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| Seat No. | |
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B.C.S. (Part -II) (Semester -III) (New) (Revised)

Examination, April - 2016

COMPUTER SCIENCE

Object oriented programming Through C++ (Paper - V)

Sub. Code: 63801

Day and Date : Wednesday, 20 - 04 - 2016

Total Marks : 50

Time :3.00 p.m. to 5.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.

Q1) Select the correct alternative and rewrite:

[10]

- a) The object name is also called as _____
- i) state
 - ii) identity
 - iii) behavior
 - iv) all of these
- b) The _____ members of a class can be accessed from outside the class.
- i) private
 - ii) public
 - iii) protected
 - iv) all of these
- c) By default C++ follows _____ binding.
- i) early
 - ii) late
 - iii) dynamic
 - iv) none of these

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- d) When class inherits properties of more than one class then it is called _____ inheritance.
- i) single
 - ii) multilevel
 - iii) multiple
 - iv) hierarchical
- e) An constructor is called automatically when an object is _____.
- i) created
 - ii) initialized
 - iii) destroyed
 - iv) both (i) and (ii)
- f) _____ function can access private members of a class.
- i) public member
 - ii) friend
 - iii) private member
 - iv) all of these
- g) Operator overloading function defined for overloading of relation operator returns _____ value.
- i) 0
 - ii) 1
 - iii) 2
 - iv) (i) or (ii)
- h) _____ class is not used to create the object.
- i) derived
 - ii) abstract
 - iii) nested
 - iv) container
- i) Data is not secured in _____.
- i) POP
 - ii) OOP
 - iii) both (i) and (ii)
 - iv) none of these
- j) The _____ member of a class is common to all objects of that class.
- i) Private
 - ii) Public
 - iii) Protected
 - iv) Static

2) Attempt any two of the following:

- What is an OOP? Explain its basic concepts in detail.
- Explain different ways of defining a member function of a class? Give its example.
- How to implement a run time polymorphism in a C++ program? Explain it with suitable example.

3) Attempt any four of the following:

[4×5=20]

- What is a friend function? How to define it to class?
- How define overloading function to overload unary operator?
- Write and explain syntax of multi level inheritance.
- What are the different types of constructors?
- How to manage the memory using new and delete operators?
- Write an OOP to display only odd numbers between n to m.

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| Seat No. | |
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B.C.S. (Part -II) (Semester -III) (New) Examination, April - 2016

COMPUTER SCIENCE

System Analysis, Design and Introduction to Software

Engineering (Paper - VI)

Sub. Code: 63802

Day and Date : Thursday, 21 - 04 - 2016

Total Marks : 50

Time :3.00 p.m. to 5.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.

Q1) Select correct alternative and rewrite entire statement: [10]

- a) In a DFD _____ symbol is used to represent the external entities.
- i) Rectangle
 - ii) Ellipse
 - iii) Diamond shaped box
 - iv) Circle
- b) Use the new system as the same time as the old system to compare the results. This is known as _____.
- i) Procedure Writing
 - ii) Simultaneous processing
 - iii) Parallel Operation
 - iv) File conversion
- c) A data flow can _____.
- i) Only emanate from an external entity
 - ii) Only terminate in an external entity
 - iii) May emanate and terminate in an external entity
 - iv) May either emanate or terminate in an external entity but not both

d) The main ingredient of the report documenting the _____ is the cost benefit analysis.

- i) System Analysis
- ii) Feasibility Study
- iii) System Analyst
- iv) System design

e) _____ can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or prospective decisions.

- i) Information
- ii) Data collection
- iii) Internal data
- iv) Sample data

f) _____ does not occur in phase-IV of the system development life cycle (SDLC).

- i) conduct interviews
- ii) train users
- iii) acquire hardware and software
- iv) test the new system

g) Changes made periodically to a system, after its implementation, is known as system _____.

- i) Analysis
- ii) design
- iii) development
- iv) maintenance

h) Mistakes made in the system analysis stage show up in _____.

- i) implementation
- ii) system design
- iii) system developments
- iv) All of these

i) A cross life cycle activity of system development is _____.

- i) object modeling
- ii) prototyping
- iii) fact finding
- iv) data modeling

j) The _____ approach is an SDLC approach that assumes the various phases of a project can be completed entirely sequentially.

