

## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: MTech CFD

Subject (Course): Software Engineering and Project Management

Course Code : MPTI811

No. of page/s:

Semester – III

Max. Marks : 100

Duration : 3 Hrs

**Instructions:** Attempt all questions from **Section-A** (each question carrying **5 marks**); **-B** (each question carrying **10 marks**) and from **Section-C** (each question carrying **20 marks**).

### SECTION-A (4 x 5 = 20)

1. What is 4 P's Concept?
2. Explain requirement elicitation techniques?
3. Define BVA and ECP?
4. Differentiate between the following:
  1. Cohesion, 2. Coupling

### SECTION-B (4 x 10 = 40)

5. Explain spiral model and compare it with win-win model?
6. Name various software life cycle models and explain the differences between incremental development and rapid application development method?
7. What are the key components of Configuration Management? Explain each in details?
8. Define the term project management. Discuss in detail the various project scheduling techniques.

**Or**

What is risk analysis? Explain different type of risk analysis and how there risks can be optimize?

### SECTION-C (2 x 20 = 40)

9. Prepare at least 10 test scenario and 10 test cases for any e-commerce web application?
10. Explain in details about functional and non-functional requirements? Explain at least 5 functional and non-functional requirements?

**Or**

We are bank industry, and very keen to opt the software application for the growth of our business. The following are the main requirements:

Account opening, Transactions, Demand Draft, Loan and Fixed deposit

Prepare SRS for above requirements in details.

Roll No: -----



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### SECTION-A (4 x 5 = 20)

1. Explain the need of project management?
2. What is software crisis?
3. Define Test-scenario, Test-Case, RTM, QTC and Defect report?
4. Explain verification and validation?

### SECTION-B (4 x 10 = 40)

5. Explain prototype model and RAD model?
6. How to calculate total effort devoted to software? Explain effort distribution in details?
7. What is cost estimation technique? Explain delfi and cocomo model.
8. Define the term project management. Discuss in detail the various project scheduling techniques.

**Or**

What is risk analysis? Explain different type of risk analysis and how there risks can be optimize?

### SECTION-C (2 x 20 = 40)

9. What do you mean by functional testing? Also focus on non-functional testing? Take example of e-commerce web application and find at least 10 scenario that should be test?
10. Explain different requirement elicitation techniques in detail?

**Or**

An educational industry is going to implement SAP to solve the manual process of organization. Take an example of any university and highlights the core requirements to help the requirement process.