

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name: Concurrent Engineering

Subject Code: 5TE03CEN1

Branch: M.Tech Mechanical (CAD/CAM)

Semester: 3

Date: 29/11/2018

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) Define Concurrent Engineering. (01)
- (b) Which are the steps to accomplish design to cost? (02)
- (c) Which are the causes of unreliability? (02)
- (d) What is the application of FTA? (02)

Q-2 Attempt all questions

- (a) Explain basic principles of CE. (07)
- (b) Describe the guidelines for Design for Assembly. (07)

OR

Q-2 Attempt all questions

- (a) Explain the systematized statistical approach of Taguchi to product and process improvement. (07)
- (b) How would your company expect to benefit from CE? Explain. (07)

Q-3 Attempt all questions

- (a) Describe complete QFD process with a diagram showing the four houses of it. (07)
- (b) Define and explain Rapid Prototyping. (07)

OR

Q-3 Attempt all questions

- (a) Describe the general framework for CAE based design optimization. (07)
- (b) Explain the steps for FMEA with an example. (07)

SECTION – II

Q-4 Attempt the Following questions.

- (a) Define HOQ. (01)
- (b) What is simulation? (02)
- (c) What is the function of PIM? (02)



- (d) List out the value management tools. (02)

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? Also describe the methods used to ensure robustness. (07)
- (b) What is DFV? Describe its steps. (07)

OR

Q-5 Attempt all questions

- (a) Explain major elements of TVM. (07)
- (b) Explain different categories of life –cycle measures in product design, development and delivery processes. (07)

Q-6 Attempt all questions

- (a) By reducing the number of interfaces between sources, organization can save time and reduce costs. Compare the similarities of minimizing product interfaces with minimizing process interfaces. (07)
- (b) Describe about CE Architecture. (07)

OR

Q-6 Attempt all Questions

- (a) Write a short note on: VCM Management. (07)
- (b) Explain Concurrent resource scheduling. Is this a part of a work break-down structure (WBS) or otherwise? (07)