- i) Waterfall
- ii) Prototype
- iii) Artifact
- iv) Spiral model

D - 108

[20]

2) Attempt any TWO of the following:

- a) What is normalization? Explain forms of normalization.
- b) What is software? Explain different qualities of software.
- c) What is system? Explain types of system.

3) Attempt any FOUR of the following:

[20]

- a) Explain quality assurance.
- b) What is file design?
- c) Write different roles of system analyst.
- d) What are the characteristics of software?
- e) Explain initial investigation with example.
- f) Draw DFD for inventory management system.

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B.C.S. (Part -II) (Semester -IV) (Revised)
Examination, April - 2016
COMPUTER SCIENCE
Data Structure Through C++ (Paper - VII)
Sub. Code: 63810

Day and Date : Wednesday, 20 - 04 - 2016
Time :12.00 noon to 2.00 p.m.

Total Marks : 50

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.

Q1) Select correct alternative and rewrite the statement: [10]

a) The number of swapping needed to sort numbers 8, 22, 7, 9, 31, 19, 5, 13 in ascending order using bubble sort is _____.

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| i) 11 | ii) 12 |
| iii) 13 | iv) 14 |

b) The following sequence of operation is performed on stack push(1), push(2), pop, push(1), push(2), pop, pop, pop, push(2), pop. Sequence of popped out values are _____.

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| i) 2,2,1,1,2 | ii) 2,2,1,2,2 |
| iii) 2,1,2,2,1 | iv) 2,1,2,2,2 |

c) What is the result of the following operation Top (Push (S, X))

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| i) X | ii) null |
| iii) s | iv) none of these |

- d) Sparse matrices have _____.
- no zero
 - many zero
 - higher dimension
 - none of these
- e) _____ case does not exist in complexity theory.
- Best case
 - Worst case
 - Average case
 - Null case
- f) Each array declaration need not give, implicitly, or explicitly the information about _____.
- the name of array
 - the data type of array
 - the first data from the set to be stored
 - the index set of the array
- g) _____ method is used to remove elements from a stack.
- Push ()
 - Remove ()
 - pop ()
 - lspop ()
- h) The memory address of the first element of an array is called _____.
- floor address
 - foundation address
 - first address
 - base address
- i) When inorder traversing a tree resulted E A C K F H D B G; the preorder traversal would return _____.
- FAEKCDBHG
 - FAEKCDHGB
 - EAFKHDCBG
 - FEAKDCHBG
- j) The complexity of Bubble sort algorithm is _____.
- $O(n)$
 - $O(\log n)$
 - $O(n^2)$
 - $O(n \log n)$

Q2) Attempt any two of the following:

- a) What is sorting? Explain insertion sort.
- b) What is stack? Write a program for static implementation of stack.
- c) What is an array? Explain multi dimensional arrays with example.

Q3) Attempt any Four of the following:

- a) Write any five differences between stack and queue.
- b) What are the limitations of simple queue?
- c) What is circular queue?
- d) Compare selection sort with insertion sort.
- e) Explain any five data types used in data structure.
- f) What is queue? Explain linear queue.

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| Seat No. | |
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D -115

Total No. of Pages :3

B.C.S. (Part -II) (Semester -IV) (Revised) (New)
Examination, April - 2016
COMPUTER SCIENCE
RDBMS with ORACLE (Paper - VIII)
Sub. Code: 63811

Day and Date : Thursday, 21 - 04 - 2016
Time :12.00 noon to 2.00 p.m.

Total Marks : 50

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to right indicate full marks.
 - 3) Draw diagram whenever necessary.

Q1) Select correct alternative and rewrite the sentence:

[10]

- a) In data control language provide user with _____ command.
- i) access
 - ii) modify
 - iii) privilege
 - iv) none of these
- b) Retrieval of information, inserting of row and modification of information will be possible in _____.
- i) DDL
 - ii) DML
 - iii) DCL
 - iv) none of these
- c) Granting of authorization of data access is the job of _____.
- i) sophisticated user
 - ii) naive user
 - iii) programmer
 - iv) administrator

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Q2) Attempt any TWO:

- a) Discuss while and for loop in pl/sql in details with suitable example.
- b) Write commands in DML with suitable syntax and example.
- c) What is role of relational algebra in SQL?

Q3) Attempt any FOUR:**[20]**

- a) What is DBA?
- b) Write any five data types in SQL.
- c) Write SELECT command with group by command and give example.
- d) What is trigger.
- e) Write any five arithmetic function.
- f) What is index.

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