

BCA (Part II) Examination, 2013

Communication Skills

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. List types of communication.
2. What is oral communication?
3. List types of agenda.
4. List various parts of Bio-data.
5. List the features of an application for a job.
6. List the salient features of a minute writing.
7. List the features of notice writing.
8. Write important characteristics of report writing.
9. List the sections of a report.
10. What is the purpose of time table?

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. Explain the importance of a business letter.
2. What do you understand by communication?
3. Draw a sample of a report.
4. Draw outlines of an application for an employment.
5. What is the importance of an agenda?

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. What do you mean by the report writing? Explain various types of reports.

OR

Prepare a time table of examinations.

2. Prepare a notice for schedule of practical examinations.

OR

What is resume writing? What are the major points that should essentially be incorporated in resume writing?

3. Draft a notice as the secretary of student union asking students to give their names for participation in annual function with list of various activities.

OR

Explain minutes writing with an example.

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Client Server Technology

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. Explain the concept of client/server.
2. What do you understand by middleware?
3. What is peer to peer communication?
4. Explain the term WAN.
5. What are back-end applications?
6. What is OSI?
7. Discuss the need of IPC.
8. Define application server.
9. Discuss the role APIs.
10. List privacy issues of client/server systems.

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. Discuss about the components of client/server application.
2. List the OSI layers in chronological order.
3. Differentiate between DDE and OLE.
4. Discuss the functions of servers.
5. Discuss the concept of network management.

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. (a) Draw the block diagram of client/server model, explain the functioning of each components.
1. (b) Explain the need of client/server computing?

OR

Write short note on following:

- (a) Network Traffic
- (b) Firewall

2. Explain briefly about CORBA? Also discuss the application areas of CORBA.

OR

Write short notes:

- (a) Applications of RDBM
- (b) GUI design concepts

3. Explain in detail the three-layer client/server architecture. What are the advantages of the above mentioned architecture?

OR

Write short notes on:

- (a) Remote System Administration
- (b) Security Services of Server.

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Database Management System

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. What do you understand by data independence?
2. Explain schema.
3. What is derived attribute?
4. What is heap file organization?
5. Describe data models.
6. Explain domain.
7. Write the syntax of REINDEX command in FoxPro.
8. What do you understand by functional dependency?
9. Explain ZAP command in FoxPro.
10. What we use GATHER command in FoxPro?

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. Explain integrity constraints.
2. Explain following FoxPro commands with the help of example:
 - (a) Skip
 - (b) Get
 - (c) Scan
 - (d) Copy Structure
3. What do you understand by mapping? Explain mapping constraints.
4. What is the difference between centralized and client server architecture? Explain 3 tier client server architecture.
5. Explain time stamp protocol.

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. (a) Explain normalization upto UNF.
- (b) What do you understand by recovery? Explain the recovery techniques.

OR

- (a) Explain serial and non serial schedule with the help of an example.
 - (b) What do you understand by concurrency control? Explain locking techniques.
2. Write a program in FoxPro to print the report in following format:

STUDENT DETAIL

Name:-	Roll Number:
Father's Name:	Date:
Mother's Name:	Class:

SUBJECT NAME

C++
CST
JAVA
CS
CG
DBMS

OR

- (a) Consider the following table
sabs.dbf
sid, sname, pname, Qty, SellingPrice, Costprice
Write a program in FoxPro to print the report in following format-

SALES REPORT

sid, sname, pname, Qty, Total Costprice Total Selling Price Total Profit

- 3(a) Explain following set commands:
 - (i) Set console on/off
 - (ii) Set carry
 - (iii) Set delimiter to
 - (iv) Set alternate to

- (b) Consider the following table:

library.dbf

bookno, bookname, authername, price

Write a menu driven procedure in FoxPro to perform following operations:

- (i) Create a procedure to add records in table.
- (ii) Create a procedure to search the bookname.

(iii) Create a procedure to display the books of price > 500.

OR

- (a) Explain error handling in FoxPro.
- (b) Draw the E-R model for an office.
- (c) Explain the difference between sorting and indexing.

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Java Programming

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. What is conceptual difference between abstraction and encapsulation?
2. How does Java implement the portability of code?
3. What is numeric promotion?
4. What is method overloading?
5. What are the interfaces?
6. What are the components in AWT? Explain with example.
7. What is the rendering process?
8. What is garbage collector?
9. Write a short note on structure of CGI?
10. What is Bean Serialization?

