Code: 13A12301 **R13**

B.Tech II Year I Semester (R13) Supplementary Examinations June 2015

FILE STRUCTURES: AN OBJECT ORIENTED APPROACH

(Information Technology)

Time: 3 hours Max. Marks: 70

Part – A (Compulsory question)

1 Answer the following: (10 X 02 = 20 M)

(a) What is a constructor? What is the use of it?
(b) Write about the scope resolution operator.
(c) In what order destructors are called in inheritance.
(d) How function overloading gain the flexibility?
(e) Give the general form of template function.
(f) Give the definition of binary search tree.
(g) Define file structure.
(h) Differentiate between disk and tape.
(i) What is metadata? What is the name given to the place where metadata is stored in a file?
(j) List the reasons for data compression.

Part – B

(Answer all five units, 5 X 10 = 50 M)

UNIT - I

2 (a) How to create array of objects? Explain with an example.
(b) Give a brief note on the pointer.

(OR)

3 Explain in detail about static class members.

UNIT - II

4 (a) Can we overload a constructor? If so give an example.
(b) How to derive a class from multiple base classes?

(OR)

5 Explain the following:

(a) Copy constructor.
(b) Function overloading with default arguments.
(c) Function overloading and ambiguity.

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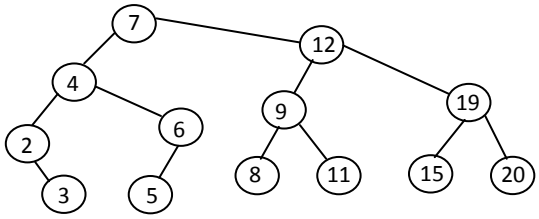
UNIT - III

6 (a) Differentiate early binding and late binding.

(b)



For the binary search tree given above, give the outcome after Inorder, preoder and postorder traversals.

(OR)

7 (a) Define virtual function. Write a program for calling a virtual function through a base class reference.

(b) What is a pure virtual function? Give the general form to declare it.

(c) Define abstract class.

UNIT - IV

8 (a) Describe the process of linking a *logical file* within a program to an actual *physical file* or device.

(b) Describe the purpose of object-oriented toolkit. Also explain its major problem.

(OR)

9 (a) Describe the buffering strategies for performance.

(b) In a block-addressable disk with 20,000 bytes/track and a subblock, interblock gap equivalent to 300 bytes/block, if we want to store a file containing 100-byte records, how many records can be stored per track if blocking factor is 10.

UNIT - V

10 (a) What is a field? Explain the four field structures.

(b) Give the description of methods in I/O buffer class hierarchy.

(OR)

11 Explain key sorting with an example. What are its advantages and disadvantages?

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