

Enrollment Number : \_\_\_\_\_

## Dr. Babasaheb Ambedkar Open University

Term End Examination January-2015

<b>Course</b>	: BCA	<b>Numerical Code: 0065</b>
<b>Subject Code</b>	: BCA - 401	<b>Numerical Code: 0540</b>
<b>Subject</b>	: Visual Windows Programming (Visual Basic)	<b>Total Marks : 70</b>
<b>Date</b>	: 25/01/2015	<b>Time : 03.00 to 06.00</b>

---

### Section A (45)

Attempt any 3 of the following:

1. Explain integrated development environment.
2. Explain if-else then statement with proper example.
3. Explain while loop in detail and print following pattern using loop.  
1  
1     2  
1     2     3  
1     2     3
4. Explain following methods in detail.  
I. Show & hide  
II. Load & unload
5. Explain properties and methods of each control in visual basic.

### Section B (25)

Write short notes on any four.

1. Explain advantage and disadvantage of visual basic.
2. Write a program in VB to find whether number is odd or even.
3. Explain array in detail with suitable example.
4. What is function? Explain any two in built function.
5. Write a program to print factorial of given no.
6. Explain combo box.

### Section C

(A) Choose correct answer. (10)

1. 1 twips = \_\_\_\_\_ inch.  
(A) 1240 (B) 1440 (C) 1340 (D) 1140
2. Pset is \_\_\_\_\_ tool.  
(A) Drawing (B) Formatting (C) Input (D) Output
3. By default variables are passed by \_\_\_\_\_ in subroutine.  
(A) Value (B) Reference (C) Address (D) None
4. \_\_\_\_\_ determines the order in which multiple object appear on screen.  
(A) Zorder (B) Porder (C) Xorder (D) A & B both
5. When variable is declared inside code then it has \_\_\_\_\_ level scope.  
(A) Procedure (B) Block (C) Module (D) Global

- 6 In visual basic at \_\_\_\_ mode code changes are allowed.  
 (A) Run (B) Compile (C) Stop (D) None of above
- 7 SQL stands for \_\_\_\_\_.  
 (A) Structure query language (B) Structured query language  
 (C) Sequential query language (D) None
- 8 \_\_\_\_\_ is not a user initiated event.  
 (A) Closing program (B) Pressing key (C) Clicking mouse (D) Timer started
- 9 When user modifies in a text box then \_\_\_\_\_ even is imitated automatically.  
 (A) Setfoucus (B) Change (C) Lost focus (D) Click
- 10 \_\_\_\_\_ statement tell VB to continue execution with the line that generated error.  
 (A) Resume (B) Resume next (C) Resume label (D) goto

**(B) Fill in the blanks/true false/one statement answer.**

**(10)**

1. Crystal report is \_\_\_\_\_ package with V.B.
2. Define control array.
3. Procedures use full in \_\_\_\_\_ task.
4. \_\_\_\_\_ gives focus to object, which is used in method call.
5. Checkbox act as \_\_\_\_\_ control.
6. State true/false: is radio button is known as combo button?
7. State true/false: wheter .WMF file is accepted by image control?
8. \_\_\_\_\_ Control allows to wait for specified length of time.
9. ODBS stand for \_\_\_\_\_.
10. Deine field.

\_\_\_\_\_

Enrollment Number : \_\_\_\_\_

## Dr. Babasaheb Ambedkar Open University

Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA - 402	Numerical Code: 0541
Subject	: System Analysis and Design	Total Marks : 70
Date	: 27/01/2015	Time : 03.00 to 06.00

---

### Section A (45)

Attempt any 3 of the following:

1. Explain system development life cycle with its stages.
2. Explain waterfall model with diagram.
3. Explain ERD & ERM with one example.
4. What is a case tool? Explain in detail.
5. Discuss rapid application development, phase development and prototyping.


### Section B (25)

Write short notes on any four.

1. Explain advantages and disadvantages of spiral model.
2. What is data flow diagram & explain its shapes.
3. Explain CASE tool as toolset.
4. Describe advantages and disadvantages of batch processing.
5. Discuss system characteristics.
6. Role of system analyst.

### Section C

(A) Choose correct answer. (10)

1. How many types of normal form?  
(A) Four (B) Three (C) Six (D) Five
2. Waterfall model also known as  
(A) Spiral model (B) Evolutionary development model  
(C) Classical life cycle (D) RAD model
3. Meaning of this symbol   
(A) Attribute (B) Entity (C) Relationship (D) Weak entity
4. How many sections in decision table.  
(A) Two (B) Four (C) Three (D) Five
5. How many parts of an interactive screen  
(A) Five (B) Seven (C) Eight (D) Four
6. Meaning of TPS  
(A) Transaction processing system (B) Transfer processing system  
(C) Translate processing system (D) Transportation processing system
7. How many types of system development methodology.  
(A) Three (B) One (C) Four (D) Six

