



[4386] – 201

Seat No.	
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**P.G.D.C.A. (Semester – II) Examination, 2013**  
**201 : VISUAL BASIC**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

***Instruction : All questions are compulsory.***

1. a) Explain important properties of following controls : **10**
- 1) Scroll Bar
  - 2) Picture Box
  - 3) Text box
  - 4) Form
  - 5) Command button
- b) Write short notes on **(any two)** : **10**
- 1) Scope of a variable
  - 2) Loops in VB
  - 3) ADO
  - 4) Common Dialog Box.
2. a) Accept 15 numbers from the user and print maximum and minimum of them. **5**
- b) Take a textbox and three vertical scrollbar. Change the color of text box according to changing scrollbar. **5**
- c) Write a VB code to accept a string and check whether it is palindrome or not. (Without using function) **5**
- d) Write a VB function to print factorial of a given number. **5**

P.T.O.



3. What will happen (**any 5**) : **10**
- 1) If sorted property of combobox is true.
  - 2) If shape property of shape is set to 2.
  - 3) If top property label is 200.
  - 4) If multiline property of textbox is false.
  - 5) If windowstate property of label is true.
  - 6) If Autosize property of label is true.
  - 7) If CauseValidate property of textbox control.
4. Explain the following (**any two**) : **10**
- a) Control Array
  - b) Loops in Visual Basic
  - c) Date functions (any four)
  - d) Event Driven Programming
  - e) Common Dialog Box.
5. Solve **any two** from the following : **10**
- 1) Write a code to accept 15 numbers from the user and find number of odd and even number from them.
  - 2) Design an interface in which take one TextBox and 1 Combobox. Fill the combobox with numbers from 1 to 10. Write a code to increase the font size of entered text in Textbox based on combobox.
  - 3) Assume database Payroll and table is Emp\_mast (empid, emp\_nm, sal, designation, dept). Write a code for adding, deleting and saving the records using ADODB.



[4386] – 302

Seat No.	
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**P.G.D.C.A. (Semester – III) Examination, 2013**  
**302 : ORACLE**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Instructions:** 1) Q. 1 and Q. 5 are **compulsory**.

2) Solve **any two** questions from the remaining.

3) Figures to the **right** indicate **full** marks.

1. Consider following table structure to write SQL queries.

**20**

Emp table

empno number (3), ename varchar2(30), sal number (4), comm number(3), job varchar2(10), deptno number(2), joindate date, address varchar2(30), mgr number(3).

Dept table

deptno number(2), dname varchar2(30), location varchar2(30)

- Display employee information of people staying in Pune city.
- List employee name, job and salary of employees in department no. 10.
- Display all employees joined the organization in the month of December.
- Display name of the department having highest no. of employee.
- Display clerks having salary more than 3000.
- Display department wise sorted employee list.
- List employees working in "Accounts" department.
- Display name of the person getting highest salary.
- Display name of the employees not getting commission.
- Write command to create table emp with proper constraints.

P.T.O.



- 2. a) Write PL/SQL block which will accept a number and print whether that number is odd or even. 10
- b) Explain use of Select statement. 10
- 3. a) Explain a stored procedure which will accept empno as parameter and will return his salary. 10
- b) Write a user defined function which will return name of the president of that organization. 10
- 4. a) Explain with suitable example exception handling. 10
- b) Explain how sub queries are used with examples ? 10
- 5. Write short notes (**any two**) : 10
  - a) Update statement
  - b) Data types
  - c) Aggregate functions
  - d) Constraints.



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Seat No.	
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**P.G.D.C.A. (Semester – III) Examination, 2013**  
**302 : OBJECT ORIENTED PROGRAMMING WITH JAVA (OLD)**  
**(2005 Pattern)**

Time : 3 Hours

Max. Marks : 80

**Instructions :** 1) Question no. 1 is **compulsory**.  
2) Solve **any four** from the **remaining**.  
3) Question no. 1 carries **20** marks and remaining have **15** marks **each**.

