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Question Paper Code:U2104

M.E. DEGREE EXAMINATION, APRIL/ MAY 2025

Second Semester

CAD / CAM

21PCD204–PRODUCT DESIGN AND LIFE CYCLE MANAGEMENT

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Discuss how collaborative product development enhances efficiency in the product life cycle. CO1- U (20)
Or
(b) Differentiate between product development planning and product life cycle planning. CO1- U (20)
2. (a) Apply customer needs assessment techniques to define a sustainable product life cycle strategy. CO2- App (20)
Or
(b) Apply the concept of Design for Sustainability (DfS) to develop a life cycle strategy for a household appliance. CO2- App (20)
3. (a) Propose a collaborative product development framework for a startup launching a new medical device. CO3- App (20)
Or
(b) Develop a strategy for supplier involvement in early product design stages. CO3- App (20)
4. (a) Apply the ergonomic principle concepts in designing a user-friendly power tool. CO4- App (20)
Or
(b) Propose an industrial design strategy for improving the aesthetics and usability of a product. CO4- App (20)

5. (a) Develop a DfM strategy for minimizing material waste in plastic component production. CO5- App (20)

Or

- (b) Propose ways to integrate sustainability into DfM for eco-friendly product development. CO5- App (20)