

G.R. No.

Paper Code: U359-144 (ESE)

**DECEMBER 2019/ENDSEM****T. Y. B. TECH. (Information Technology) (SEMESTER - V)****COURSE NAME: Software Engineering****COURSE CODE: ITUA31174****(PATTERN 2017)**

Time: [2 Hours]

[Max. Marks: 50]

**(\*) Instructions to candidates:**

- 1) Answer Q.1, Q.2, Q.3, Q.4, Q.5 OR Q.6, Q.7 OR Q.8
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1) a) Explain Prototype model. List down its merits and demerits. [6 marks]

**OR**

b) Explain incremental model. List down its merits and demerits. [6 marks]

Q.2) a) Explain different Industrial XP practices in detail. [6 marks]

**OR**

b) Explain burn down chart with diagram. [6 marks]

Q.3) a) Compare 1. functional and behavioral model.

2. Data flow diagram and State transition diagram. [6 marks]

**OR**

b) Draw DFD diagram for food ordering system up to level 1. [6 marks]

Q.4) a) Explain change control mechanism in SCM. [4 marks]

**OR**

b) Mention four uppercase tools. [4 marks]

Q. 5) a) Describe CMMI model in detail. [6 marks]

b) List down inputs to quality control process. [4 marks]

c) Discuss cost benefit analysis using example. [4 marks]

**OR**

Q.6) a) Explain cause and effect diagram, run chart and Pareto chart with example. [6 marks]

b) List down inputs to quality assurance process. [4 marks]

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c) Discuss benchmarking using example.

[4 marks]

Q.7) a) The company is bringing a new product on line to be manufactured in their current facility in existing space. The owners have identified 11 activities and their precedence relationships. Develop an AON for the project. Find Critical Path. [6 marks]

Activity ID	Description	Immediate Predecessor	Duration
A	Develop product specifications	None	4
B	Design manufacturing process	A	6
C	Source & purchase materials	A	3
D	Source & purchase tooling & equipment	B	6
E	Receive & install tooling & equipment	D	14
F	Receive materials	C	5
G	Pilot production run	E&F	2
H	Evaluate product design	G	2
I	Evaluate process performance	G	3
J	Write documentation report	H&I	4
K	Transition to manufacturing	J	2

b) Discuss different soft trends in software engineering.

[4 marks]

c) What is meant by Critical Path Method (CPM)? How to calculate it?

[4 marks]

OR

Q.8) a) An R & D project has a list of task to be performed whose time estimates are given in the table as follows

Activity Name	Predecessor	Optimistic	Most Likely	Pessimistic
A	-	2	5	14
B	-	1	10	12
C	A	0	0	6
D	A	1	4	7
E	C	3	10	15
F	D	3	5	7
G	B	1	2	3
H	E.F	5	10	15
I	G	3	6	9

Calculate expected time and variance. Draw project network diagram. Find critical Path, and find the probability that the project is completed in 25 days. [6marks]

b) Explain hype cycle in detail.

[4 marks]

c) What is meant by network diagram? What are different ways of drawing the network diagram? [4 marks]

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