

Roll No.

23729

**M. Tech. 1st Semester (Artificial
Intelligence & Data Science)
Examination – January, 2023**

SOFTWARE ENGINEERING

Paper : 21MTA121C4

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. **1** is *compulsory*. All questions carry equal marks.

- 1.** Write short note on the following : 4 × 5 = 20
- (i) Software Crisis
 - (ii) Risk Management
 - (iii) Failure and Faults

23729- (P-3)(Q-9)(23)

P. T. O.

(iv) Documentation

UNIT – I

2. What do you understand by Software Life Cycle and explain the following models ? 20

- (i) Waterfall Model
- (ii) Spiral Model

3. What is Software Metrics ? Explain its types in detail. 20

UNIT – II

4. What do you understand by Software Project Planning ? Explain in detail. 20

5. Explain the following : 2 × 10 = 20

- (i) Data Flow Diagrams
- (ii) Behavioural and Non-behavioural Requirements.

UNIT – III

6. Describe the following : 2 × 10 = 20

- (i) Object Oriented Design
- (ii) Function Oriented Design

23729- -[P-3](Q-9)(23) (2)

7. Give a complete description about Reliability Models. 20

UNIT – IV

8. Define Software Testing and explain the following : 20

- (i) Equivalence Class Testing
- (ii) Mutation Testing

9. Describe the following : 2 × 10 = 20

- (i) Reverse Engineering
- (ii) Software Maintenance

23729- -[P-3](Q-9)(23) (3)