

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

Paper ID [PE306]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 6th/7th)

PRODUCT DESIGN & DEVELOPMENT (PE - 306)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) Enlist the essential factors of product design.
- b) Discuss the role of aesthetics in the product design.
- c) What do you understand by the form elements?
- d) What do you understand by functional design practice?
- e) What main objectives should be fulfilled by the product graphics?
- f) How the designs of displays play an important role in the product design?
Give examples to support your answer.
- g) Distinguish between the permanent and temporary joints.
- h) With the help of a neat diagram show the difference between the poor and good joint fit up used in the permanent fastening.
- i) Define the term 'Product development'.
- j) Discuss the importance of product promotion.

Section - B

(4 × 5 = 20)

- Q2) Discuss the general procedure adopted by the industrial designer in connection with the product design and development.
- Q3) What kinds of form elements are used frequently for designing the products and why? Discuss the basis of selecting the form elements.

- Q4)** How the human factor engineering plays its role in designing the controls? Give suitable examples.
- Q5)** What do you understand by the term 'Product detailing'? Discuss how the product detailing for plastic products can be carried out?
- Q6)** What is the role of a designer in the development of a product? Discuss in brief.

Section - C

(2 × 10 = 20)

- Q7)** What do you mean by the product graphics? Discuss the basic principles of the graphic design in detail.
- Q8)** What do you understand by the elementary forms? Discuss their characteristics and significance in the product design.
- Q9)** Write short notes on the following :
- (a) Manufacturing and economic aspects of product development.
 - (b) Unity and variety with respect to visual design.