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23/11
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Question Paper Code : 50648

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

First Semester

Mechanical Engineering

GE 6151 – COMPUTER PROGRAMMING

(Common to Mechanical Engineering, (Sandwich), Aeronautical Engineering, Agriculture Engineering, Automobile Engineering, Biomedical Engineering, Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Electronics and Instrumentation Engineering, Environmental Engineering, Geoinformatics Engineering, Industrial Engineering, Industrial Engineering and Management, Instrumentation and Control Engineering, Manufacturing Engineering, Marine Engineering, Materials Science and Engineering, Mechanical and Automation Engineering, Mechatronics Engineering, Medical Electronics Engineering, Metallurgical Engineering, Petrochemical Engineering, Production Engineering, Robotics and Automation Engineering, Biotechnology, Chemical Engineering, Chemical and Electrochemical Engineering, Fashion Technology, Food Technology, Handloom and Textile Technology, Industrial Biotechnology, Information Technology, Leather Technology, Petrochemical Technology, Petroleum Engineering, Pharmaceutical Technology, Plastic Technology, Polymer Technology, Rubber and Plastics Technology, Textile Chemistry, Textile Technology)
(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. Convert the given octal number 12570_8 into decimal number.
2. What is Flowchart ?
3. What is the difference between while loop and do while loop ?
4. What is the use of size of () operator ?



5. What are the features of array ?
6. Differentiate between Linear search and Binary search.
7. Distinguish between Call by value Call by reference.
8. What are the advantages of using pointers in a program ?
9. Define in C++. Define 'Structure' of C language. Give an example.
10. What storage classes are available in C language ?

PART – B

(5×16=80 Marks)

11. a) i) Explain in detail about the characteristics of computer. (6)
- ii) Describe in detail about the classification of computers with their features and limitations. (10)
- (OR)
- b) i) Give pseudocode algorithm and the flowchart to print the Fibonacci series of n terms. (8)
- ii) Write an algorithm and draw the flowchart to find the largest among three numbers. (8)
12. a) Explain the different types of operators available in C with example. (16)
- (OR)
- b) i) With an example program explain the various decision making statements available in C. (8)
- ii) Explain switch case statement and 'for' loop statement with suitable example. (8)
13. a) i) What is an array ? Write a C program to arrange the given 10 numbers in ascending order using one dimensional array. (8)
- ii) Write a C program to multiply two 3×3 matrices. (8)
- (OR)
- b) Write a C program to count the number of Vowels Consonants, Digits and Spaces in a given string. Discuss the algorithm for the same. (16)



14. a) Explain about the different parameter passing methods in functions with examples. (16)
- (OR)
- b) i) Write a C program to swap the content of two variables using pointers. (8)
- ii) Write a C program to read integers into an array and reversing them using pointers. (8)
15. a) Write a C program and algorithm to create mark sheet for students using structure. (16)
- (OR)
- b) Write algorithm and a C program using unions, to prepare the employee pay roll of a company. (16)