = ()_8$$

$$(161)_8 = ()_{10}$$

$$(11101001)_2 = ()_{16}$$

Q.5. What are Symbols used in flowchart? Draw flowchart of factorial of a number. Write about

Generation of computers along with advantages and disadvantages?

Q.6. What are goals of operating system?

Q.7. What do you mean by System software and application software?

Q.8. Write difference between compiler and interpreter.

Q.9. Differentiate between:

- a. High and low level language.
- b. Compiler and interpreter.
- c. Logical and runtime error.
- d. Algorithm and flowchart.

Q.10. Define Operating system. Name of 4 OS. Write its features.

Q.11. For a digital computer explain the following:

- a. Cache memory.
- b. Control unit.
- c. ALU.

Q.12. Convert:

$$a. (999)_{10} = (?)_{16}$$

$$b. (11011101999)_2 = (?)_8$$

$$c. (786)_{10} = (?)_{BCD}$$

d. Two's complement of 1100100. And write the value in decimal.

From 2012-2013

- Q.1. Define CPU. Explain its major components.
- Q.2. What do you mean by application software? Give any two examples.
- Q.3. What is an operating system? List the various types of OS.
- Q.4. What do you mean by algorithm? Discuss characteristics of algorithm.
- Q.5. What is secondary memory? Give any two examples.
- Q.6. How plotter is different from printer.
- Q.7. Convert the following:
a) $(1110101.101)_2 = (?)_8$
b) $(5454.11)_6 = (?)_{10}$
c) $(CD1B)_{16} = (?)_8$
d) $(254.5)_{10} = (?)_2$
- Q.8. Write about various types of programming languages and their characteristics.
- Q.9. Convert the following:
 $(D123.AB)_{16} = (?)_{10}$
 $(-76)_8 = (?)_{10}$
 $(AB15)_{16} + (EF5)_{16} = (?)_{10}$
 $(642)_8 = (?)_{10}$
- Q.10. Draw neat diagram of digital computer.

From 2013-14

- Q.1. Write in brief about the components of central processing unit of a computer.
- Q.2. Make the hierarchy of different memories available in a computer.
- Q.3. Write difference between compiler and interpreter.
- Q.4. Define operating system with its different functions.
- Q.5. Convert the following:
a) $(FA1.2C)_{16} = (?)_8$
b) $(756)_{10} = (?)_4$
c) $(11011.011)_2 = (?)_{16}$
d) $(574.32)_8 = (?)_2$
- Q.6. Define algorithm. Make flowchart to find prime numbers between 101 and 999.

From 2014 -15

- Q.1. What are the classification of computer? Explain any two in detail.
- Q.2. Describe the functionalities of an operating system.

- Q.3. Convert the hexa decimal number $(A9C5.DB4)_{16}$ to octal number.
- Q.4. Draw a flowchart to find the sum and reverse of a given number.
- Q.5. Discuss various functionalities of compiler, linker and loader.
- Q.6. Describe about the basic components of computer with a neat block diagram.
- Q.7. Draw the memory hierarchical structure of a computer system. Explain each memory unit in brief.
- Q.8. What is an operating system? Describe the functionalities of operating system.
- Q.9. Describe compiler, interpreter, assembler? Write the names of compiler that are used in C programming.
- Q.10. What do you mean by algorithm? Explain the properties of algorithm?
- Q.11. Differentiate between high level and machine level language?
- Q.12. What is pseudo code? Differentiate between flowchart and algorithm with example.
- Q.13. Convert the following numbers into:
- $(11010.0110)_2 = (\dots)_{10}$
 - $(110101011.0110110)_2 = (\dots)_8$
 - $(2B6D)_{16} = (\dots)_2$
 - $(AB4F.C1)_{16} = (\dots)_{10}$
 - $(54)_6 = (\dots)_4$

From 2015 -16 (Even Sem.)(2 Marks each)

- What do you mean by Algorithm?
- What are various components of Operating System?
- Convert the octal number 2354 to hexadecimal number.
- Write short note on Android O.S.
- Give the architecture of UNIX.
- Differentiate between RAM and ROM
- What do you mean by Software?

From 2015 -16 (Odd Sem.)(2 Marks each)

- List five internal and external commands used in DOS Operating System.
- Give difference between android and windows O.S.
- Justify that operating system is a resource manager
- What is algorithm and its characteristics?
- Difference between Algorithm and flowchart
- Difference between Logical error and run time error.
- Difference between High level language and low level language.

From 2016 -17 (Odd Sem.)(2 Marks each)

- Q.1.a) What do you mean by Algorithm? Explain the characteristics of Algorithm.
- b) What is the difference between Pseudo code and flow chart?
- c) Draw the memory hierarchical structure of a computer system.
- d) What will be the output of following code?

```
void main()
{
    int a,b=6;
    printf("%d\t",a=b);
    printf("%d\t",a==b);
    printf("%d\t%d",a,b);
}
```

- e) Write short notes on high level language and low level languages.
- f) Write the five commands of LINUX with its architecture?

Q. 2 Describe about the basic components of a computer with a neat block diagram (3.5 Marks)

Q.3. Convert the following number into: (7 Marks)

$$(10101011101.011)_2 = (?)_{16}$$

$$(916.125)_{10} = (?)_4$$

$$(123)_{10} = (?)_2$$

$$(574.32)_8 = (?)_2$$

$$(1011.10)_2 = (?)_{10}$$