

(102 & A-44)

SEAT No. _____

No. of Printed Pages: 2

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SARDAR PATEL UNIVERSITY

B. C. A. Examination, 5th Semester

Wednesday, 08th November, 2017

US05CBCA01: Visual Programming through VB .NET

Time: 02:00 PM to 05:00 PM

Total Marks: 70

Note: Answer of all the questions (including Multiple Choice Questions) should be written in the provided answer book only

Q:1 Give answers of following Multiple Choice Questions [10]

[01] _____ statement is used to declare variable in vb.net.

- (A) Var (B) Dim
(C) Int (D) All of the above

[02] A Procedure that does not return a Value is called as

- (A) Sub Procedure (B) Method
(C) Constructor (D) Function

[03] The JIT is one type of _____.

- (A) Hardware (B) Compiler
(C) Measurement unit (D) Time

[04] In VB .NET, msgbox returns _____ type of data.

- (A) Integer (B) Double
(C) String (D) None of these

[05] In For loop, the default value of step is _____

- (A) 2 (B) 1
(C) 0 (D) None of these

[06] To create procedure _____ keyword is used.

- (A) Sub (B) Procedure
(C) Function (D) None of these

[07] Which event is activated when a RadioButton is selected?

- (A) CheckedChanged (B) Selected
(C) Changed (D) SelectedChanged

[08] Which method is used to savefile in RichTextBox

- (A) LoadFile (B) SaveFile
(C) SaveAll (D) None of these

[09] What is the major component of connected data architecture?

- (A) DataReader (B) DataSet
(C) DataAdapter (D) DataCommand

[10] _____ method is used to populate DataSet.

- (A) Populate (B) Fill
(C) Open (D) Store

P. T. O.

Q:2 Answer the following short questions (any Ten)

[20]

- [01] Explain CLR?
- [02] List any five operators?
- [03] List the parts of IDE.
- [04] Write down the syntax of For ... Next If.
- [05] What is procedure? How it is created in VB .NET?
- [06] Write a difference between MDI and SDI.
- [07] Write a syntax of Try.....catch statement.
- [08] How to add and delete a node in a treeview?
- [09] Differentiate between listbox and combobox.
- [10] What are the applications of ADO .NET?
- [11] What is the use of the Connection object?
- [12] What is connection string? Explain in brief.

- Q:3** [A] Write a short note on Tool box. **[06]**
[B] Write a short note on Solution Explorer and property window **[04]**

OR

- Q:3** [C] Explain CLR, CTS, and MSIL in detail. **[06]**
[D] What is an Array? Explain array declaration in VB.NET with example. **[04]**

- Q:4** [A] Explain Modules in detail. **[05]**
[B] Explain If...EndIf Structure in detail. **[05]**

OR

- Q:4** [C] Explain Message box with example. **[05]**
[D] Explain Form life cycle in detail. **[05]**

- Q:5** [A] Write a note on DateTimePicker in detail. **[05]**
[B] Explain TextBox control with its properties, methods & events **[05]**

OR

- Q:5** [C] Write down the steps to add menu on the form and explain at least five properties of it. **[05]**
[D] Explain TreeView control with its properties, methods & events **[05]**

- Q:6** [A] Explain major ADO .NET objects. **[06]**
[B] Explain the step, how can we retrieve data in DataSet? **[04]**

OR

- Q:6** [C] Explain the connected architecture of ADO.NET in brief. **[06]**
[D] Explain the steps to bind the application with the Database in ADO .NET. **[04]**

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(145 & A-55)

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No. of Printed Pages : 2

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SARDAR PATEL UNIVERSITY
BCA Examination, 5th Semester (CBCS) (Regular & NC)
Thursday, Date: 9th November, 2017
Session : Evening Time : 02:00 P.M. TO 05:00 PM

Course Code: US05BCA02

Course Title : Computer Graphics

Total Marks: 70

Q1. Multiple Choice Questions. (Attempt All)