1. A) Which of the following statements are true ?
  - 1) The default constructor has a return type of void
  - 2) The default constructor takes a parameter of void
  - 3) The default constructor takes no parameters
  - 4) The default constructor is not created if the class has any constructors of its own
- B) Which of the following statements are true ?
  - 1) Constructors are not inherited
  - 2) Constructors can be overridden
  - 3) A parental constructor can be invoked using this
  - 4) Any method
- C) Which of the following statements are true ?
  - 1) A method cannot be overloaded to be less public in a child class
  - 2) To be overridden a method only needs the same name and parameter types
  - 3) To be overridden a method must have the same name, parameter and return types
  - 4) An overridden method must have the same name, parameter names and parameter types

P.T.O.



D) Which of the following statements are true

- 1) constructors cannot be overloaded
- 2) constructors cannot be overridden
- 3) a constructor can return a primitive or an object reference
- 4) constructor code executes from the current class up the hierarchy to the ancestor class

2. Write Java code for following

Create a class Athlete which extends Sport and implements an interface Playable.

[Assume necessary data]

Write parameterized constructors for each class.

Overload and Over ride “canPerform” method.

Create object of Athelete and call all methods which you have written.

3. Write a java program which have three scroll bars representing Red, Green and Blue colors ? Write an event to change background color of the Frame when the scroll bars' tab is moved.
  4. Write a program to accept ten integer numbers from the user and arrange them in ascending order and print them.
  5. Write a class which can copy picture file. Write demonstration program also.
  6. Write short note **(any three)** :
    - A) classpath
    - B) interface
    - C) final keyword
    - D) stream.
-



[4386] – 101

Seat No.	
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**P.G.D.C.A. (Semester – I) Examination, 2013**  
**101 : FUNDAMENTALS OF INFORMATION TECHNOLOGY**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Note :** 1) Question Nos. 1 and 6 are **compulsory**.  
2) Attempt **any three** from remaining.

- |   |           |
|---|-----------|
| 1. A) Define computer. Explain different types of computer.               | <b>10</b> |
| B) Explain EBCDIC in brief.   | <b>4</b>  |
| 2. A) Define software. Explain various types of software with example.    | <b>7</b>  |
| B) Define operating system. Explain the functions of operating system.    | <b>7</b>  |
| 3. A) Explain universal logic gates with truth table.                     | <b>7</b>  |
| B) Discuss various computer network topologies.                           | <b>7</b>  |
| 4. A) Explain any two output devices.                                     | <b>7</b>  |
| B) Compare and differentiate between Compiler, Interpreter and Assembler. | <b>7</b>  |
| 5. A) Explain memory management techniques – segmentation, paging.        | <b>7</b>  |
| B) Explain OSI model in detail.   | <b>7</b>  |
| 6. Write short notes ( <b>any two</b> ) :                                 | <b>14</b> |
| a) Round Robin  |           |
| b) Any two input devices  |           |
| c) Virus  |           |
| d) E-mail.  |           |



[4386] – 102

Seat No.	
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**P.G.D.C.A. (Semester – I) Examination, 2013**  
**102 : 'C' PROGRAMMING**  
**(2008 Pattern)**

Time : 3 Hours

Total Marks : 70

**Note :** i) Question No. 1 is **compulsory**.  
ii) Solve **any five** from remaining questions.

1. What will be the outputs ? Give explanation (**any four**).

**10**

a) # define CUB (X)X \* X \* X

```
main ( )  
{  
    int a, b ;  
    a = 2 ;  
    b = CUB (a + + + + a);  
    printf ("% d % d ", a, b);
```

b) Void main ( )

```
{  
    int a = 41 * b;  
    b = & a  
    * b = 5 ;  
    printf ( "% d %d", a, b);  
}
```

c) Void main ( )

```
{  
    int i;  
    for (i = 1; i < 5 ; i + +)  
        printf ("%d", + + i);  
}
```

P.T.O.





```
d) Void main ( )
{
    char str [ ] = "INDIA";
    printf ("% s \n % s", str, str+2);
}
```

```
e) Void main ( )
{
    int a = 0, b = 1, c = 4, d;
    d = if (a != 0 ? b : c)
    printf (" % d, % d", a, d);
}
```

