

PURBANCHAL UNIVERSITY

2011

Bachelor of Computer Application (B.C.A.)/Fifth Semester/Final
Time: 03:00 hrs.

Full Marks: 60 / Pass Marks: 24

BCA304CS: Advanced Programming

Candidates are required to give their answers in their own words as far as practicable.

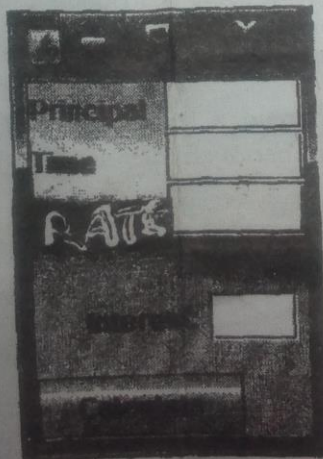
The figures in the margin indicate full marks.

Group A

Answer TWO questions.

2×12=24

1. A computer with IP address 10.10.0.10 contains method concat (String txt1, String txt2). Write complete programs for both server and client so that client computer can call method in the server 10.10.0.10. When the client machine calls the method, it should merge (concatenate) two texts passed as parameter to method concat and display resulting String to client machine's console. 12
2. Write a program to find Simple Interest as shown in following figure, when user click to calculate button the calculated amount from principal, time and rate should be displayed in Interest textbox. 12



Contd. ...

(2)

3. Differentiate between Statement and Prepared Statement. Write a program in java to connect to DSN name mydsn using JDBC-ODBC Driver. The program should consist of method called "insert" which will insert "id, name, salary" to employee table where id, name and salary will be provided as parameter to insert method. It should also consist of another method called select which will display all record of employee table to console. 12

Group B

6×6=36

Answer SIX questions.

4. Write a thread program which will display your name in one thread and your address in another in every 500 milliseconds. There should be 1000 iteration. 6
5. Differentiate Vector with Array. Explain with example How Vector demonstrate like dynamic array. 6
6. What is socket programming? Write a program to display the protocol, host port and file components of a URL. 6
7. Explain Java Media Framework. Write a Java Program to play audio file using JMF. 2+4
8. "Java Applet processes some restriction unlike java application." Justify it. Also explain attribute of <APPLET> tag and its attribute in HTML. 6
9. Write a program to read a text file called pu.txt and find out number of lines, number of characters and number of words. 6
10. Write short notes on any TWO: 3+3
- (a) Java Virtual machine (JRE)
 - (b) File Class
 - (c) RMI Architecture

PURBANCHAL UNIVERSITY

2012

Bachelor of Computer Application (B.C.A.)/Fifth Semester/Final

Time: 03:00 hrs.

Full Marks: 60 /Pass Marks: 24

BCA304CS: Advanced Programming

Candidates are required to give their answers in their own words as far as practicable.

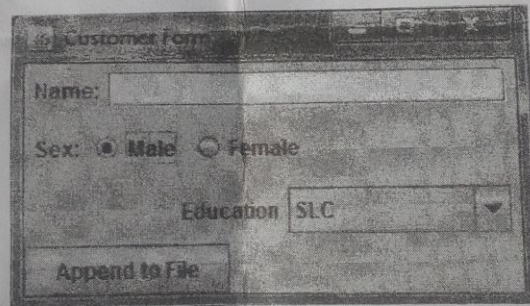
The figures in the margin indicate full marks.

Group A

2×12=24

Answer TWO questions.

1. Write a Swing program to create following form. Male should be selected by default and education consists of SLC, 10+2, Bachelor Degree and Master Degree. Once the "Append to File" button is clicked, the data should be saved in text file called "customer_form.txt" where each values are separated by comma (,). 12



2. A computer with IP address 192.168.0.100 contain method called rectArea (double height, double width). Write complete programs for both server and client so that client computer can call method in the server 192.168.0.100 which user port 2222. When the client machine calls rec Area method, it should display area of rectangle in client machine's console. 12
3. Differentiate Thread with Process. How using Runnable interface can be better than Thread Class? Write an application that creates and start 4 threads. Each thread is instantiated with

Contd. ...

separate text message which ⁽²⁾ is passed to same thread when it is instantiated. Each thread should run in the iteration of 10000 times. These Threads should sleep between 400 to 700 milliseconds. 12

Group B

6×6=36

Answer SIX questions.

4. What do you understand by interface in Java? How interface help Java to provide multiple inheritance. Explain with an example. 6
5. Write a TCP or UDP program which will return system date to client machine whenever client sends "date" text to Server; client should display date sent by server in its console. Also there server should run until client send "quit" message to server. 6
6. Write an Applet program which will get X, Y, height and width values from HTML as parameters and draw rectangle in Applet with given parameters. The color filled in rectangle should be red. Also write HTML code for it. 6
7. JApplet and JFrame use its own default layout management technique. Explain features of these default layout management techniques. 6
8. Write a program to read a text file and display it in console. Also find number of lines in the file. File name should be passed as command line argument. 6
9. Write a Java Program which will select all records from table emp; in which department is "Account" and "Salary" is greater than 10,000. 6
10. Write short note on any TWO: 2×3=6
 - (a) Java Media Framework
 - (b) Garbage Collection
 - (c) RMI Features

PURBANCHAL UNIVERSITY

V SEMESTER FINAL EXAMINATION-2003

LEVEL: B. C. A. (Bachelor of Computer Application)

SUBJECT: BCA304CS, Advance Programming

TIME: 2:45 hours+15 minutes

Full Marks: 60

Pass Marks: 24

Candidates are required to give their answers in their own words as far as possible.