- 8 What is SDLC?  
(A) System development life cycle (B) Software development life cycle  
(C) Structure development life cycle (D) Stage development life cycle
- 9 Meaning of DSS.  
(A) Data support system (B) Decision support system  
(C) Document support system (D) Development support system
- 10 Domain/key normal form define by  
(A) Ronald fagin (B) Raymond F. Boyce (C) E. F. codd (D) C. J. date

**(B) Give Answer in One/Two Sentence.**

**(10)**

1. Meaning of MIS
  2. Meaning of dialog box
  3. What do you mean by reverse engineering
  4. Define synchronous event
  5. What is open system
  6. What is data modeling
  7. What is moralization
  8. What is data dictionary
  9. What is centralize data dictionary
  10. What is transaction processing system
-

Enrollment Number : \_\_\_\_\_

## Dr. Babasaheb Ambedkar Open University

Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA - 403	Numerical Code: 0542
Subject	: Core Java	Total Marks : 70
Date	: 28/01/2015	Time : 03.00 to 06.00

---

### Section A (45)

Attempt any 3 of the following:

1. Write a short note on feature of java.
2. List the logical operator in java. Explain any two with truth table.
3. Explain try, catch and finally block with syntax and sample code.
4. Write a short note on thread life cycle.
5. Write a short note on how to read and write files in java.

### Section B (25)

Write short notes on any four.

1. Explain type casting in java
2. Explain while loop with syntax and flow chart.
3. Write a short note on parameterized constructors in java with sample code.
4. Explain runtime polymorphism with sample code.
5. Write a short note on "Abstract" keyword.
6. Explain border layout with diagram in java.

### Section C

#### (A) Multiple Choice Questions. (10)

1. Java supports \_\_\_\_\_.  
(A) Single line comment (B) Multi line comment  
(C) Single & multi line comment (D) Any type of comment
2. Minimum value of short data type is \_\_\_\_\_.  
(A) - 20,768 (B) + 32,768 (C) - 32,768 (D) + 20,768
3. Starting index of array is \_\_\_\_\_.  
(A) 2 (B) -1 (C) 1 (D) 0
4. To creating class object, syntax is \_\_\_\_\_.  
(A) Classname objectname;  
(B) Classname objectname = new objectname();  
(C) Classname objectname = new classname();  
(D) None of above
5. The use of "final" keyword in java is \_\_\_\_\_.  
(A) Creating constants (B) Presenting inheritance  
(C) Preventing method over ridding (D) All of above

- 6 Class variable is also called \_\_\_\_\_.  
(A) Static variable (B) Global variable (C) Local variable (D) Instance variable
- 7 Supper class of "Exception" class is \_\_\_\_\_.  
(A) IO exception class (B) Runtime exception class (C) Error class (D) Throwable class
- 8 To creating thread, which interface required by class.  
(A) Runnable (B) Thread (C) Exception (D) None of above
- 9 Which class help us in avoiding the implementation of the empty method bodies.  
(A) Thread (B) Adapter (C) Exception (D) Wrapper
- 10 To read console input, \_\_\_\_\_ required  
(A) System.out (B) System.lang (C) System.in (D) None of above

**(B) Fill in the blanks.**

**(10)**

1. Full form of JVM is \_\_\_\_\_.
2. Length of byte data type variable is \_\_\_\_\_.
3. To exist form the loop \_\_\_\_\_ statement is used.
4. The \_\_\_\_\_ keyboard is used when a function will need to refer to the object which invoked it.
5. To inherit a class in to other \_\_\_\_\_ keyword is used.
6. \_\_\_\_\_ is a collection of all abstract methods.
7. The \_\_\_\_\_ keyword is used to create a block of code that follows a try block, Whether or not a exception has occurred.
8. The value of NORM\_PRIORITY is \_\_\_\_\_ in thread.
9. The \_\_\_\_\_ event is generate when component state change.
10. The \_\_\_\_\_ event is generate when component state change.
11. For IO operation in java \_\_\_\_\_ namespace require.

\_\_\_\_\_

**Dr. Babasaheb Ambedkar Open University**

Term End Examination January-2015

<b>Course</b>	: BCA	<b>Numerical Code: 0065</b>
<b>Subject Code</b>	: BCA – 404	<b>Numerical Code: 0543</b>
<b>Subject</b>	: Mathematics Part-2 (Scientific and Statistical Computing)	<b>Total Marks : 70</b>
<b>Date</b>	: 29/01/2015	<b>Time : 03.00 to 06.00</b>

**Section A****(30)****Attempt any 3 of the following:**

1. Explain Newton Rapson method. Find the root of the equation  $x^3 - x - 1 = 0$  by Newton Raphson method correct up to 4 decimal points.
2. Using trapezoidal rule evaluate.  
 $\int_4^8 \log x \, dx$  Take  $n = 4$  (subinterval of equal width)
3. From the given pair of value of  $x, y$  find  $\frac{dy}{dx}$  at  $x = 5$   

$x$	:	0	2	4	6
$y$	:	3	3	51	195
4. Write a short note on scatter diagram. Explain perfect correlations using following data calculate correction coefficient 'r'.  
 $n = 9, \sum x = 45, \sum x^2 = 285, \sum y = 108, \sum y^2 = 1356, \sum xy = 597$
5. A company has two plants to manufacture scooters Plant I manufacture 80% of the scooter and plant II 20% for plant I 85 out of 100 scooters are rated standard and at plant-II 65 out of 100 are rated standard. If a scooter selected at random is a standard quality what's the probability that it were manufactured in plant I.

