

BAHAUDDIN ZAKARIYA UNIVERSITY
Department of Information Technology

Comprehensive Examination
MIT (2014-2016)

Date:

This exam has 7 sections on 15 pages. Please count the pages.
You have **2 hours** to complete this exam.
Pass Marks: 50

Instructions

1. Check that you have all 15 pages (including this cover page).
2. Write your name, student number on this page.
3. Please turn off your mobile phone/pager.

Section	Your points	Max points	Section	Your points	Max points
I		15	V		15
II		15	VI		15
III		15	VII		10
IV		15			
Subtotal			Subtotal		
Your total points					

Student Roll# _____

Student Name _____

Signature _____

External Examiner Name and Signature : -----

Section-I

Programming Fundamental

- Q.1 Missing semicolon ';' at the end of C++ statement is
- Logical error
 - Syntax error
 - Runtime error
 - None of the given options
- Q.2 What will be the output of the following code?
- ```
int i=0, j = 0;
for(i=0; j < 2; i+=2)
for(j=0; j < 2; j +=2)
 cout << "i=" << i << " j=" << j << endl;
```
- i=0 j =0
  - i= 0 j= 2
  - i=0 j=0 i=2 j=2
  - i=0 j=2 i=2 j=2
- Q.3 What will be the correct syntax to assign an array named *arr* of 5 elements to a pointer *ptr*?
- \*ptr = arr ;
  - ptr = arr ;
  - \*ptr = arr[5] ;
  - ptr = arr[5] ;
- Q.4 In case of parameters passing by reference
- The values of those variables are passed to the function so that it can manipulate them
  - The location of variable in memory is passed to the function so that it can use the same memory area for its processing
  - The function declaration should contain ampersand in its type declaration
  - All of above
- Q.5 Which one of the followings is an example of a pure virtual function?
- virtual void function1() = 0;
  - virtual int function1() { }
  - abstract void function1() = 0;
  - abstract int function1() { }
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**Section-II****Data Structure & Algorithms**

1. Convert infix expression into its equivalent postfix expression.
  - a.  $ABD+*E/FGHK/+*-$
  - b.  $ABD*+E/FGHK/*+-$
  - c.  $ABD+*E/FGHK-+*/$
  - d.  $ABD+*E/FGHK/*-+$
2. Worst Case Complexity of a quick sort is:
  - a.  $O(n)$
  - b.  $O(2n)$
  - c.  $O(n^2)$
  - d.  $O(n^3)$
  - e. Non of these
3. In the linked list implementation of the queue class, where does the push member function place the new entry on the linked list?
  - a. At the head
  - b. At the tail
  - c. After all other entries those are greater than the new entry.
  - d. After all other entries those are smaller than the new entry.
4. Linked lists are best suited
  - a. for relatively permanent collections of data
  - b. for the size of the structure and the data in the structure are constantly changing
  - c. for both of above situation
  - d. for none of above situation
5. Binary search requires data to be in what order?
  - a. Increasing
  - b. Decreasing
  - c. Random
  - d. Sorted

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**Section-III****Operating Systems**

- 1- A process said to be in \_\_\_\_\_ state if it was waiting for an event that will never occur.
  - a. Safe
  - b. Unsafe
  - c. Starvation
  - d. Dead lock
- 2- A thread is a \_\_\_\_\_ process.
  - a. Heavy Weight
  - b. Mutliprocess
  - c. Inter Thread
  - d. Light weight
- 3- To remove an installed application you will use?
  - a. Add/ Remove programs
  - b. My documents
  - c. My Computer
  - d. Del
- 4- File format defines
  - a. Storage structure
  - b. Security scheme
  - c. Access authority
  - d. Data hiding
- 5- Process Control Block manages
  - a. Disks
  - b. Processors
  - c. I/O devices
  - d. Tasks
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**Section-IV****Introduction to IT**

1. The language that the computer can understand and execute is called
  - a. Machine language
  - b. Application software
  - c. System program
  - d. All of the above
2. Which of the following is used as a primary storage device?
  - a. Magnetic drum
  - b. PROM
  - c. Floppy disk
  - d. All of these
3. Which of the following memories needs refresh?
  - a. SRAM
  - b. DRAM
  - c. ROM
  - d. All of above
4. Which of the following devices can be used to directly input printed text?
  - a. OCR
  - b. OMR
  - c. MICR
  - d. All of above
5. The output quality of a printer is measured by
  - a. Dot per cm
  - b. Dots per inch
  - c. Dots printed per unit time
  - d. All of above

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**Section-V****Database Systems**

- 1) Which one is not advantage of TFP  
a) Economical      b) Low cost      c) Consistent      d) Standardized  
e) All of above      f) None of these
  - 2) Which one is dominant advantage of Database  
a) Simple      b) Redundancy      c) Sharing      d) Concurrency  
e) All of above      f) None of these
  - 3) Which one is not an advantage of Database  
a) Standards      b) Controlled Redundancy      c) Sharing      d) Concurrency  
e) All of above      f) None of these
  - 4) Which one is not a disadvantage of Database  
a) Standards      b) Controlled Redundancy      c) Sharing      d) Concurrency  
e) All of above      f) None of these
  - 5) It is true that database  
a) process some applications slow      b) is always distributed  
c) provides integrity sometimes      d) has no constraints on data
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## Section-VI

**Computer Communication & Networks**

1. Which are the components of a data communication system? (Choose Three)
  - A) Message
  - B) Protocol
  - C) Switch
  - D) Router
  - E) Transmission Medium
2. Which of the following OSI (Open Systems Interconnect) layers is responsible for formatting and code conversions?
  - A) The Transport Layer
  - B) The Data Link Layer
  - C) The Application Layer
  - D) The Presentation Layer
3. What is attenuation?
  - A) Opposition to the flow of current
  - B) Measurement of electrical signals relative to time
  - C) Degradation of a signal as it travels along the medium
  - D) Amount or volume of traffic that is flowing on the medium
4. Which of the following OSI layer offers reliable, connection-oriented data communication services?
  - A) Application
  - B) Presentation
  - C) Session
  - D) Transport
  - E) Network
5. Which network topology uses a multi-point connection?
  - A) Star topology
  - B) Mesh topology
  - C) Bus topology
  - D) Ring topology

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## Section-VII

Human Computer Interaction

1. The different contexts that change the interpretation of commands are called \_\_\_\_\_.
  - a. modes
  - b. nodes
  - c. environment
  - d. links
2. The feeling of disorientation when you do not have sufficient means to know where you are and where you have been has been called \_\_\_\_\_.
  - a. ambivalence
  - b. frustration
  - c. lost in hyperspace
  - d. none of these
3. Shrinking a window is called as \_\_\_\_\_.
  - a. Iconifying
  - b. Compression
  - c. Expansion
  - d. Recursion
4. A consequence of the direct manipulation paradigm is that there is no longer a clear distinction between \_\_\_\_\_.
  - a. drapper's collection
  - b. upper & lower
  - c. domain
  - d. input & output
5. The phrase 'human error' is taken to mean \_\_\_\_\_.
  - a. operator error
  - b. user
  - c. design error
  - d. bad interfaces

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