1. _____ produce illustrations for reports for use with projectors.
a. Presentation Graphics c. Computer Art
b. Visualization d. Image Processing
2. The ratio of vertical points to horizontal points necessary to produce equal length lines in both direction is called _____.
a. Pixel c. Resolution
b. Aspect Ratio d. Persistence
3. Which one of the following is not the application of emissive type flat panel?
a. Plasma Panel c. LED
b. LCD d. None of the Above
4. _____ type has small lines or accents at the end of the main character.
a. Serif c. Symbol
b. Font d. Instance
5. In a four-level gray scale color system, White color intensity is _____.
a. 0.76 c. 1.0
b. 0.33 d. 0.67
6. _____ is defined as the distance between the baseline and the cap line of the character.
a. Character Height c. Character Body
b. Alignment d. Font
7. A _____ is applied to an object by repositioning it along a straight – line path from one coordinate location to another.
a. Reflection c. Translation
b. Rotation d. Shear
8. The region against which an object is to clipped is called a _____.
a. Clipping c. Viewport
b. Window d. Clip Window
9. Default frame rate in FLASH is _____.
a. 12 fps c. 30 fps
b. 50 fps d. 60 fps
10. _____ are like transparent sheets of acetate stacked on top of each other used to organize the artwork in your FLASH document.
a. Stage c. Layer
b. Frame d. Symbol.

(1)

(P.T.O.)

Q2. Answer the following short questions (Attempt any TEN) [20]

1. State two disadvantages of Beam Penetration method.
2. State the function of Control grid in CRT?
3. Define : i) Resolution ii) Persistence
4. Write only procedure for Boundary Fill 4 connected approach.
5. List types of line joins and explain any one in brief.
6. State the purpose of Inside-Outside test. List the methods for Inside-Outside test.
7. Define Geometric Transformation. List all 2-D Geometric Transformations.
8. Define : i) Window ii) Viewport
9. What is clipping? List out all clipping object.
10. Explain play and stop actions in brief.
11. Explain Timeline in brief.
12. Explain geturl actions to control browser network.

Q3.a. Explain applications of Computer Graphics in detail. [06]

b. Explain Raster scan display method in brief. [04]

OR

Q3.a. Explain construction and working of CRT with labeled diagram in detail. [06]

b. Write short note on Shadow Mask Method of color monitors. [04]

Q4.a. Write steps for DDA Line drawing algorithm. [06]

b. Write short note on Character Generation. [04]

OR

Q4.a. Write steps for mid-point circle generation algorithm. [06]

b. Explain any one inside-outside test in detail. [04]

Q5.a. Explain Scaling transformation in detail. [06]

b. Explain concept of Line clipping in brief. [04]

OR

Q5.a. Explain Translation transformation in detail with diagram. [06]

b. What is Text clipping? List out all types and explain it with example. [04]

Q6. Explain different types of tween animations in FLASH with examples. [10]

OR

Q6. Explain frame-by-frame and Guided motion animation with example. [10]

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SARDAR PATEL UNIVERSITY
B.C.A EXAMINATION, V SEM

Date : 10th NOV 2017, Friday

Session : Evening

Course No : US05CBCA03

Time : 02:00pm To 05:00pm

Sub: Software Engineering

Total marks : 70

Q-1 Multiple Choice Question

[10]

- i) _____ is the second step of design phase
a) Design Analysis b) System Design c) Black Box d) Detail Design
- ii) _____ is the simplest and most widely used software development model.
a) Spiral b) Prototype c) Iterative enhancement d) Waterfall
- iii) An SRS provides a reference for _____ of the final product.
a) Validation b) Xerox Copy c) Verification d) Quality
- iv) The effort can be calculate using _____ formula in single variable model.
a) $Effort = a * sizeb$
b) $Effort = a + sizeb$
c) $Effort = a * size/b$
d) $Effort = a /sizeb$
- v) The Gant chart is used for _____ method to display activities.
a) Earn value method b) Review c) UDF d) SRS
- vi) Which one is the key term used in design of a system?
a) Module b) Data c) Process d) None
- vii) In functional abstraction the module considered as _____ for detail design.
a) White Box b) Black Box c) Compiled Box d) None
- viii) In structured design methodology the hierarchy of modules is represented by the _____.
a) Flow chart b) PERT chart c) Gant Chart d) None of these
- ix) In Programming style nesting means
a) Switch b) If - then - else c) nested function d) Nested for loop.
- x) A failure is produced only when there is a _____ in the system.
a) Error b) Bug c) Fault d) Problem.

Q-2 Short Answer attempt any ten (Each carry 2 marks)

[20]

- i) Define : Software, Software Engineering, Software Process and Software Project.
- ii) List down characteristics of software process.
- iii) Explain Error distribution.
- iv) Justify the following. : " Now a day a more importance is given to SRS instead of design and coding.
- v) Justify the following : "A high quality SRS is prerequisite to high quality software"
- vi) Write short note on Time sheets.
- vii) Differentiate between system design and detailed design
- viii) Differentiate between Top - down and Bottom - up approaches.
- ix) Explain in brief Design walkthrough.
- x) Write a goal of coding
- xi) What do you mean by information hiding?
- xii) What do you mean by code reading?