- 2. a) Write a program to print factorial of given number using recursion. **6**
- b) Write a program to find highest divisible factor of given number. **6**
- 3. Write a program to read source file and copy only capital letters into destination file. **12**
- 4. a) Write a program to accept 3 \*3 matrix element and print sum of all elements. **6**
- b) Write a program to accept two strings and check which string is greater. **6**
- 5. Write a program to accept a string and a character through command prompt. And find how many times character occurs in given string. **12**
- 6. Create a structure of employee as empid, empname, department. Write a program to accept and print information of five employee. **12**
- 7. a) Write a program to display pattern. **6**  
    Aa  
    Aa Bb  
    Aa Bb Cc  
    Aa Bb Cc Dd
- b) Write a program to find how many times given number occurs in given array. **6**



[4386] – 202

Seat No.	
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**PGDCA (Semester – II) Examination, 2013**  
**202 : JAVA**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Note :** i) Question 1 and 7 are **compulsory**.  
ii) Solve **any four** from the remaining.

1. Solve the following :

6

a) Which statements are true ?

- i) The size of operator is not keyword.
- ii) Wrapped classes are classes that allow primitive types to be accessed as object.
- iii) Null is a keyword in Java.

b) Which statements are true ?

- i) A static method may be invoked before even single instance of the class is constructed.
- ii) Final Modifier can appear before a class or a method but not before a variable.
- iii) A public member of a class can be accessed from anywhere in a Java Application.
- iv) Thread is the smallest unit of an executable code in a program.

c) Which statements are true ?

- i) Class can contain both static and non-static methods
- ii) Constructor can be virtual
- iii) Java is pure object oriented language
- iv) Java support multiple inheritance.

P.T.O.



- d) When thread will die ? (Select correct answer)
    - i) Execution on run ( ) method ends
    - ii) Sleep ( ) is called
    - iii) Wait ( ) is called
    - iv) Execution of thread's constructor ends.
  
  - 2. Write a Java program to find sum of integers from command line argument and count invalid integers. (use exception handling) 14
  
  - 3. Write a Java program which calculate factorial of a given number. 14
  
  - 4. Write a Java program using awt to display current date and time. 14
  
  - 5. Write a threaded applet which will display different shapes. Shapes will change after 5 seconds randomly. 14
  
  - 6. Write a Java program to demonstrate use of super keyword in Java. 14
  
  - 7. Write short note on **(any two)** : 8
    - a) Overloading vs overriding
    - b) Applete
    - c) Object oriented concepts
    - d) Data types in Java.
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[4386] – 301

Seat No.	
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**P.G.D.C.A. (Semester – III) Examination, 2013**  
**301 :SOFTWARE ENGINEERING AND BUSINESS PROCESS**  
**(2008 Pattern)**

Time : 3 Hours

Total Marks : 70

- Note :** i) Question 1 is **compulsory**.  
ii) Attempt **any five** from remaining.  
iii) Draw **neat diagrams wherever** required.  
iv) **Neat diagram carry equal** marks.

1. Sneha Gas is a firm engaged in distribution of LPG cylinders to their customers. The owner of the firm has decided to develop computerized system for the routine day to day transactions. He wants to provide quick services and response to the customers. He is also interested to get various reports required to take decision.
  - a) Draw first level DFD 6
  - b) Draw ERD 6
  - c) Design Master Data entry screen for customer registration. 4
  - d) Design payment receipt format. 4
2. Design following reports to be generated from sales and purchase system. 10
  - a) Purchase Order (PO) to supplier
  - b) Quotation to customer.
3. Explain various steps of system development life cycle. 10

P.T.O.



4. Draw the decision tree and decision table for the following : 10

Income tax is computed for salaried person as follows :

If salary is  $< 10,000/-$  then No tax

If salary is  $\geq 10,000/-$  and  $< 20,000/-$  then 10% tax

If salary is  $\geq 20,000/-$  and  $< 30,000/-$  then 15% tax

If salary is  $> 30,000/-$  then 20% tax

For physical disabled person – 10% rebate in tax.

