Total No. of Questions – [04]   Total No. of Printed Pages: 01

G.R. No.	

OCTOBER 2019/ INSEM (T1)
T. Y. B. TECH. (MECHANICAL) (SEMESTER - I)

COURSE NAME: PRODUCT DESIGN AND ENGINEERING

COURSE CODE: IE31175ME

(PATTERN 2017)

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

(*) Instructions to candidates:
1) Answer Q.1 OR Q.2 and Q.3 OR Q.4.
2) Figures to the right indicate full marks.
3) Use of scientific calculator is allowed
4) Use suitable data where ever required

Q.1) a) Explain in details the different stages of product development process   [6]
   b) What is the product design? What are the characteristic of successful product?   [6]
   c) What do you mean by innovative thinking? Enlist any 4 different characteristics of good Innovator?   [4]

OR

Q.2) a) Explain the different challenges faced during successful product development.   [6]
   b) Explain in details the different activities of concept development process   [6]
   c) What is the total fixed cost and total variable cost ?   [4]

Q.3) a) Describe the concept screening and concept testing method   [6]
   b) What is the procedure of setting target specification of product?   [4]
   c) What is the importance of reverse engineering?   [4]

OR

Q.4) a) Explain in details the different steps require to identify the proper customer needs.   [6]
   b) What is the process of setting final specification of product?   [4]
   c) Explain in short spiral product development process.   [4]

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