Figures in the margin indicate full marks.

GROUP-A: OBJECTIVE QUESTIONS (SHEET ATTACHED) [10]

GROUP-B: LONG-ANSWER TYPE QUESTIONS

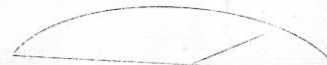
Attempt any ONE question.

[1×12=12]

Q. [1] Write an application that creates and starts five threads. Each thread is instantiated from the same class, executes a loop with ten iterations. Each iteration displays the character 'X' and sleeps between 300 and 800 milliseconds. The application waits for all threads to complete and then display a message.

Q. [2] Write an applet that simulates an analog meter as shown in the following illustration. The parameters to the applet define the amplitude and frequency (in cycles/second) of a sine wave and the maximum and minimum values that can be displayed by the meter. Use

Applet PU Question



(3)

[6×6=36]

- Q. [8] How will you define interface in Java? Explain its utility for implementing single inheritance by a suitable standalone Java Program. *Rem. Before*
- Q. [9] What do you mean by RMI? Explain the features of stub and skeleton file.
- Q. [10] Create an object Input stream for home address, phone number, and e-mail details. Now write these bytes into an object Output stream object.

Contd. ...

PURBANCHAL UNIVERSITY

V SEMESTER FINAL EXAMINATION-2004

LEVEL: B. C. A. (Bachelor of Computer Application)

SUBJECT: BCA304CS, Advanced Programming

Full Marks: 60

TIME: 03:00 hrs.

Pass Marks: 24

Candidates are required to give their answers in their own words as far as possible.

Figures in the margin indicate full marks.

GROUP-A: LONG-ANSWER TYPE QUESTIONS

Attempt any TWO questions.

[2×12=24]

Q. [1] Write a program to create a database table (MS Access) with the following fields:

Customer_ID --- Type: Numbers ---- Field Size (5)

Customer_Name --- Type: Text ---- Field Size (30)

Telephone_Number --- Type: Text ---- Field Size (10)

Then, write code to insert any two sets of data into the table. Also show in the program, how you will create connection with the table if the DSN of the table is given to be "mytable". **[12]**

Q. [2] Write a program for Client-Server communication following TCP protocol in which the client enters some text on its console and that text is displayed at the server console. **[12]**

Q. [3] What is a Thread? What are the different states in a Thread life-cycle? Point out the difference between Process based Multitasking and Thread based Multitasking. How can you create a new Thread? Show any one method with a small example program. **[1+2+4+5]**

Contd. ...

GROUP-B: SHORT-ANSWER TYPE QUESTIONS

Attempt any SIX questions.

[6×6=36]

Q. [4] Explain the RMI architecture. **[6]**

Q. [5] What is an Applet? What are the Restrictions imposed upon Applets? **[2+4]**

Q. [6] What do you mean by method overloading and method overriding in Java? Explain with the help of a simple program to show the differences. Point out the main differences. **[3+3]**

Q. [7] What are the different Layout Management Techniques in AWT? Explain. **[6]**

Q. [8] Java Programs are said to be "Platform Independent". Justify this statement. **[6]**

Q. [9] What is Exception Handling in Java? What are the constructs provided by Java for Exception Handling? **[3+3]**

Q. [10] Write a program that reads from a File and Displays the content onto the console. In this case pass the name of the file as an argument to the program. Take any .txt file. **[6]**

Q. [11] With an example program, explain how **abstract** classes are different from Interfaces though they might appear similar. Highlight the main points of differences between them. **[6]**

KANTIPUR CITY COLLEGE
V SEMESTER, END-TERM EXAMINATION 2005

Level: B.C.A 5th Semester
Subject: Advanced Programming

Time: 03:00 hrs

Full Marks: 60
Pass Marks: 24

SECTION-A

Attempt any two questions (2Q X 12=24)

1. a. What is JDBC? What are the difference between statements and prepare statement?
b. Write a complete java program that will connect to database perform following
 - i. insert new row
 - ii. update the row
 - iii. delete the row
 - iv. list the record
2. What is thread? What are the different stages of thread life cycle? Draw a diagram of it. With the complete code for multithreading.
3. a. What is network? What are the differences between TCP/IP and UDP protocols based networking? What is socket?
b. Write a client and server program in java using tcp/ip that accepts radius for client and computes area of circle and return result to client

SECTION-B

Attempt any six questions (6Q X 6=36)

1. What is package? How can package be helpful? Illustrate with example.

P.T.O.

