

Reg. No. \_\_\_\_\_ Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**FOURTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2017**

Course Code: **AE202**Course Name: **COMPUTER PROGRAMMING (AE)**

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer any 2 questions.*

1. a) Explain (i) Compilers (ii) Interpreters (iii) Loaders (iv) Linkers (6)  
b) Write down different logical, conditional and bitwise operators used in C with proper examples. (6)  
c) Compare identifiers and keywords. (3)
2. a) Compare switch and case statements with proper examples. (4)  
b) Write a C program to find the reverse of a number. (4)  
c) Write a C program to convert a decimal number into a binary number. (7)
3. a) Write a C program to print the series  $1^2+2^2+3^2+\dots$  upto a limit. (5)  
b) With proper examples, explain entry controlled and exit controlled loops. (5)  
c) Write a C program to find the largest of 3 numbers using *if-else*. (5)

**PART B***Answer any 2 questions.*

4. a) Write a C program to find the trace of a matrix. (6)  
b) Compare getchar() and scanf() in the case of strings. (4)  
c) Write a C program to implement linear search. (5)
5. a) Explain how a user defined function is constructed in C with an example. (4)  
b) Write a C program to calculate the standard deviation of 10 data using arrays. (3)  
c) Which are the input and output functions used in C for file handling. Write a program to read 5 numbers from a file and calculates the average and prints in another file. (8)
6. a) Write a C program to find the smallest number in an array (6)  
b) With proper examples, explain recursion. (4)  
c) Write a structure having the elements name, rollno, height and weight for 50 students and print the details of students having height >5.5 ft and weight >55. (5)

**PART C**

*Answer any 2 questions.*

7. a) Which of the following is a valid variable name in python and why  
(i) 12xyz (ii) break (iii)A-123 (iv) int-value (v) \_name (5)
- b) Write a python program to convert Celsius to Fahrenheit. (6)
- c) Why do we need functions? What are the advantages of using function (3)
- d) Write a python program to find the sum of digits of a number using functions (6)
8. a) What are lists? How can we access elements from a list? (5)
- b) Describe how exceptions are handled in python with examples. (10)
- c) Write a python program to find the factors of a number. (5)
9. a) Write a python program to make a simple calculator. (10)
- b) Write a python program to create a dictionary contains roll numbers and names of 5 students. Display the contents. (4)
- c) What is tuple in python? How can we create a tuple? List the advantages of tuple over lists. (6)

\*\*\*\*