- Q-3
- a) Explain design, coding and testing phase of software development
 - b) Explain prototype model

[06]

[04]

OR

- Q-3 a) Which factors are effects on quality of software [06]
b) Explain Iterative enhancement model [04]

- Q-4 a) What is SRS? Explain components of SRS. [06]
b) What is Specification language [04]

OR

- Q-4 a) Validation process of SRS [06]
b) Explain SQAP. [04]

- Q-5 What is system design? Explain how coupling and cohesion used. [10]

OR

- Q-5 What is detail design? Explain module specification techniques in detail. [10]

- Q-6 a) List all the rules to write the code in coding phase and explain any three of them. [06]
b) Explain the structured programming used in coding [04]

OR

- Q-6 a) Explain the levels of testing [06]
b) Define Error, Fault, and Failure [04]

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(114 & A-41)

SEAT No. _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY
V.V.NAGAR
INTERNAL EXAMINATION (2017)
BCA-5th Semester

COURSE:: US05EBCA01

SUB:: Basics of Unix Operating system

DATE: 11/11/2017, Saturday

MARKS:: 70

TIME: 2:00 to 4:00 PM

Q:1 Give answers of following multiple choice questions [10]

- [1] To Display the Content as it is _____ command is used.
A. Echo
B. Read
C. Both A and B
D. None of these.
- [2] For Logical AND operator _____ Command is used.
A. -a
B. -c
C. -o
D. -d
- [3] Which of the following are used as loops?
A. For
B. While
C. Both A and B
D. None of these.
- [4] Full form of sed is
A. Sequential Data
B. Stream Editor
C. Sequence Editor
D. None of these
- [5] _____ command display the status of a process.
A. ls
B. ps
C. grep
D. Cat
- [6] Which of the following is a filter program?
A. date
B. rm
C. mv
D. Grep
- [7] Unix Operating System is a _____
(A) Time Sharing Operating System
(B) Multi Tasking Operating System
(C) Multi-User Operating System
(D) All of Above
- [8] Which command can be used to display the contents of a file on the screen?
A. ls
B. grep
C. cat
D. cut
- [9] _____ directory contains executable files for most of the UNIX commands
A. Lib
B. Bin
C. Dev
D. Tmp
- [10] _____ works as a command interpreter.
A. Hardware
B. Shell
C. Kernel
D. CPU

- Q:2 Answer the following short questions (any Ten) [20]
- [1] Explain the difference between UNIX like Operating system.
 - [2] Explain cp command in brief.
 - [3] Explain -v and -c option of grep command.
 - [4] Explain use of expr for performing arithmetic operations.
 - [5] Explain quoting in brief.
 - [6] List all saving and quitting command of vi Editor.
 - [7] Explain read command in brief.
 - [8] Define: internal command. Give 2 examples of internal commands
 - [9] Define: filter. Give 2 examples of filter .
 - [10] Explain cat command in brief.
 - [11] List down Test Commands.
 - [12] State any 4 attributes displayed by -l option of ls command.
- Q:3 [a] Write a detail note on Modes of Operation of vi editor [06]
 [b] Explain pattern searching and replacement utility of vi editor. [04]
- OR**
- Q:3 [a] Write a note on Brief history of UNIX operating system. [06]
 [b] Explain File System in detail. [04]
- Q:4 [a] Explain Command line processing. [06]
 [b] Explain Input/Output Redirection in detail. [04]
- OR**
- Q:4 [a] What is path? Explain Absolute and Relative path with example. [06]
 [b] Explain Cut Command. [04]
- Q:5 [a] Explain For Loop with Syntax and Example. [06]
 [b] What is Shell script? Explain uses of Shell script and execution of shell script. [04]
- OR**
- Q:5 [a] Explain While loops with syntax and example. [06]
 [b] Explain if and case statement in LINUX. [04]
- Q:6 Explain grep command in detail. [10]
- OR**
- Q:6 Explain Sed filter in detail. [10]

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SEAT No. _____

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SARDAR PATEL UNIVERSITY

T.Y.B.C.A. (5th Semester) Examination November – 2017

US05BCA02 : Software Project Management

Date: 11/11/2017, Saturday

Time: 02:00 to 04:00 PM

Total Marks : 70

Q.1 Multiple choice questions: [10]