5. What are the differences between class and objects? Explain with complete examples of each
6. What are difference between Vector and array? Explain with complete example of each
7. Explain how java is platform neutral language
8. What are the technologies for developing distributed objects? Explain in brief how to create distributed application in java with suitable program.
9. What is serialization? Write a program that will write 5 objects and read it at later time
10. What are the difference between interface and abstract class?
11. Write short notes on any two
 - i. Streams
 - ii. Byte stream and character stream
 - iii. AWT and Java Swing

The End

KANTIPUR CITY COLLEGE
MID- TERM EXAMINATION-2005



Subject: - BCA304CS Advance Programming
Time: 90 Minutes
Program: BCA
Semester: V

Full Marks: 40
Pass Marks: 16

Figure in the Margins indicate Full Marks
Group A

Attempt all Questions (7 X 2Q=14)

1. What is thread? What are the different stages of thread life cycle? Draw a diagram of it. With the complete code for multithreading.
2. What is applet? What are the limitations of applet? Draw an applet life cycle. Write a simple code containing applet main methods.

Group B

Attempt any four Questions (4 X 4Q=16)

3. What is the different between interface and abstract class?
4. Discuss the different types of swing components.
5. Write a program that will load audio files and plays randomly when play button is clicked. You must have different button for each operations.
6. What do you mean by method overloading and overriding in Java? Explain with the help of example to show the difference.
7. What is Exception handling in Java? What are the constructs provided by Java for exceptional handling?
8. What are the different layout managements in AWT?

The end.

PURBANCHAL UNIVERSITY

V SEMESTER BACK-PAPER EXAMINATION-2006

LEVEL : B. C. A. (Bachelor of Computer Application)

SUBJECT : BCA304CS, Advanced Programming

Full Marks: 60

Pass Marks: 24

TIME: 03:00 hrs.

Candidates are required to give their answers in their own words as far as possible.

Figures in the margin indicate full marks.

GROUP-A: LONG-ANSWER TYPE QUESTIONS

Attempt any TWO questions.

[2×12=24]

- Q. [1] ✓ Write complete code to create GUI for an application program whose snapshots is as shown in the figure alongside.

The screenshot shows a Java Swing window titled "My Pride, My PU". Inside the window is a "Sum Calculator" applet. The applet contains three text input fields: "Number 1:" with the value "10", "Number 2:" with the value "20", and "SUM:" with the value "30". At the bottom of the applet are two buttons: "OK" and "CANCEL".

Your program should add the integer values entered in first and second TextFields and Displays the sum in the last TextField on Clicking of "OK" Button. Whenever you click "CANCEL" Button, your program should terminate displaying "Thank U" message either in the console or in Dialog Box.

Contd. ...

(2)

- Q. [2] Write Complete code for Network based Java program using with you can chat between two different terminals of Network. Your client side of chat program should establish connectivity with server side of your chat program which is running on machine 192.168.1.199 and which is listening at port no 7777. Your program should transmit the text types in client console to server console and vice versa. Whenever, user in server console types message "Bye" and then transmits this message, your client program should disconnect from server on receipt of that message.
- Q. [3] Explain the steps of creating a typical RMI program in brief. Develop complete code for a sample program to fit the following scenario:
"A Computer having Internet Address of 192.168.1.104" consists of a method named meth1(). Some machine in the network is going to invoke this method. Whenever this method gets invoked, it should return String named "My Pride, My PU" to the machine which had invoked this method. The client machine on receipt of this String message from server should print it in its console. Assume that both client and server machines are on the same LAN and your RMI bootstrap loader has been started to receive the incoming connection request at port no 7777.

GROUP-B: SHORT-ANSWER TYPE QUESTIONS

Attempt any SIX questions.

[6×6=36]

- Q. [4] Write complete code for an Application Program that should contain following classes
- [i] Main
 - [ii] Add
 - [iii] Sub

Contd. ...

(3)

Pass two numbers from Main Class to Add and Sub class constructor. Call the methods In Add and Sub class methods that should do their respective job and return the result To the Main Class. The Main Class should in turn print that two results in its console.

- Q. [5] Differentiate methods and constructor. Is it possible for a class to have more than one constructor? If so, How? What are the instance variables and local variables? What are the default values of integer type variable and string type instance variable? Illustrate with an example.
- Q. [6] What are exceptions? What are the advantages of Exception handling? How does it save the life of any Java program? Give an example to support your answer that contains try, catch and finally blocks.
- Q. [7] Write a sample program using Java that should do following:
- [i] Create a table named emp(id number, name varchar(20),addr varchar(20))
 - [ii] insert 3 sets of record in above table.
 - [iii] Delete a record from above table for person whose id= 1
- Q. [8] What are Applets? Explain Life Cycle of a typical Applet Program. What are the various security restrictions imposed by an Applet program? Explain.
- Q. [9] Write complete code for an Applet program and its corresponding HTML file such that the applet should draw a Rectangle and your name inside that Rectangle. Pass the values for width, height of rectangle and your name as well from the HTML file.
- Q. [10] Assuming that more than one object has been registered in RMI bootstrap registry, how will you obtain each object name from the bootstrap registry? Write necessary code fragment to support your answer. Is it possible to register two different objects with same name in the bootstrap registry? Justify.