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. How to parameters are passed to an Applet.
2. What is thread? Explain life cycle of multithreading.
3. Explain CORBA services and its products.
4. What are constructors and how they used?
5. Write a short note on the following:
 - (a) new
 - (b) this

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. Write an Applet program to generate a form that accepts the following data from user:

NAME

ADDRESS

The user can select his age group from under 20, 20-50 and above 50 years and select working or non working from a checklist. Add buttons to save the data and reset the data. When the user clicks the save button, a dialog box should open up saving that the data has been saved. And when the user clicks the Reset button the data in the components reset.

OR

What is inheritance? Explain different types of inheritance with example.

2. What is multithreading? Write a Java program which makes sure that both the threads will be running alternatively irrespective of the scheduling strategy (sleep() method in use).

OR

What is an Exception? Explain the procedure of how to handle exception?

3. What is package? Write steps to create and run a package. Also give advantage of package.

OR

Write a program in Java to find the root of a Quadratic equation by using the equation:

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C++ Programming

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. How is OOP implement in C++?
2. What is abstraction class?
3. What is preprocessor directive?
4. Why main function is special in C++?
5. What is scope resolution operator?
6. How are binary files different from that files in C++?
7. What is type casting in C++?
8. Differentiate between a template class and class template?
9. How can we initialize a pointer to a function?
10. What do you mean by inline function.

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. What is run time error, logical error and syntax error?
2. What is the major difference between OO Programming and Procedural Programming?
3. What is virtual class and friend class? What is its significance?
4. What is dynamic binding? Explain with suitable example?
5. What is a stream? Name the streams generally used for file I/O (input/output)

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. What are the basic concepts of object oriented programming and also explain its advantages?

OR

Describe the concept of pointer in C++. How it is different from pointer in C?

2. What is mean by inheritance in OOP and how many types of inheritance available in OOPs.

OR

Differentiate operator overloading and function overloading with suitable example.

3. Explain the concept of file handling. How do you open and close a file in C++? (write code)

OR

Write short note on:

- (a) Structure and Union
- (b) Method overloading and method overriding
- (c) Friend function
- (d) Constructor and destructor

BCA (Part II) Examination, 2013

Computer Graphics

Part - A

Note: Answer all ten questions (20 words each). Each question carries equal marks.

1. What are different uses and applications of computer graphics?
2. Differentiate raster system with random system.
3. What is virtual reality?
4. What do you mean by high definition system?
5. Define aspect ratio.
6. What is difference between bitmap and pixmap?
7. Explain the basic operation of a CRT.
8. List the difference between track ball and space ball.
9. What advantages do LCD and plasma displays share over CRT?
10. Why are homogeneous co-ordinates required?

Part - B

Note: Answer all five questions (50 words each). Each question carries equal marks.

1. What are the functions of laser printer?
2. What is inverse transformation?
3. What are the advantages of electrostatic plotters? Explain its functions.
4. What do you mean by character generation?
5. In a raster system with resolution 2560 x 2048, how many pixels could be assessed per second by a display controller that refreshes the screen at a rate of 60 frames per second? Also calculate access time per pixel in the system.

Part - C

Note: Answer all three questions (400 words each). Each question carries equal marks.

1. Explain Cohen-Sutherland line clipping algorithm with region code details.

OR

Write a Bresenham's line algorithm for line where $|m| \leq 1$. Digitize a line with end points (20, 10) and (30, 18).

2.(a) Derive the following equation and in which situation this equation is used?

$$T(x_r, y_r) \cdot R(\theta) \cdot T(-x_r, -y_r) = R(T(x_r, y_r, \theta))$$

(b) What is the difference between diffuse reflection and specular reflection?

OR

(a) Explain Sutherland-Hodgeman polygon clipping algorithm.

(b) Derive a formula to rotate a point by θ .

3(a) Explain shearing.

(b) Show that a reflection about the line $y=-x$ is equivalent to a reflection relative to y-axis followed by a counter clock wise rotation of 90° .

OR

Explain mid-point circle algorithm. Rasterize circle points using this algorithm for $R=10$ and (x_c, y_c) at (10, 10).