1. Your project _____ statement tells you what must be done, how it must be done.
A. assumption B. resource C. scope D. constraint
2. A project schedule is the _____ of when things will happen in a project.
A. specification B. order C. group D. activity
3. Projects have predetermined.
A. Time span B. Budget C. Both D. None of them
4. SLOC means _____.
A. Source Line of Control C. Second Line of Code
B. Source Line of Code D. South Line of Code
5. JPP Stands for
A. Joint Project Planning C. Jip Project
B. Job Project planning D. none of them
6. _____ are potential threat to every software project.
A. Generic risks B. Models C. Estimation D. Problems
7. Expert judgment technique is subject to _____.
A. Technical Error B. Computer Error C. Human Error D. None
8. The _____ Provides a road map for a software project manager.
A. Project schedule C. Tracking
B. Project monitoring D. Controlling
9. _____ is an activity that distributes estimated effort across the planned project duration.
A. Software project scheduling C. Controlling
B. Monitoring D. Managing
10. CPM Stands for
A. Critical Path Method C. Complete Path Method
B. Complex Path Method D. Complex Project Method

(2)

(P.T.O)

- Q.2 Attempt any ten out of twelve. [20]
1. What are the benefits of management?
 2. Define project and project management.
 3. Which are three component of project management?
 4. Which algorithmic methods are used for estimation of software?
 5. What is Risk management?
 6. Differentiate Capital Resource and Human Resource.
 7. What is WBS? What purpose it serve?
 8. List out the elements of activity diagram.
 9. Define cost in brief.
 10. What is interdependency?
 11. Define function point analysis.
 12. Define Gantt Bar Chart.

- Q.3 (a) Explain Project management lifecycle in detail. [6]
(b) What is difference between software project and other types of project. [4]

OR

- (a) Explain in detail different phase of project management. [6]
(b) Write a note on project specifications and parameter? [4]

- Q.4 (a) Explain Joint Project Planning Session. [5]
(b) Explain break down structure in detail. [5]

OR

- (a) What is Project proposal? Explain it in detail. [5]
(b) Write a note on project activity. [5]

- Q.5 What is Cost? Explain Project Cost Estimation techniques and explain them. [10]

OR

- Q.5 What is Risk? Write a note on Risk's type and Risk Identification. [10]

- Q.6 (a) Write a note on project scheduling and tracking. [5]
(b) Write a note on Graphical Reporting Tools. [5]

OR

- Q.6 (a) Explain task network and scheduling in detail. [5]
(b) Explain project monitoring and control. [5]

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SARDAR PATEL UNIVERSITY

T.Y.B.C.A. (Fifth Semester) (CBCS) EXAMINATION – 2017

US05FBCA01 : Operations Research

Date: 07/11/2017, Tuesday

Time: 02:00 to 05:00 PM

Total Marks : 70

- Q.1 Multiple choice questions: [10]
- In graphical representation the bounded region is known as _____ region.

[a] Solution	[b] feasible solution
[c] basic solution	[d] optimal
 - In LPP the condition to be satisfied is

[a] Constraints have to be linear	[b] Objective function have to be linear
[c] both [a] and [b].	[d] none of the above
 - The linear function of variables which is to be maximized or minimized is called _____.

[a] constraints	[b] basic requirements
[c] objective function	[d] none of them
 - In the simplex method for solving of LPP number of variables can be _____.

[a] Not more than three	[b] at least three
[c] at least two	[d] none of them
 - The _____ variable is added to the constraint of less than equal to type.

[a] slack	[b] Surplus	[c] artificial	[d] basic
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 - The Penalty in VAM represents difference between _____ cost of respective row/column.

[a] Two Largest	[b] smallest two
[c] largest and smallest	[d] none of them
 - In Assignment Problem the value of decision variable x_{ij} is _____.

[a] no restriction	[b] two or one
[c] one or zero	[d] none of them
 - If number of sources is not equal to number of destination in Assignment problem then it is called _____.

[a] unbalanced	[b] symmetric	[c] unsymmetric	[d] balanced
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 - Burst and Merge are types of _____ in networking.

[a] event	[b] activity	[c] arrow	[d] tools
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 - Activity which is completed before starting new activity is called _____.

[a] dummy	[b] Predecessor	[c] successor	[d] none of them
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Q.2 Attempt any ten out of twelve.