5. What are the skills that a system analyst should possess ? Explain. 10

6. Explain various types of system. 10

7. Write short notes on **(any two)** : 10

1) Spiral model

2) Types of feasibility study

3) Fact finding techniques.



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Seat No.	
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**P.G.D.C.A. (Semester – III) Examination, 2013**  
**303 : UNIX (Old)**  
**(2005 Pattern)**

Time : 3 Hours

Max. Marks : 80

**Note :** A) *All questions are compulsory.*  
B) Write **both** Sections on **same** answer sheets.

SECTION – I

1. Explain the following commands with example (**any five**) : **10**
  - A) mkdir
  - B) sleep
  - C) ln
  - D) mv
  - E) wc
  - F) nice.
  
2. Answer **any two** : **10**
  - A) Explain Inter-user communication commands.
  - B) Explain mail command with example.
  - C) Explain the egrep command with example.
  
3. Write Unix commands (**any five**) : **10**
  - A) Print number of words in file file1.
  - B) Move file “m1” from current directory to “d1” directory.
  - C) Display the month of the year.
  - D) Display all ordinary files in current directory.
  - E) Stop incoming messages from user.
  - F) Send message “welcome” to all the users currently logged in.
  
4. Explain the concept of command line argument in shell programming. **10**

P.T.O.



SECTION – II

5. Solve **any four** :

**40**

- A) Write a shell script to print prime numbers between 1 and 200.
- B) Write a shell script which accept two numbers as command line arguments and print tables of all numbers between given two numbers.
- C) Explain Unix file structure.
- D) Write shell script to check repeatedly whether user “u1” is logged in and as soon as he/she logs in send message “Congratulations!”.
- E) Write awk program to print first word and last word of each line from abc.txt file.

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[4386] – 401

Seat No.	
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**P.G.D.C.A. (Semester – IV) Examination, 2013  
401 : DATA STRUCTURES AND ALGORITHMS  
(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

- Note :** i) Solve **any 5** questions.  
ii) Write structure definitions.  
iii) Answer **all** sub questions of a question at **one** place.

1. A) Convert the following infix form to its prefix form :

$$A * (B + C) / D - E$$

Show the contents of both the stacks at each step in a tabular form. (7)

B) Evaluate the following postfix form :  $AB + CDE / + *$

where  $A = 7, B = 5, C = 4, D = 3, E = 2$ .

Show the contents of the stack at each step in a tabular form. (7)

2. A) Write a function that returns total count of nodes in a Doubly linked list. (7)

B) Write a function to delete an element in a linear queue of characters implemented as a linked list. (7)

3. A) Write functions for pre-order and post-order traversal of Binary Search Tree. (7)

B) Compute row major and column major address of the member nos [6][8] of a 2-d array nos [10][10] where base address of the array is 200 and each member occupies 2 bytes of memory. (7)

4. A) Write a function that prints data of nodes of a single linear linked list in reverse order. (7)

B) Write a program for stack implementation using arrays (7)

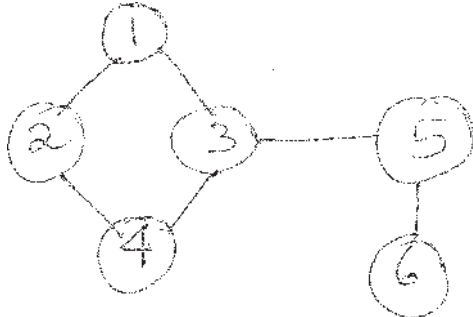
P.T.O.





5. Consider the following graph.

(14)



- a) Write adjacency matrix
- b) Write adjacency list
- c) Generate the output of Breadth First Search (BFS) when starting vertex is 1.
- d) Generate the output of Depth First Search (DFS) when starting vertex is 1.
- e) Write in degree of each vertex.

