Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

V SEMESTER MAKE UP B.TECH. (COMPUTER SCIENCE AND ENGINEERING)
END SEMESTER EXAMINATIONS, FEB 2022

SUBJECT: Software Engineering [CSE 3154]

REVISED CREDIT SYSTEM

(24/02/2022)

Time: 1 hour 15 minutes MAX. MARKS: 20

Instructions to Candidates:

- Answer **ALL** the questions.
- Missing data may be suitably assumed.

Part B

Q 1 a) Discuss at least 10 Agile principles in software development. (5 M)

b) Draw the diagrams for layered design with good and poor control abstraction. Explain 4 important concepts and terminologies associated with a layered design. (3 M)

c) What problems are likely to arise if two modules have high coupling? What problems are likely to occur if a module has low cohesion? (2M)

Q 2 A Railway Reservation System has two parts, Book Tickets and Cancel Tickets.

a) Give Functional Requirements in correct template format, Context Diagram, DFD at Level 1,and DFD at level 2 in for the problem, given above. (5 M)

b) Give Class Diagram and Interaction Diagrams (for any two use cases) for the problem, given above. (2 M)

c) Draw the control flow graph for the following i function named `find-maximum`. From the control flow graph, determine its Cyclomatic complexity by applying three different approaches. (3M)

```
int find-maximum(int i,int j, int k)
{
     int max;

     if(i>j) then
         if(i>k) then max=i;
                     else max=k;
         else  if(j>k) max=j
          else max=k;
       return(max);
  }
```