[20]

1. Define i] Unbounded solution ii] Optimum solution
2. Define Operation research.
3. Give any four models of operations research.
4. When is Big M method useful?
5. What is the condition for optimality in simplex table?
6. Differentiate graphical method and simplex method in LPP.
7. What is the Assignment problem?
8. What is travelling salesman problem?
9. What is transportation problem?
10. In brief explain problem of sequencing.
11. Define two types of events used in network analysis.
12. What is successor activity?

Q.3 [a] Note down the applications of operations research.

[4]

Q.3[b] A firm manufactures two types of products A and B and sells them at a profit of Rs. 200 on type A and Rs. 300 on type B. each product is processed on two machines G and H. type A requires 1 minute of processing time on G and 2minutes on H; Type B requires 1 minute on G and 1 minute on H. the machine G is available for not more than 6 hours, 40 minutes while H is available for 10 hours during any working day. Formulate this problem as a linear programming problem.

OR

Q.3[a] Note down the phase of operations research.

[4]

Q.3[b] Solve the below LPP using graphical method.

[6]

$$\text{Maximize } Z=40X_1+30X_2$$

Subject to:

$$3X_1+X_2 \leq 30, X_1 \leq 8, X_2 \leq 12$$

$$X_1, X_2 \geq 0$$

Q.4 [a] Write the standard form of LPP for the following LPP

[4]

$$\text{Maximize } Z = 13x_1 + 25x_2$$

$$\text{Subject to } 21x_1 + 3x_2 \leq 40, \quad 5x_1 + 2x_2 \leq 7, \quad x_1, x_2 \geq 0$$

Q.4[b] Solve the below LPP using Big-M method.

[6]

$$(1) \text{Maximize } Z = 3x_1 - x_2$$

$$\text{Subject to } 2x_1 + x_2 \geq 2, \quad x_1 + 3x_2 \leq 3, \quad x_1, x_2 \geq 0$$

OR

Q.4[a] Define slack and surplus variables with example.

[4]

Q.4[b] Solve the below LPP using simplex method.

[6]

$$\text{Max } Z=2X_1 + 4X_2$$

Subject to:

$$X_1 + 2X_2 \leq 5, \quad X_1 + X_2 \leq 4,$$

$$X_1, X_2 \geq 0$$

Q.5 [a] What is difference between transportation problem and assignment problem? [4]

Q.5[b] Obtain the initial solution of below TP using Vogel's approximation method. [6]

	I	II	III	IV	Supply
A	21	16	15	13	11
B	17	18	14	23	13
C	32	27	18	41	19
Demand	6	10	12	15	

OR

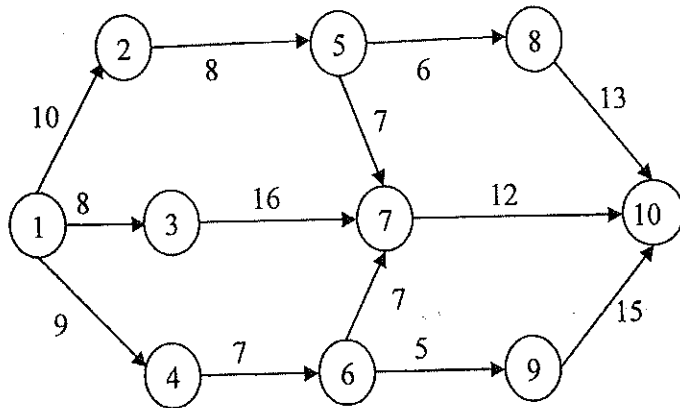
Q.5[a] Give the algorithm of LCM to obtain basic feasible initial solution to transportation problem. [4]

Q.5[b] Solve the below assignment problem. [6]

	P	Q	R	S
A	22	30	21	15
B	18	33	9	31
C	44	25	24	21
D	23	30	28	14

Q.6 [a] Write down the procedure for solving problem of sequencing with two machines. [4]

[b] Find the critical path and calculate the Total float and Free float for the following PERT diagram. [6]



OR

Q.6[a] State the rules for drawing network diagram. [4]

Q.6[b] In a machine shop 8 different products are being manufactured each requiring time on two different machines A and B are given in the table below: [6]

Product	1	2	3	4	5	6	7	8
Machine-A	30	45	15	20	80	120	65	10
Machine B	20	30	50	35	35	40	50	20

Find an optimal sequence of processing of different product in order to minimize the total manufactured time for all product. Find total ideal and elapsed time.

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