

Roll No: .....

**BACHELOR OF COMPUTER APPLICATION  
EXAMINATION, 2017**

**Paper – BCAD-501  
Software Engineering**

Time: Three Hours

Maximum Marks: 100

*(Write your Roll No. at the top immediately on receipt of this question paper.)  
Answer ALL questions as per instructions given in each Section.*

**Section A**

Answer All Questions (10X2=20)

*Fill in the blanks*

1. Software is not considered to be collection of executable programming code, associated libraries and documentations..... (True/ False)
2. CASE tools cannot be grouped together if they have similar functionality, process activities and capability of getting integrated with other tools..... (True/ False)
3. Cyclomatic complexity of a graph G can be computed by  $v(G)=$  .....
4. The full form of PERT is .....

*Each question having four probable answer out of them only one option is correct. Write correct option in your answer sheet*

5. Which depicts flow of control in program modules?
  - a. Flowchart
  - b. DFD
  - c. Both A & B
  - d. None of the above
6. From the following methods which size of the software product can be calculated?
  - a. Counting the lines of delivered code
  - b. Counting delivered function points
  - c. Both A and B
  - d. None of the above
7. Which chart is a tool that depicts project as network diagram that is capable of graphically representing main events of project in both parallel and consecutive way?
  - a. PERT chart
  - b. Gantt chart
  - c. Both A & B
  - d. None of the above
8. Software project manager is engaged with software management activities. He is responsible for \_\_\_\_\_
  - a. Project planning.
  - b. Monitoring the progress
  - c. Communication among stakeholders
  - d. All mentioned above.
9. Which of the following is not a part of the Test Implementation and Execution Phase?
  - a. Creating test suites from the test cases
  - b. Executing test cases either manually or by using test execution tools
  - c. Comparing actual results
  - d. Designing the Tests

10. Alpha and Beta Testing are forms of \_\_\_\_\_.
- a. Acceptance testing
  - b. Integration testing
  - c. System Testing
  - d. Unit testing

**Section B**

**Answer any six questions (6x5=30)**

1. Define Software Engineering. Explain the need of software Engineering.
2. Describe different phases in SDLC.
3. Differentiate between waterfall model and Iterative model.
4. Explain different software metrics.
5. Differentiate between Coupling and Cohesion.
6. Explain Control Flow Graph with an example.
7. Explain Work Breakdown Structure in details.
8. Explain the important of PERT in software project management.

**Section C**

**Answer any five questions (10x5=50)**

1. Define Waterfall Model. List out the limitations of waterfall model. How these limitations are removed in other software models.
2. Define Data Flow Diagram. Draw the DFD for online shopping.
3. a) Differentiate between sequence diagram and Hierarchy Diagram.  
b) Compare Spiral model and Prototyping.
4. Explain Risk Management Process with a neat diagram. What are the qualitative risk identification techniques?
5. What is software inspection? What are the main principles for any inspection or review process?
6. a) Explain Use Case Diagram with an example.  
b) What do you understand by software testing?
7. Write short notes on:
  - a) ER Diagram
  - b) State Transition Diagram
  - c) Software Cost Estimations

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**JAMIA HAMDARD**  
**DIRECTORATE OF DISTANCE LEARNING**  
**BACHELOR OF COMPUTER APPLICATION**  
**III YEAR EXAMINATION, 2017**

**Paper - BCAD-502**

**Java Programming**

Maximum Marks: 100

Time: Three Hours

*(Write your Roll No. at the top immediately on receipt of this question paper.)*  
*Answer ALL questions as per instructions given in each Section.*

**Section-A**

**(1 X 20 = 20 M)**

**Answer ALL Questions.**

1. Command to execute a compiled java program is  
a) javac                      b) java                      c) run                      d) execute
  2. Which one of the following will declare an array and initialize it with five numbers?  
a) Array a = new Array(5)    b) int [ ] a = {23,22,21,20,19}  
c) int a [ ] = new int[5]    d) int [5] array
  3. Which of the following is a valid declaration of an object of class Box?  
a) Box obj = new Box()    b) Box obj = new Box  
c) obj = new Box()    d) new Box obj
  4. Which of these is a mechanism for naming and visibility control of a class and its content?  
a) Object                      b) Packages                      c) Interfaces                      d) None of these
  5. Which of the following is a method having same name as that of its class?  
a) finalize                      b) delete                      c) class                      d) constructor
  6. Which of these keyword must be used to inherit a class?  
a) super                      b) this                      c) extant                      d) extends
  7. Java intermediate code is known as  
a) First code                      b) Mid code                      c) Byte code                      d) None of above
  8. Two methods are said to be overloaded if they have  
a) same name and same number of parameter but different return type.  
b) they have same name.  
c) they have different name but same number of argument.  
d) have same name but different parameters.
  9. **this** keyword in java is used to  
a) refer to current class object.                      b) refer to static method of the class.  
c) refer to parent class object.                      d) refer to static variable of the class.
  10. Two methods are said to be overloaded if they have,  
a) same name and same number of parameter but different return type.  
b) they have same name.  
c) they have different name but same number of argument.  
d) have same name but different parameters.
- State True or False**
11. Polymorphism means the ability to take only one form.
  12. Java is pure Object Oriented Programming Language.