**Section B****(20)****Attempt any 4 of the following:**

1. Solve the simultaneous equation by matrix inverse method.  
 $x + 2y = 4$   
 $3x - 5y = 1$
2. From the following point  $(x, y)$  find  $\frac{dy}{dx}$  at  $x = 14$  by Newton's backward differentiation formula  

$x$	4	8	12	16
$y$	16	13	9	6
3. Can  $y = 5 + 2.8x$  and  $x = 3 - 0.5y$  be estimated regression equation? Explain your answer with suitable theoretical argument.
4. Fit a straight line  $y = a + bx$  to the following data.  

$x$	0	1	2	3	4
$y$	1	1.8	3.3	4.5	6.3
5. A fair die is tossed 7 times. We say that a toss is success if 5 or 6 appears otherwise failure what is the probability that there are exactly, 3 successes?
6. Let  $x$  &  $y$  be two random variable each taking three value  $-1, 0$  and  $1$  and having joint probability distribution.

$y/x$	-1	0	1	Total
-1	0	0.1	0.1	0.2
0	0.2	0.2	0.2	0.6
1	0	0.1	0.1	0.2
				1.00

- Find (i)  $E(x), E(y), E(x.y)$   
(ii) What is correlation coefficient  $r_{xy}$  ?

### Section C

#### (A) Choose correct answer.

(12)

- 1 Matrix A is of order  $2 \times 3$  and B is of order  $3 \times 2$  then BA is of order \_\_\_\_\_.  
(A)  $3 \times 2$  (B)  $2 \times 3$  (C)  $2 \times 2$  (D)  $3 \times 3$
- 2 Simpson's  $1/3^{\text{rd}}$  rule of integration is exact for all polynomials of degree not exceeding \_\_\_\_\_.  
(A) 4 (B) 1 (C) 3 (D) 2
- 3 The modification of gauss elimination method is \_\_\_\_\_.  
(A) Gauss method (B) Gauss Jacobi (C) Gauss Jordan method (D) Gauss siedel method
- 4 Which of the following is the most unstable average?  
(A) Mean (B) Median (C) Mode (D) Geometric mean
- 5 Newton forward interpolation is used for \_\_\_\_\_ intervals.  
(A) Equal (B) Unequal (C) Open (D) Closed
- 6 The best representative curve to the set of point is that for which E the sum of the squares of the residuals is a minimum. This is known as \_\_\_\_\_.  
(A) Curve fitting (B) Empirical relation  
(C) Linear form (D) Principles of least squares
- 7 To find the derivative at the end of the table we use \_\_\_\_\_ formula.  
(A) Newton forward differentiation formula (B) Newton backward differentiation formula  
(C) Newton forward difference formula (D) .LaGrange's interpolation formula
- 8 \_\_\_\_\_ rule is derived from newton's cotes formula.  
(A) Trapezoidal rule (B) Simpson's  $(1/3)^{\text{rd}}$  rule  
(C) Romberg's integration (D) Simpson's  $(3/8)^{\text{th}}$  rule
- 9 Each of the mn numbers constituting an  $m \times n$  matrix is called an \_\_\_\_\_ of the matrix.  
(A) Square (B) Rectangle (C) Diagonal (D) Element
- 10 The \_\_\_\_\_ correlation was developed by spearman.  
(A) Partial (B) Multiple (C) Rank (D) Positive
- 11 Standard deviation will reveal the quality of \_\_\_\_\_.  
(A) Arithmetic mean (B) Average (C) Median (D) Range
- 12 If any two rows or columns are identical in a matrix the value of the new determinant is \_\_\_\_\_.  
(A) Zero (B) One (C) Same (D) Different

#### (B) True/False

(08)

1. Statistical information is expressed in descriptive form.
2. Is a frequency distribution is positively skewed; the mean of the distribution is less than the mode.
3. The trend can be found by the method of least squares if the trend is not liner.
4. A measure of central tendency give a single representative value for a set of usually unequal values.
5. Rank correlation method was developed by karl person.
6. Correlation analysis deals with only two variables.
7. The process of numerical integration of function of a single variable is called quadrature.



8. The relationship between 3 or more variables is studied with the help of multiple correlations.

---