Reg. No ....   Name **23U436**

END SEMESTER EXAMINATION : MARCH 2023
SEMESTER 4 : INTEGRATED M.Sc. PROGRAMME COMPUTER SCIENCE
COURSE : **21UP4CRMCP12 : SOFTWARE ENGINEERING**
(For Regular - 2021 Admission)

Time : Three Hours   **Max. Weightage: 30**

PART A
Answer Any 8 Questions

1. List any two drawbacks of the FP metric.
2. List any four characteristics of a good software design.
3. List any two advantages by having functionally independent modules.
4. List any four desirable qualities of a good software engineer.
5. State any two drawbacks of exploratory style of software development.
6. List the activities involved in project risk management.
7. State any two advantages of adhering to a standard uniform style of coding.
8. Define the term syllable with respect to software documentation.
9. List the factors that favors the use of first model over second model in software maintenance.
10. State the conditions by which you can say that two modules are tightly coupled.

(1 x 8 = 8 Weight)

PART B
Answer Any 6 Questions

11. Components need to be properly classified in order to develop an effective indexing and storage scheme. Discuss any one component classification scheme.
12. Discuss the role of data dictionary in software design.
13. "A design solution that is difficult to understand would lead to increased development and maintenance cost". Give reasonings for your answer.
14. Draw the control flow graph for the following function named `find-maximum`:
```
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);
}
```
15. Discuss the path coverage strategy along with an example.
16. Suggest a suitable life-cycle model for a software project which your organisation has undertaken on behalf of certain customer who is unsure of his requirements and is likely to change his requirements frequently, since the business process of the customer (organisation) is of late changing rapidly. Give the reasonings behind your answer.

17. Explain project planning and the activities involved in project planning.
18. Explain how the principles of abstraction and decomposition are used to arrive at a good design.

(2 x 6 = 12 Weight)

PART C
Answer Any 2 Questions

19. Define critical path in an activity network. Also explain the critical path method in determining the project duration.
20. Discuss the basic concepts involved in designing user interfaces.
21. Prepare a detailed note on the coding standards and guidelines.
22. Prepare a detailed report about Spiral model and its phases.

(5 x 2 = 10 Weight)