Roll No: | | | | | | | | | |

The Assam Royal Global University, Guwahati

Royal School of Information Technology
BCA / BSc IT 6th Semester
Semester End Examination, June 2023
Course Title: System Analysis and Design
Course Code : CAP052C602 / INT052C602

Time: 3 Hours **Maximum Marks: 70**

Note: Attempt all questions as per instructions given.
The figures in the right-hand margin indicate marks.

Section – A

1. Attempt **all questions**. (Maximum word limit 50) **2 x 8**

a. Mention the main purpose of requirement analysis.
b. List the five criteria for systems project selection.
c. Outline the different steps of Interviewing phase in information gathering.
d. How risk analysis is done in spiral mode.
e. Does 0 level DFD have any significance?
f. When maintenance phase can be skipped in product development.
g. How verification is different from validation in system design.
h. Describe two notations of Activity Diagram.

Section – B

2. Attempt **any two** of the following: **6 x 2**

a. Apply the Gantt chart with an example.
b. Compare Prototype model with Spiral model in software development process.
c. Discuss all the elements of a System.

3. Attempt **any two** of the following: **7 x 2**

a. Illustrate the Agile model with examples.
b. Write about the distributed system and centralized system.
c. Discuss the failures of Classic Waterfall lifecycle model on designing a library management system.

4. Attempt **any two** of the following: **7 x 2**

a. Draw an UML diagram for the railway ticket reservation system.
b. Explain pros and cons of using CASE tool in system design.
c. With a proper diagram, show how ER model can be implemented for a Hotel Management System.

5. Attempt **any two** of the following: **7 x 2**

a. Explain Android Studio as a good system design and analysis tool.
b. Why maintenance phase of a software design is costly? Explain taking Windows Vista as a product.
c. Design a test suit for Bubble sort algorithm. The test suit must cover all the branches and all loops should be executed at their boundaries and within their operational bounds.