13. *new* operator calls a special initialization method in the class called destructor
14. *this* keyword in java is used to refer to current class object.
15. *final* variable is a name constant which cannot be modified
16. A package is a collection of classes and interfaces
17. When a subclass calls *super* (*..*), it is calling the constructor of its immediate superclass.
18. Object class is the base class for all Java objects.
19. Multithreading is not possible in single processing system.
20. An I/O Exception is a runtime error.

**Section B**

Answer any SIX Questions.

(6 X 5 = 30 M)

1. Differentiate between an object and a class in java along with code example
2. Explain the key features of Java.
3. Explain the primitive data type supported in java.
4. Explain the purpose of final key word along with code example.
5. Differentiate between Data Abstraction and Data Encapsulation
6. Explain the key features of Java.
7. What is a constructor? Can a constructor be overloaded? Justify your answer.
8. What is error and describe type of error in Java Programming.
9. Define Constructor and Destructor with example.
10. Describe Applet and its lifecycle.

**Section C**

Answer any FIVE Questions.

(5 X 10 = 50 M)

1. What is object-oriented programming? How is it different from the procedure-oriented programming? List the benefits and application of OOP.
2. Describe the structure of a typical Java program. How does Java achieve architecture neutrality?
3. Compare and contrast overloading and overriding methods in Java with examples.
4. What is a thread? Describe the different stages in the life cycle of a thread. Develop a simple program to illustrate the use of multithreads.
5. Given are two one-dimensional arrays A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order.
6. Explain Servlet life-cycle in detail?
7. Write a program to print the following triangle in Java.

```

1
2 3
4 5 6
7 8 9 10
11 ... .. 15
...
...
...
79 ... .. 91

```

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**Bachelor of Computer Application ( BCA)**

III year examination, 2017

**Operating System Administration with Windows 2000 (BCAD – 503)**

**SECTION - A**

**Time : 3 Hours.**

**Max Marks : 100**

**1) Choose the correct answer.**

**[10 x 1 = 10]**

i) Which component in the Windows 2000 architecture supports the logon process and Active Directory?

- a) User mode
- b) Microkernel
- c) Win 32 subsystem
- d) Security subsystem

ii) In which part of the Windows 2000 architecture do applications run in?

- a) User mode
- b) kernel mode
- c) Windows Manager
- d) Executive Services

iii) Which operating system(s) can you upgrade to Windows 2000 Server? (Choose all that apply).

- a) Windows 95
- b) Windows 98
- c) Windows for Workgroups
- d) Windows NT Workstation 4.0
- e) Windows NT Server 4.0

iv) You want to install the device driver for a new infra red device in your windows 2000 computer. Which tool should you use?

- a) Wireless link
- b) Device Manager
- c) Add/Remove hardware
- d) Database program

v) Which of the following windows version support 64 bit processor?

- a) Windows 98
- b) Windows 2000
- c) Windows XP
- d) Windows 95

vi) Which of the following tools are useful for troubleshooting hardware devices on a windows 2000 computer? (Choose all that apply)

- a) Device Manager
- b) System Information
- c) Add/Remove Programs
- d) Add/Remove Hardware

vii) You want to create and format a simple volume on a windows 2000 computer. Which tool should you use:

- a) Disk Administrator
- b) Disk Management
- c) The Convert.exe command-line utility
- d) The Format.exe command line utility

viii) You want to analyze volume on your windows 2000 computer. Which tool should you use?

- a) Disk Administrator
- b) Disk Management
- c) Disk Defragmenter
- d) Windows Component wizard

ix) Which tool should you use to manage driver signing on a windows 2000 computer?

- a) system
- b) Folder Option
- c) Licencing
- d) Add/remove Programs

x) Which of the following is not an operating system?

- a) DOS
- b) Linux
- c) Windows
- d) Oracle

2) Fill in the blanks with correct answer.

[10 x 1 = 10]

- a) DLL stands for .....
- b) Windows 2000 professional allows up to ..... Computers to simultaneously share a single connection.
- c) To be able to use the "TCP/IP protocol, Windows networking is using a feature called ..... Over TCP/IP,
- d) 1 Megabytes (MB) = ..... Kilobytes (KB).
- e) OLAP stands for online ..... processing.
- f) ROM stands for.....
- g) A ..... is a named location on a disk where files are stored.
- h) The ..... is a temporary storage place for deleted files.
- i) ..... manager is an important part of operating system for managing tasks.
- j) DOS stands for .....

#### SECTION - B

Answer any six of the following questions.

