

B. Tech. Sem - VIII (Mechanical Engg.) (2014 COURSE) (CBCS) :

WINTER - 2018

SUBJECT: INDUSTRIAL PRODUCT DESIGN

Day: Wednesday

Date: 14/11/2018

W-2018-2652

Time: 02.30 PM TO 05.30 PM

Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Define Product Design. What is market survey? Explain different methods of market survey. (10)

OR

Q.1 Explain detailed block diagram for generic product development with respect to marketing design manufacturing and other functional aspects. (10)

Q.2 Explain with suitable examples function analysis method in designing new product. State its advantages and limitations. (10)

OR

Q.2 Explain with suitable example Quality Function Deployment method in designing product with suitable example. (10)

Q.3 What is concept selection? Explain with suitable examples how the concept is selected. (10)

OR

Q.3 What is product architecture? Compare modular and integral architecture. (10)

Q.4 Explain with neat sketch stereo lithography, rapid prototyping method with its working principle advantages, limitations and applications. (10)

OR

Q.4 Explain with neat sketch Fused deposition modelling, rapid prototyping method with its working principle advantages, limitations and applications. (10)

Q.5 Define Ergonomics. Explain man-machine system. State its relevance with suitable example. (10)

OR

Q.5 Explain the ergonomically parameters/ factors which are to be considered while designing industrial product with reference to safety. Justify with suitable example. (10)

Q.6 Explain the techniques used to maximize the ease of assemble. (10)

OR

Q.6 Explain with suitable example how Design for Manufacturing and Assembly (DFMA) helps in optimizing external factors (component cost, life cycle costs). (10)

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