**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**
**End Semester Examination, Dec 2021**

Course:  Software Engineering and Project Management          Semester:  I
Program:    MCA                                                                        Time: 03 hrs.
Course Code: CSEG7010                                                       Max. Marks: 100

**Instructions:**

### SECTION A

**1. Each Question will carry 4 Marks**
**2. Instruction: Explain in short.**

| S. No. | | Marks | CO |
|--------|---|-------|-----|
| Q1. | Explain importance Software Reengineering. | **4** | **CO1** |
| Q2. | Describe role of Software Project Manager. | **4** | **CO2** |
| Q3. | Discuss characteristics of a good SRS document. | **4** | **CO2** |
| Q4. | Suppose you were to plan to undertake the development of a product with a large number of technical as well as customer related risks, which life cycle model would you adopt? Justify your answer. | **4** | **CO3** |
| Q5. | State the user interface design principles in developing a software product. | **4** | **CO3** |

### SECTION B

**1. Each question will carry 10 marks**
**2. Instruction: Write brief notes.**

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|--------|---|-------|-----|
| Q6. | Discuss all the phases of SDLC with an example. | **10** | **CO2** |
| Q7. | Explain the use of spiral model in software development process with its pros and cons. | **10** | **CO3** |
| Q8. | Describe System Testing and its types that are usually performed on large software testing.<br><br>OR<br><br>Illustrate the risk planning and mitigation in project development. | **10** | **CO1** |
| Q9. | Assume that the size of an organic type software product has been estimated to be 35000 lines of code. Assume that the average salary of software engineers is Rs.10,000 per month. Determine the effort required to develop the software product and the nominal development time. | **10** | **CO1** |

### SECTION-C

**1. Each Question carries 20 Marks.**
**2. Instruction: Write long answer.**

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|--------|---|-------|-----|
| Q10 | Define terms 'Software' and 'Software Engineering'. "Software does not wear out". State whether this statement is true or false. Justify your answer.<br>OR | **20** | **CO1** |

| | | | |
|---|---|---|---|
| | Explain the steps and categories of software maintenance process with the help of an example. | | |
| Q11 | Discuss following:<br>   a)  SEI Capability Maturity Model<br>   b)  Work Breakdown Structure | **20** | **C02** |