

1E24

1E2406

B. Tech. II - Sem. (Main) Exam., May - 2019

ESC

2FY3 - 06 Programming for Problem Solving  
Common for all Branches

Time: 2 Hours

Maximum Marks: 80

*Instructions to Candidates:*

*Attempt all five questions from Part A, four questions out of six questions from Part B and two questions out of three from Part C.*

*Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.*

*Use of following supporting material is permitted during examination.  
(Mentioned in form No. 205)*

1. NIL

2. NIL

**PART - A**

**(Answer should be given up to 25 words only)**

**[5×2=10]**

**All questions are compulsory**

- Q.1 Write the difference between compiler and interpreter. [2]
- Q.2 What is type casting? [2]
- Q.3 Explain primary memory and secondary storage. [2]
- Q.4 Write the difference between random access and sequential access method. [2]
- Q.5 What is structure? Write syntax of structure declaration. [2]

[1E2406]

Page 1 of 3

[3880]

**PART - B**

**(Analytical/Problem solving questions)**

**Attempt any four questions**

**[4×10=40]**

Q.1 What is recursion? Write a program to find factorial of a given number using recursion. [10]

Q.2 Draw a block diagram of basic architecture of a computer system. [10]

Q.3 What do you mean by function? Also explain types of functions available in C. [10]

Q.4 Write a program to find the given number is palindrome or not. [10]

Q.5 Write a program to swap two numbers using call by value and call by reference method. http://www.rtuonline.com [10]

Q.6 Perform the following-

**[5×2=10]**

(a)  $9387_{(10)} = ?_{(16)}$

(b)  $A15C_{(16)} = ?_{(2)}$

(c)  $(10101)_2 - (01110)_2$

(d)  $(651.24)_{(8)} = ?_{(10)}$

(e)  $(111101011)_2 = ?_{(8)}$

**PART - C**

**(Descriptive/Analytical/Problem Solving/Design Questions)** [2×15=30]

**Attempt any two questions**

Q.1 What is array? Explain types of array with suitable example. [15]

Q.2 What do you understand by file handling? Explain various file handling functions used in C language. [15]

Q.3 What is looping? Explain types of loop available in C. Also write a program to check the input number is prime or not. [15]

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[1E2406]

Page 3 of 3

[3880]