EVENING

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Uni. Roll No. ....

Program: B.Tech. (Batch 2018 onward)
Semester: 4
Name of Subject: Object Oriented Programming using C++ and Data Structures
Subject Code: PCEC- 107
Paper ID: 16223

Time Allowed: 03 Hours Max. Marks: 60

NOTE:

1) Parts A and B are compulsory
2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
3) Any missing data may be assumed appropriately

Part – A [Marks: 02 each]

Q1.

   a) Discuss about the term encapsulation.
   b) Mention the significance of new and delete operator.
   c) Cite the need of creating initialize lists.
   d) List any two basic operations that can be performed on a data structure.
   e) Differentiate between base and derived class.
   f) Write a program in C++ to multiply any 3 numbers.

Part – B [Marks: 04 each]

Q2. Explain the role of the mentioned pointers: this, dangling, null.
Q3. Describe the working of constructors and destructors in detail.
Q4. Space complexity of an algorithm plays a vital role for its working. Justify
Q5. Write a program in C++ to demonstrate the concept of private inheritance.
Q6. Write a program to create cube( ) function using template.
Q7. With the help of relevant program, explain the concept of operator overloading.

Part – C [Marks: 12 each]

Q8. Explain any six features of object oriented programming.
                        OR
Explain in detail about memory leak and allocation failures.

Q9. Convert the following infix to postfix using a stack.
              [a + (b-c)] * [(d-e) / (f-g +h)]
                        OR
With the help of a relevant program, describe the concept of exception handling.
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