

C. U. SHAH UNIVERSITY

Winter Examination-2019

Subject Name: Concurrent Engineering

Subject Code: 5TE03CEN1

Branch: M.Tech Mechanical (CAD/CAM)

Semester: 3

Date :15/11/2019

Time : 02:30 To 05:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION – I

- Q-1 Attempt the Following questions.**
- (a) Give definitions of Concurrent Engineering. (02)
 - (b) What is Simulation? (02)
 - (c) What is the importance of Virtual Analytical models in information modeling? (02)
 - (d) Define HOQ. (01)
- Q-2 Attempt all questions**
- (a) Explain DFM guidelines and explain how it helps in reducing manufacturing cost of a product? (07)
 - (b) Describe each of the classification of information modeling and provide some examples of each. (07)
- OR**
- Q-2 Attempt all questions**
- (a) Describe complete QFD process with diagram showing the four houses of it. (07)
 - (b) Discuss about failure mode and effect analysis. (07)
- Q-3 Attempt all questions**
- (a) Define and explain Rapid Prototyping. (07)
 - (b) Discuss importance of fault tree analysis. (07)
- OR**
- Q-3 Attempt all questions**
- (a) Teamwork is an essential component of CE in providing a set of consistent goals and objectives. Discuss the seven qualities necessary for a concurrent work group. (07)
 - (b) Explain basic principles of CE. (07)



SECTION – II

- Q-4 Attempt the Following questions.**
- (a) Define Prevention in product quality assessment. (02)
 - (b) What are called life cycle measures? (02)
 - (c) Which problems are occurring during Product Information Management? (02)
 - (d) List out the value management tools. (01)
- Q-5 Attempt all questions**
- (a) Design for Robustness is a concept that has been in existence for a long time. Explain why it is so important and repeatedly cited? (07)
 - (b) What is a framework or architecture? Why do we need a set of frameworks and architecture for CE? (07)
- OR**
- Q-5 Attempt all questions**
- (a) How do CE metrics and measures provide feedback to a realization model? How important is this feedback? (07)
 - (b) What is Design for Total Value? Describe steps involved in a DFV Process. (07)
- Q-6 Attempt all questions**
- (a) Write a short note on VCM Management. (07)
 - (b) What are the issues involved in Design for Serviceability? List those issues you need in your redesign with an example. (07)
- OR**
- Q-6 Attempt all Questions**
- (a) Describe basic components of PIM. (07)
 - (b) Give comparison between QFD and CFD. (07)

