

Total No. of Questions : 8]

SEAT No. :

**PD4103**

[Total No. of Pages : 2

**[6402]-63**

**S.E. (Information Technology)  
SOFTWARE ENGINEERING  
(2019 Pattern) (Semester - IV) (214454)**

**Time : 2½ Hours]**

**[Max. Marks : 70**

**Instructions to the candidates:**

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

- Q1)** a) Explain the golden rules for user interface design. [9]  
b) Explain the software quality guidelines and attributes of a software design. [9]

OR

- Q2)** a) What is a design? Explain architectural design pattern in detail. [9]  
b) How is interface analysis done? What parameters are considered? [9]

- Q3)** a) The project manager has obtained the following optimistic, pessimistic and most likely 9 times in weeks related to the various activities of a power project. Draw a PERT network diagram and clearly mark the critical path, also what is the probability of power project to get completed in 32 weeks? [9]

Activity sequence	Optimistic Time	Most Likely Time	Pessimistic Time
1-2	6	9	18
1-3	5	8	17
2-4	4	7	22
2-5	4	7	10
3-4	4	7	16
3-5	2	5	8
4-5	4	10	22

- b) Explain the typical problems with IT cost estimation. [8]

OR

**P.T.O.**

- Q4) a)** Construct PERT Network for the above mentioned activities. Calculate critical path for the same. [9]

ACT	Predecessor	Optimistic	Most Likely	Pessimistic
A	-	1	2	3
B	-	2	3	4
C	A	1	2	3
D	B	2	4	6
E	C	1	4	7
F	C	1	2	9
G	D, E	3	4	11
H	F, G	1	2	3

- b) What do you understand by scope of a project? What are the parameters considered in project scope statement? Explain scope statement for any software of your choice [8]

- Q5) a)** Explain McCall's Quality Factors. [9]

- b) Write a short note on : [9]

- Black Box testing
- Regression Testing
- Beta Testing

OR

- Q6) a)** Explain defect life cycle along with diagram also state the importance of defect reporting. [9]

- b) What is software testing? Design a testing strategy for a given software project, considering various testing types and their applicability. [9]

- Q7) a)** Explain Test Driven Development along with a diagram. [9]

- b) What is risk in a software project? Explain risk management and risk responses. [8]

OR

- Q8) a)** What is Software Reuse? Explain benefits and Drawbacks of software reuse. [9]

- b) Write a short note on : [8]

- JIRA
- KANBAN

