E-211

B.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA301B

PRINCIPLES OF SOFTWARE

Time : 3 *Hours*]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Answer to the point. Ensure that you have been supplied correct and complete question paper, no complaint in this regard will be entertained after the completion of examination.

Unit I

1. Explain Waterfall Software Life Cycle Model. Also list its advantages and disadvantages. **15**

2. Explain the Putnam resource allocation model in detail. **15**

Unit II

3. What is Data Flow Diagram (DFD) ? Explain Level-0, Level-1 and Level-2 DFDs considering suitable example. **15**

4. What is Coupling ? Explain different types of coupling. **15**

Unit III

5. Write notes on the following : **15**
   (a) Structured Programming
   (b) Decision Table Testing.

6. Write notes on the following : **15**
   (a) Boundary Value Analysis
   (b) Loop Testing.

Unit IV

7. What is Integration Testing ? Explain different integration testing techniques. **15**

8. What is Software Maintenance ? Explain in brief different types of software maintenance. **15**

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B.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA303B

COMPUTER GRAPHICS

Time : 3 Hours]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) What is the role of Computer in Graphics ? Explain the application of Computer Graphics.   **10**

(b) Explain Frame Buffer in detail.   **5**

2. (a) Explain CRT Monitors with its functioning.   **10**

(b) Explain Pixel, Resolution and Aspect ratio.   **5**

Unit II

3. Explain DDA and Bresenham's Line drawing Algorithms with their advantages and disadvantages.   **15**

4. Explain Ellipse Generation algorithm.   **15**

Unit III

5. A triangle with vertices (10, 20), (10, 10), (20, 10) :

(a) Translate triangle by $tx = 5$, $ty = 10$ **5**

(b) Rotate triangle about the origin by 30 degrees   **5**

(c) Scale a triangle with respect to the origin by $sx = 2$, $sy = 1.5$.   **5**

6. Explain Sutherland-Hodgeman polygen clipping Algorithms.   **15**

Unit IV

7. Explain Translation, Rotation, Scaling, Reflection in 3-D transformation with example.   **15**

8. (a) Explain Bezier and B-spline Curve. **10**

(b) Explain Rendering and Amination. **5**

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B.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA305B

DATA COMMUNICATION AND NETWORKS

Time : 3 *Hours*]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Differentiate between : **7½×2=15**

(a) Simple, Half duplex and Full Duplex

(b) Guided and Wireless media.

2. Name and explain the following used in telephone networks : **7½×2=15**

(a) Type of multiplexing
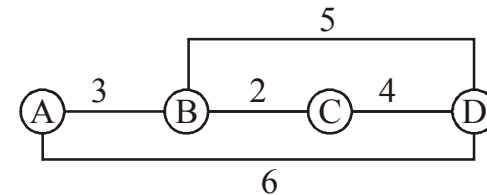
(b) Type of Switching.

Unit II

3. Explain X.25 networks. What are PADs and why are they needed in X.25 ? **15**

4. (a) Name and explain the layer of OSI reference model which deals with routing. **7½**

(b) List and explain the service categories of the ATM protocol layer. **7½**

Unit III

5. (a) Compare and contrast Flow Control and Error Control. **7½**

(b) Define CRC. Where and how is it used ? Also explain why there is no need for CRC in the simplex protocol. **7½**

6. Explain CSMA/CD medium access sublayer protocol in detail. **15**

Unit IV

7. (a) Draw comparison between Unicast, Multicast and Broadcast routing. **7½**

(b) How does load shedding helps in congestion control ? **7½**

8. Define routing and explain the working of Distance Vector Routing algorithm with the help of an example given below : **15**

A : Source Node   D : Destination Node

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B.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA307B

VISUAL PROGRAMMING

Time : 3 *Hours*]   [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Each question carries equal marks.

Unit I

1. (a) Explain the different windows of integrated development environment supported by VB IDE. **10**

   (b) Differentiate between foreach and for statement. Explain with suitable example. **5**

2. (a) Explain different types of arrays supported by VB 6.0. **5**

   (b) Give an example of three message box constants. **5**

   (c) Define flow control. Explain Select.......Case statement with suitable example. **5**

Unit II

3. Write the steps to create program to read a matrix in one list box and display the transpose of it in another list box. Explain by necessary GUI and sequence of events. **15**

4. Compare the visual and non-visual architectures. **15**

Unit III

5. (a) Explain the use of slider control and file control with suitable examples. **10**

   (b) Explain the font and color dialog bow. **5**

6. (a) Define Validation. List and explain different functions. **10**

   (b) Briefly explain how the VB projects are debugged. **5**

Unit IV

7. (a) Explain the usefulness of ADO and OlE DB for a VB programmer. **5**

   (b) Briefly explain remote data objects. **10**

8. Create a project for the Cafeteria vendor who sells Tea Rs. 20, Burgeare @ Rs. 40, Lunch @ Rs. 100 pasta @ Rs. 60. The vendor has also distributed the discount coupon of 5% and 8%. Allow the vendor to select the discount or no discount for a particular item. The vendor should be able to calculate total amount for the order. Also the total discount if any. **15**

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B.C.A. EXAMINATION, Dec. 2018

(Fifth Semester)

(B. Scheme) (Main & Re-appear)

(BCA)

BCA309B

WEB TECHNOLOGIES

Time : 3 *Hours*]   [*Maximum Marks* : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. What is .NET technology ? Explain the origin of .Net Technology.   **15**

2. Write notes on the following :
   (a) .Net types   **8**
   (b) .Net Namespaces.   **7**

Unit II

3. What is the concept of Common Language Specifications (CLS) ? Explain.   **15**

4. Explain the following :
   (a) Managed Code and Unmanaged Code **8**
   (b) Interoperability.   **7**

Unit III

5. What are various data types in C# ? Write a program in C# to compare two strings.   **15**

6. What is inheritance and polymorphism in reference of C# ? Explain by taking suitable examples.   **15**

Unit IV

7. How is data accessed with ADO .Net ? Explain the components of ADO .Net.   **15**

8. Write notes on the following :
   (a) Data adapter   **8**
   (b) Data relation.   **7**