Total No. of Questions : 6] **SEAT No. :** [ ]

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T.E./Insem.-643

T.E (Information Technology)

SOFTWARE ENGINEERING & PROJECT MANAGEMENT

(2015 Pattern) (Semester - I)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates:-

1) ***Solve any 1 out of Q1 or Q2 and.***
2) ***Solve any 1 out of Q3 or Q4 and.***
3) ***Solve any 1 out of Q5 or Q6.***
4) ***Draw neat diagrams and assume suitable data wherever necessary.***
5) ***Figures to the right indicate full marks.***

Q1) a) What is the difference between hardware and software? Explain bath tub curve. **[5]**

b) Explain the generic process model of software development with the diagram. **[5]**

OR

Q2) a) Explain with an example spiral model with its merits and demerits. **[5]**

b) Robert was hired to create a new purchasing system. He completed the project in the following order. **[5]**

- analyzed the existing system
- designed a new system
- wrote the code
- bought the hardware
- built the system

After testing he presented the new system to the client.

Which process model is suitable for above example? Justify your answer.

Q3) a) Explain in detail Requirement Engineering functions. **[5]**

b) Explain various stakeholders involved in the project along with their viewpoints. **[5]**

P.T.O.

OR

Q4) a) Explain with an diagram prioritizing software requirements based on Kano Analysis. **[5]**

b) Draw and explain use case diagram for library management system. **[5]**

Q5) An R & D project has a list of task to be performed whose time estimates are given in the table as follows: **[10]**

Activity	Activity Name	Optimistic	Most Likely	Pessimistic
1 - 2	A	4	6	8
1 - 3	B	2	3	10
1 - 4	C	6	8	16
2 - 4	D	1	2	3
3 - 4	E	6	7	8
3 - 5	F	6	7	14
4 - 6	G	3	5	7
4 - 7	H	4	11	12
5 - 7	I	2	4	6
6 - 7	J	2	9	10

Calculate expected time and variance. Draw project network diagram. Find critical Path, and find the probability that the project is completed in 19 days. Assume Z (1.34) = 0.4099

OR

Q6) a) Explain Work Breakdown Structure with an example. **[5]**

b) Explain typical problems with IT cost estimates. **[5]**