[6 x 5 = 30]

- 3) What is an operating system? Briefly explain.
- 4) What is load balancing? Explain briefly.
- 5) Briefly compare between Windows 2000 professional with other Windows operating systems.
- 6) What do you mean by OLTP? Explain briefly.
- 7) How can you install a printer in your Windows 2000 computer?
- 8) Write steps to copy a file from one folder to another?
- 9) Write steps to move a file from one folder to another?
- 10) How do you customize a desktop? Write briefly.

P.T.O

Answer any six of the following questions.

**SECTION - C**

**Answer any five of the following questions.**

**[5 x 10 = 30]**

- 11) Write down the advantages of windows 2000 server family?
- 12) How to create Folder in Windows 2000? Write the complete steps.
- 13) What is load balancing? Explain in detail.
- 14) Explain the differences between FAT/NTFS?
- 15) Briefly explain any two of the following:
  - a) DOS
  - b) Server
  - c) cluster
  - d) Data warehouse
  - e) Internet
  - f) RAM
- 16) What is an Active Directory? What are the requirements for installing Active Directory on a new Server
- 17) What do you mean by System Area Networks? Explain briefly.
- 18) How reliable is windows 2000 professional?

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

- 19) Explain the following
- 20) What is an Active Directory?
- 21) What do you mean by...

7



**BACHELOR OF COMPUTER APPLICATION**  
**SEMESTER EXAMINATION 2017**  
**Paper – BCAD-504**  
**ADVANCED WEB DEVELOPMENT**

Time: Three Hours

Maximum Marks: 100

*(Write your Roll No. at the top immediately on receipt of this question paper.)*

*Answer ALL questions as per instructions given in each Section.*

**Section-A**

**Fill in the blanks with suitable words or phrases.**

**(20 \* 1 = 20)**

1. \_\_\_\_\_ Pages consist of the pages that can be interpreted by the server.
2. A \_\_\_\_\_ computer requests some needed information from a server computer.
3. \_\_\_\_\_ means a small relatively limited interpreted language.
4. \_\_\_\_\_ is a light version of Microsoft's Visual-Basic programming language.
5. Old Web browsers that don't support VBScript will just display the contents of the script as \_\_\_\_\_.
6. In VBScript, \_\_\_\_\_ are declared by prefixing the line with an apostrophe.
7. We can declare variables in VBScript explicitly using the \_\_\_\_\_ keyword.
8. The \_\_\_\_\_ function converts an expression to a variant of subtype Byte.
9. The ASP Response object is used to send \_\_\_\_\_ to the user from the server.
10. The \_\_\_\_\_ object is used to store information about, or change settings for a user session.
11. The ASP Server object is used to access \_\_\_\_\_ and methods on the server.
12. \_\_\_\_\_ are a way for you to store nuggets of information on the visitor's computer.
13. Through the use of \_\_\_\_\_, an ASP page can acquire the user's input.
14. To create text boxes, check boxes, and radio buttons, we should use < \_\_\_\_\_ > tag.
15. CGI stands for Common \_\_\_\_\_ Interface.
16. A \_\_\_\_\_ bug causes an abrupt end of the execution of a program.
17. A \_\_\_\_\_ bug causes the program to generate the wrong output for a given input.
18. The concept of a user of an object not being concerned with the inner workings of the object is known as \_\_\_\_\_.
19. If the first action must be completed before the second one begins, then these two actions are said to be \_\_\_\_\_.
20. The \_\_\_\_\_ function in VB returns an expression formatted as a percentage with a trailing % character.

**Section B**

**Answer any SIX Questions.**

**(6 \* 5 = 30)**

1. Explain Client-Server Model.
2. How does ASP differ from Client-Side Scripting technologies?
3. What is a variable? When does it get created and destroyed? Give the syntax of variable declaration in VB.
4. Write the use of the following functions:  
(a) CBool (b) CByte (c) CCur (d) CDate (e) CStr
5. Write a program in VB to output a given string in the reverse order.
6. What are For-Next loops? Write the output of the following program code:  

```
<%  
For I = 1 to 10  
Response.Write "Number = " & I & vbCrLf  
Next  
>%
```
7. Discuss some commonly used Environment Variables.
8. "The Web is Stateless". Comment.

**Section C**

**Answer any FIVE Questions.**

**(5 \* 10 = 50)**

1. Explain Client-Server Model
2. How do the ASP web forms get processed? Discuss the stages.
3. Consider the following statement:  
" This is a beautiful day! "  
Write a program that trims the extra spaces from both sides and replaces "beautiful" with "horrible". What would you change in your program if you were asked to remove the spaces only from the left side?
4. What is an object? Explain with the help of suitable examples. Discuss the terms associated with objects viz. instances, classes, properties and methods.
5. What is validation? Explain the various validation controls in ASP.NET with the help of examples.
6. Explain State Management in ASP.
7. Discuss various types of errors and the ways to raise errors.