Total No. of Questions : 8]

SEAT No. :

PD4103

[Total No. of Pages : 2

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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, Q7or 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]**

i) Black Box testing

ii) Regression Testing

iii) 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]**

i) JIRA

ii) KANBAN