Printed Pages: 4 EOE-083

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 199853 Roll No. 1 2 0 3 2 4 0 0 6 1

B. TECH.

Theory Examination (Semester-VIII) 2015-16

PRODUCT DEVELOPMENT

Time : 3 Hours *Max. Marks : 100*

Section-A

Attempt all parts. All parts carry equal marks. Write answers of each part in short maximum 30 words. (10×2=20)

1. (a) Define a "product".

(b) Definitions of "design".

(c) Define "product life cycle".

(d) Name the types of "Need"

(e) Define "Ergonomics".

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(f) What do you know about "mental blocks".

(g) Define "Reliability of a product".

(h) Define "Creativity".

(i) What is "Synetics"?

(j) What is "brainstorming"?

Section-B

2. Answer any five parts from the followings. (5×10=50)

(a) What are the various aspects of building reliability into the design process?

(b) Describe the Advantages and Applications of "Break Even Analysis".

(c) Define "Decision Making". Explain the decision making under multiple criteria.

(d) What are the barriers to creativity? Explain each of them.

(e) What are various elements involved in Ideonomics?

(f) What is "Aesthetics"? What are the concepts of Aesthetics in Engg.?

(g) What is need Analysis? Outline a check list of items before conducting need analysis.

(h) Describe various steps of design process with the help of a flowchart.

Section-C

Note: Answer any two of the following : (2×15=30)

3. What is SQC? What are the various tools of SQC? Explain each of them.

4. (a) Describe a Reliability of systems for two unit in parallel network.

(b) An aircraft has three identical independant engines that function simultaneously. At least one engine must operate successfully for the aircraft to fly successfully. If the reliability of each engine is 0.8. Calculate the probability of the aircraft flying successfully.

5. Write short notes on any three of the following :

   (a) Normal Distribution Curve

   (b) Technological forecasting

   (c) Design of Display and controls.

   (d) Innovation Verses Invention (with examples).