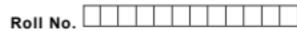


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Total No. of Questions : 16

Total No. of Pages : 02

(Sem.-7)

# B.Tech. (Ind. Engg. Spl. in TQM) ( SIX SIGMA Subject Code : IEM-701 M.Code : 71695

Time : 3 Hrs.

Max. Marks : 40

### INSTRUCTIONS TO CANDIDATES :

- 1. Attempt All EIGHT questions from SECTION-A carrying TWO marks each.
- Attempt any SIX questions out of EIGHT from SECTION-B carrying FOUR marks each.

## SECTION-A

#### Answer briefly :

- 1. Define Six Sigma. What do you see as the evolution of Six Sigma?
- 2. What are the define phase deliverables?
- 3. What is tollgate review? Who should attend tollgate meetings?
- 4. Differentiate between null hypothesis & alternative hypothesis.
- 5. How do organizations measure and provide statistical evidence of an improvement?
- 6. How do organizations assess the adequacy of risk mitigation plans?
- 7. What is the difference between DMAIC and DMADV in Six Sigma?
- 8. Write short note on integrating Six Sigma with Lean philosophy.

1 M-71695

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#### SECTION-B

- 9. What is DMAIC methodology and why is it important to Six Sigma?
- Why do we need SIPOC in process improvement? Explain 7 steps to create SIPOC diagram in Six Sigma.
- 11. Describe the elements of a process map used for evaluating the current state of a system.
- 12. Discuss the FMEA method for analysis of root causes of defects giving a suitable example.
- 13. What is design of experiments (DOE)? What are the steps involved in structured design of an experiment?
- 14. How do organizations institutionalize change into quality system?
- 15. What is DFSS? What are the five phases of a DFSS project? Explain them briefly.
- 16. Describe best practices in Six Sigma. How six sigma initiatives can be sustained in an organization?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

2 M-71695

(S109)-362



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