

**BE DEGREE EXAMINATIONS: APR / MAY 2014**

(Regulation 2007)

First Semester

**MECHANICAL ENGINEERING**

U07GE102 :Fundamentals of Computing

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Which of the following is application software?  
a) Database Management system      b) Image Editor  
c) Spreadsheets      d) All of these
2. The unit that performs the arithmetical and logical operations on the stored numbers is known as \_\_\_\_\_  
a) Arithmetic Logic Unit      b) Control Unit  
c) Memory Unit      d) Both a) and b)
3. Flow lines in a flowchart are used to connect:  
a) Two terminals      b) Two connec  
c) Mouse      d) Hard disk
4. What consists of instructions written as a string of 1s and 0s?  
a) Query Language      b) Assembly Language  
c) Machine language      d) None of these
5. Pick the correct output of the given program  
int main(void)  
{  
int i=5;  
printf("%d %d %d %d %d", i, i++, i++, i++, ++i);  
return 0;  
}  
a) Compiler-Time Error      b) 10 9 8 7 6  
c) 9 8 7 6 6      d) 10 8 7 6 6
6. An array is collection of \_\_\_\_\_  
a) Elements of different data type      b) Same data types  
c) both a) and b)      d) None of these

7. Which function is used to convert all alphabets strings into upper case?  
a) Strupr()      b) Strlwr()  
c) Strrev()      d) Strcmp()
8. Which is the odd one out for the following answer  
a) printf()      b) Auto  
c) Static      d) Extern
9. The size of the char is  
a) 1      b) 2  
c) 4      d) 8
10. Which format specifier is used to print the address of pointer variable  
a) %d      b) %ld  
c) %c      d) %u

**PART B (10 x 2 = 20 Marks)**

11. What are the steps involved in the process of booting?
12. How software is installed and uninstalled?
13. What are the advantages of using e-mail?
14. List some features of a good programming language.
15. What is the difference between a break and continue statement?
16. Why is the use of the goto statement generally discouraged?
17. How to declare an array?
18. What do you mean by recursive function?
19. How the pointers differ from variables in C?
20. What is union?

**PART C (5 x 14 = 70 Marks)**

21. a) Discuss in detail about classification computers.  
**(OR)**  
b) Discuss the various computer generation along with the key characteristics of the computers of each generation.
22. a) Explain the various types of problem solving techniques with examples.

**(OR)**

- b) Write short note on the following
- i) Repetition control structure (7)
  - ii) Selection control Structure (7)

23. a) Discuss in detail about various types of operators and expression used in C with suitable examples.

**(OR)**

- b) i) Explain in detail about looping statements used in C with suitable examples. (7)
- ii) Write a program to calculate bill for Internet browsing. The conditions are given below. (7)
- a) 1 Hour 20 Rs.
  - b) ½ Hour 30 Rs.
  - c) 2 Hours 40 Rs.

The owner should enter number of hours spent by customer.

24. a) What do you mean by call by value and reference? Explain the various types of functions used in C.

**(OR)**

- b) i) Discuss in detail about Storage classes used in C. (7)
- ii) Write a program in C to read the elements of matrix of the order upto 10 x 10 and transpose its elements. (7)

25. a) Define a structure with the following elements: Employee number, name, Salary, HRA, PF and Net salary of the employees (N numbers). Compute the Net salary of each Employee. Write a C program using structure to read, compute and display the details of each employee.

**(OR)**

- b) Discuss in detail about Dynamic Memory allocation with examples program.

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