6. A) Design Huffman's tree for the following message :

“Competition”. What kind of tree is a Huffman's tree ?

(7)

B) Give the steps for sorting following numbers using Bubble sort :

3 9 5 2 4 8 .

7





[4386] – 402

Seat No.	
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**P.G.D.C.A. (Semester – IV) Examination, 2013**  
**402 : PRINCIPLES AND PRACTICES OF MANAGEMENT AND**  
**ORGANIZATIONAL BEHAVIOUR**  
**(2008 Pattern)**

Time : 3 Hours

Max. Marks : 70

**Note :** i) *Question 1 is compulsory.*  
ii) *Solve any 3 from the remaining.*

1. a) What is planning ? Explain different steps in planning. 10  
b) Explain contributions made by Taylor in detail. 15
2. Define co-ordination. Explain its nature and scope in detail. 15
3. What are functions of management ? Are they relevant to IT industry ? 15
4. Define motivation. Explain Maslow's Theory of Motivation in details. 15
5. What is 'conflict' ? Explain different methods of resolving conflict. 15
6. Explain various types of 'Leadership' with suitable examples. 15
7. Write short notes (**any three**) : 15
  - i) M.B.O.
  - ii) Johari window
  - iii) Transactional Analysis
  - iv) Team Building.



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Seat No.	
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**P.G.D.C.A. (Semester – IV) Examination, 2013**  
**401 : SOFTWARE ENGINEERING (Old)**

Time : 3 Hours

Max. Marks : 80

**Instructions:** 1) Question Nos. 1 and 7 are **compulsory**. Solve **any four** question nos. 2 to 6.  
2) Make assumptions, **if necessary**.

1. Consider that a computerized system should be developed for accounts section of a college. Students pay fees in installments. A receipt is given to students each time they pay fees. Every month a report is generated for balance fees. The students with balance fees are reminded.
  - a) Draw a DFD up to first level 10
  - b) Draw ERD 5
  - c) Design the receipt. 5
2. Explain the role of system analyst. 10
3. Explain the difference between Waterfall Model and Spiral Model with proper examples. 10
4. Design a data entry screen for opening a new bank account. 10
5. Explain with example, how will you validate the new values entered through data entry screen for students admission form. 10
6. An HR-department of an organization publishes an advertise for various posts. Applications received are scrutinized and call letters are sent to the eligible candidates. The performance of every interviewee is judged by a panel of five members. They give marks on the basis of the candidate's performance. The result is prepared on the basis of average of marks given by panel members. Offer of appointment letter is sent according to requirement in the organization and to those who fulfill the minimum criteria. Some of them accept and then the appointment letter is given to them. These candidates join their duties in the organization. Draw a state transition diagram for the above case. 10

P.T.O.



7. Explain the importance of analysis phase in SDLC. 10
8. Write short note on **(any four)** : 20
- a) System Requirement Specifications
  - b) Importance of documentation
  - c) CASE
  - d) Code-less design
  - e) Controlled De-Normalization
  - f) Interface Design
  - g) System Flow Chart.
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Seat No.	
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**P.G.D.C.A. (Semester – IV) Examination, 2013**  
**402 : BUSINESS APPLICATIONS**  
**(2005 Pattern) (Old)**

Time : 3 Hours

Max. Marks : 80

**Instructions :** 1) Q. 6 is compulsory.

2) Solve **any 3** out of remaining.

3) **All** questions carry **equal** marks.

1. State Bank of India wants to computerise its saving and fixed deposit system. Being software consultant, discuss the database requirements pertaining to the development of these applications in brief.
2. What is BOM ? How it is useful for material requirement planning ?
3. Discuss various rules for calculation of payslip ? Draw a layout of payslip and bank-statements of payroll system.
4. Design database, data-entry forms, MIS reports to the multi-utility hospital management system.
5. Explain the raw material rejection analysis report. How it helps purchase department ?
6. Write a short note on **(any four)** : **20**
  - a) Ratio analysis
  - b) Distributed processing
  - c) e-Banking
  - d) EBQ
  - e) Stock ledger.