Total No. of Questions : 8]

SEAT No. : [ ]

PF-4736

[Total No. of Pages : 3

[6625]-29

S.E. (Electronics/E&TC/Electronics & Computer/ E.Eng.-VLSI D&T/E.C-ACT)

OBJECT ORIENTED PROGRAMMING

(2019 Pattern) (Semester - IV) (204194)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Use of calculator is allowed.***
5) ***Assume suitable data if necessary.***

Q1) a) What are the rules for overloading operators? **[6]**

b) Write a program to overload '+' operator to concatenate two strings. **[6]**

c) Write down program to overload unary operators. **[6]**

OR

Q2) a) Explain Friend function with example. **[6]**

b) Explain the operator overloading. Also explain different steps for overloading operator. **[6]**

c) Write a program to overload post increment unary operator. **[6]**

Q3) a) What does inheritance mean in C++? Explain different forms of Inheritance? **[6]**

b) Explain the pure virtual function. State the rules for virtual function. **[6]**

c) Discuss the ways in which inheritance promotes software reuse, saves time during program development and helps prevent errors. **[5]**

OR

Q4) a) Explain the following terms with example **[6]**

i) Virtual base class

ii) Friend class

iii) Abstract class

P.T.O.

b) What is the ambiguity that arises in multiple inheritance? How it can be Overcome? Explain with example. **[6]**

c) Discuss the role of access specifiers in inheritance and show their visibility when they are inherited as public, private and protected. **[5]**

Q5) a) What are fstream, ifstream and ofstream? Illustrate with help of example. **[6]**

b) Explain class template using multiple parameters. Write a program in C++. **[6]**

c) Explain exception handling mechanism in C++. Write a program in C++ to handle divide by zero exception. **[6]**

OR

Q6) a) Write a C++ program involving a function template. **[6]**

b) Explain the following terms **[6]**

i) Throwing mechanism

ii) Catching mechanism

iii) Multiple catch statements

c) Explain name space with example. **[6]**

Q7) a) Explain the classes for file stream operations. **[6]**

b) What is file pointer? And explain following functions for manipulation of file pointers. **[6]**

i) seekg()

ii) seekp()

iii) tellg()

iv) tellp()

c) Write a program using the open ( ), eof ( ) andgetline ( ) functions to open and read file contents line by line. **[5]**

OR

103.157.122.163 09/06/2026 09:36:14 in-pnq-static-163-122-157-103 CEGP019671

Q8) a) Explain opening a file with constructor function and opening a file with open() function. **[6]**

b) Write a program using put() to write characters to a file until user enters a dollar sign. **[6]**

c) Explain error handling during file operation. **[5]**



CEGP019671 103.157.122.163 09/06/2026 09:36:14 in-pnq-static-163-122-157-103