E211

B.C.A. EXAMINATION, 2020

(Fifth Semester)

(B Scheme)

(Re-appear Only)

BCA

BCA301B

PRINCIPLES OF SOFTWARE ENGINEERING

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 software development life-cycle ? Make a detailed diagram of Waterfall model. What are its pros and cons ? **15**

2. What is team structure ? What are various types of it ? **15**

Unit II

3. Describe functional point analysis as a cost estimation technique for software project. **15**

4. (a) What is a requirement ? What are the different methods of requirements gathering ? **7½**

(b) Write a short note on conceptual data modeling techniques. **7½**

Unit III

5. (a) What is a equivalence class ? How to determine equivalent classes ? **7½**

(b) State and explain flow based testing. **7½**

6. Discuss various techniques of white box testing in details. **15**

Unit IV

7. What is integration testing ? State it. Explain the types of it with the significance of stub and drivers in each type. **15**

8. Write short notes on the following :

(a) Regression Testing

(b) Maintenance Process. **15**

E212

B.C.A. EXAMINATION, 2020

(Fifth Semester)

(B Scheme)

(Re-appear Only)

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 are benefits of Computer Gaphics in Engineering and Technology ?   **7**

   (b) Explain the following terms in detail :   **8**

      (i)   Pixel

      (ii) CRT

      (iii) Resolution

      (iv) Frame Buffer.

2. (a) What do you mean by Graphics Input Device and Hard Copy Devices ?   **8**

   (b) Give historical background of computer graphics.   **7**

Unit II

3.   Derive and explain Bresenham's circle drawing algorithm.   **15**

4.   Explain in detail Ellipse-Generating Algorithms with suitable examples.   **15**

Unit III

5.   What is Concatenation ? How does it work in Transformations ? Explain with suitable example.   **15**

6.   (a)   What is window to view port coordinate transformation ?   **7**

   (b)   Derive the composition of 2D transformation matrix for clockwise routation. **8**

Unit IV

7.   What are synthetic surfaces ? Explain their different types.   **15**

8.   (a)   Derive the parametric equation for Hermite Cubic Spline.   **5**

   (b)   Derive 3D transformation matrices for reflection about the three reference planes.   **10**

E213

B.C.A. EXAMINATION, 2020

(Fifth Semester)

(B Scheme) (Re-appear Only)

(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. (a) List and explain briefly various components of wireless WAN. What are its applications ?   **8**

    (b) Compare and contrast circuit switching and packet switching.   **7**

2. Discuss the important characteristics of various guided transmission media. Which one is better and why ?   **15**

Unit II

3. Explain the functions of different layers of wireless ATM ? Explain the different fields used in its frame format.   **15**

4. Write short notes on the following : **15**

    (a)   Repeaters

    (b)   Hubs

    (c)   Gateways

    (d)   Switches

    (e)   Bridges.

Unit III

5. Explain the working of Token Ring protocol in detail. What is the frame format used in Token Ring ? What are the limitations faced by this protocol ? **15**

6. (a)   Compare and contrast pure and slotted ALOHA. **10**

    (b)   What is Framing ? **5**

Unit IV

7. What is Routing ? Explain distance vector routing in detail. What are the problems faced by distance vector routing ? **15**

8. Write short notes on the following :

    (a)   Choke Packets for congestion control **6**

    (b)   Broadcast routing protocol. **9**

E214

B.C.A. EXAMINATION, 2020

(Fifth Semester)

(B Scheme)

(Re-appear Only)

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. All questions carry equal marks.

Unit I

1. (a) Explain VB integrated Development Environment in detail.   **10**

    (b) Explain properties window.   **5**

2. (a) Explain features of Visual basic.   **5**

    (b) Explain the types of arrays in VB and describe with an example. Also write a program to sort 20 names using arrays.   **10**

Unit II

3. (a) Define an event. What are the different types of events in VB ? **7**

(b) Compare Visual and Non-Visual Architecture. **8**

4. Create an application in VB that displays the mouse movement event in text box for mouse up, mouse down, right button clicked and left button clicked events. **15**

Unit III

5. (a) Write a VB program to create menu bar in MDI. **10**

(b) Explain Intrinsic Control in VB. **5**

6. Write an application in VB to validate the user name and password using a button submit and display a message box "Invalid username or password" if the user name or password is incorrect. **15**

Unit IV

7. Develop an application in Visual Basic to add, delete and updates record of passengers. Also, display a list of records of passengers travelling in a certain train on a particular date. **15**

8. Explain ADO data control with suitable example. **15**

E215

B.C.A. EXAMINATION, 2020

(Fifth Semester)

(B Scheme)

(Re-appear Only)

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 .Net Platform.   **15**

2. Explain the following :

    (a) Building blocks of .Net framework   **8**

    (b) .Net Namespaces.   **7**

Unit II

3. What is the concept of Common Language Runtime (CLR) ? Explain.   **15**

4. Explain the role of MSIL and Meta data in Visual studio .Net.   **15**

Unit III

5. What is Polymorphism ? Explain with example in reference of C#. **15**

6. Define array. Write a program in C# to find the largest of 10 numbers by using array. **15**

Unit IV

7. How data is accessed with ADO ? Compare ADO with ADO .NET. **15**

8. Explain the following :
   (a) Data relation **7**
   (b) Data adapter. **8**