Roll No. ....

BCA–602(N)

B. C. A. (Sixth Semester)
EXAMINATION, May/June, 2015

(New Course)

Paper Second

INFORMATION SYSTEM : ANALYSIS DESIGN AND IMPLEMENTATION

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

Note : Attempt questions from all Sections as directed.

Section—A

(Short Answer Type Questions)

Note : All questions are compulsory.

1. (A) What is the need of stages in Software Development Life Cycle ?   3

     (B) Define Feasibility Study. Write down the steps in Feasibility Study.   1, 2

     (C) List the cost drivers in Intermediate COCOMO Model.   3

     (D) Draw a DFD for the given expression :   3

$$[(a+c)*(b+d)]*(b+c)$$

     (E) List the advantages of Case Tools.   3

(F) Define the following terms :   1 each
  (i) Risk Prioritization
  (ii) Risk Avoidance
  (iii) Risk Mitigation

(G) Defined Qualified Association in reference of class modeling. Give example also.   3

(H) List the guidelines for effective Coding.   3

(I) What is Brainstorming ? How it differs from Group Discussion ?   1, 2

Section—B
(Long Answer Type Questions)
Note : Attempt any *two* questions.

2. (a) Draw the diagram for Software Development Life Cycle. List the stride and their corresponding reports in design phase. Also give the advantages of Software Development Life Cycle.   2, 3, 2

  (b) Discuss the relationship between International and Technical skills of system analyst.   5

3. What are the rules for constructing DFD ? Construct Level 0 and Level 1 DFD for Online Examination system.   4, 4, 4

4. What do you mean by Software Constructors ? Discuss in detail.   12

5. Consider a University database for the scheduling of class rooms for final exams. This database could be modelled as the single entity set exam, with attributes course-name, section_name, room_number, exam_id

and time. Alternatively, one or more additional entity sets could be defined along with relationship set to replace some of the attributes of the exam. entity set as :

(i) Course with attributes name, department and c-number.

(ii) Section with attributes s-number and enrollment, and dependent as a weak entity set on course.

(iii) Room, with attributes r-number, capacity and building.

Answer the following :

(a) Show an ER diagram illustrating the use of all three additional entity sets listed.   6

(b) Explain what application characteristics would influence a decision to include or not to include each of the additional entity sets ?   3

(c) When designing an ER diagram for a particular enterprise (suppose university), we have several alternatives from which to choose. What criteria should we consider in making the appropriate choice ?   3

Section—C
(Long Answer Type Questions)
Note : Attempt any *two* questions.

6. What are the characteristic of Object Oriented Paradigm ? Discuss with an example.   12

7. (a) Prepare a class diagram for two classes User and Workstation. Use one more class Directory with

an association class Authoritization. Clearly mention attribute, operation, link and multiplicity in your diagram.   5

(b) Describe three models which are used for Object Orineted Modeling. Also give the relationship among them.   7

8. (a) What do you mean by Dynamic Modeling ?   3

(b) Draw event trace, scenario and state diagram for phone (landline) call.   3, 3, 3

9. Write short notes on the following :   4 each

(a) Architecture of Case Environment

(b) Characteristic of Software Market

(c) International Standard Organisation