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Roll No. ....

**E-211**

**B.C.A. EXAMINATION, Dec. 2017**

(Fifth Semester)

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

(BCA)

BCA-301-B

PRINCIPLES OF SOFTWARE

*Time : 3 Hours]*

*[Maximum Marks : 75*

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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.

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

(3-24/17)M-E-211

**P.T.O.**

### **Unit I**

1. Explain the spiral model for software development. List its advantages and disadvantages. **15**
2. Explain COCOMO model for cost estimation of software project. **15**

### **Unit II**

3. Write notes on the following : **15**
  - (a) DFD
  - (b) Data Dictionary.
4. What is Coupling ? Explain different types of coupling in detail. **15**

### **Unit III**

5. Explain the structured programming methodology in detail. List its advantages and disadvantages. **15**

6. Consider a simple program to classify a triangle. Its inputs is a triple of positive integers (say  $x$ ,  $y$ ,  $z$ ) and the data type for input parameters ensures that these will be integers greater than 0 and less than or equal to 100. The program output may be one of the following words :  
[Scalene; Isosceles; Equilateral; Not a triangle]  
Design the boundary value test cases. **15**

### **Unit IV**

7. Write short notes on the following : **15**
  - (a) Bottom-up vs Top-Down approach for software testing.
  - (b) Alpha Testing vs Beta Testing.
8. Write short notes on the following : **15**
  - (a) Maintenance Process
  - (b) Maintenance Characteristics.