

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech. Summer 2017 - 18 Examination**

**Semester: 2**  
**Subject Code: 03108101**  
**Subject Name: Fundamentals of Programming**

**Date: 22/05/2018**  
**Time: 02:00pm to 04:30pm**  
**Total Marks: 60**

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

**Q.1 Do as directed. (15)**

1. Which of the following operator is used to select a member of a structure variable  
 A) .(dot)                      B) ,(comma)                      C) :(colon)                      D) ;(semicolon)
2. printf() belongs to which library of c  
 A) stdlib.h                      B) stdout.h                      C) stdio.h                      D) stdoutput.h
3. Which of the following is used as a string termination character?  
 A) 0                                      B) \0                                      C) /0                                      D) None of these
4. Which are not looping structures?  
 A) For loop                      B) While loop                      C) Do...while loop                      D) if...else
5. Which data type allows storage of same data type?  
 A) Array                      B) Union                      C) Void                      D) both a and b
6. The ++ operator increments the operand value by 1, whereas, the -- operator decrements it by 1.  
**[True or False]**
7. The keywords cannot be used as variable names. **[True or False]**
8. Switch statement can have any number of case instances. **[True or False]**
9. Structure is collection of same data types. **[True or False]**
10. The function definition contains the code for a function. **[True or False]**
11. What is a Variable?
12. What is an Array?
13. Give the definition of "C Token".
14. Convert  $(6F2)_{16}$  to the octal number system.
15. Add and multiply the following Binary numbers without converting them to decimal.  
 $(1011)_2$  and  $(101)_2$ .

**Q.2 Answer the following questions. (Attempt any three) (15)**

- A) Explain flow chart with suitable example.
- B) List and explain fundamental data types of 'C' language.
- C) Explain entry control loop and exit control loop with example.
- D) What do you understand by recursive function? Explain with small example.

**Q.3 A) Discuss about various operators used in C language. (07)**

- B) Write a program in C for multiplication of two matrix. **(08)**

**OR**

- B) What is a Pointer? How it is declared? Write a C program to swap two integer variables using pointers. **(08)**

**Q.4 A) Define a Structure. How it is different from union? Write a C program to illustrate a structure. (07)****OR**

- A) Explain different file handling functions used in C language. **(07)**
- B) Explain following string manipulation functions. **(08)**

strcmp(), strlen(), strcat(), strstr()

Write a program to check whether a given string is palindrome or not.