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**2025**

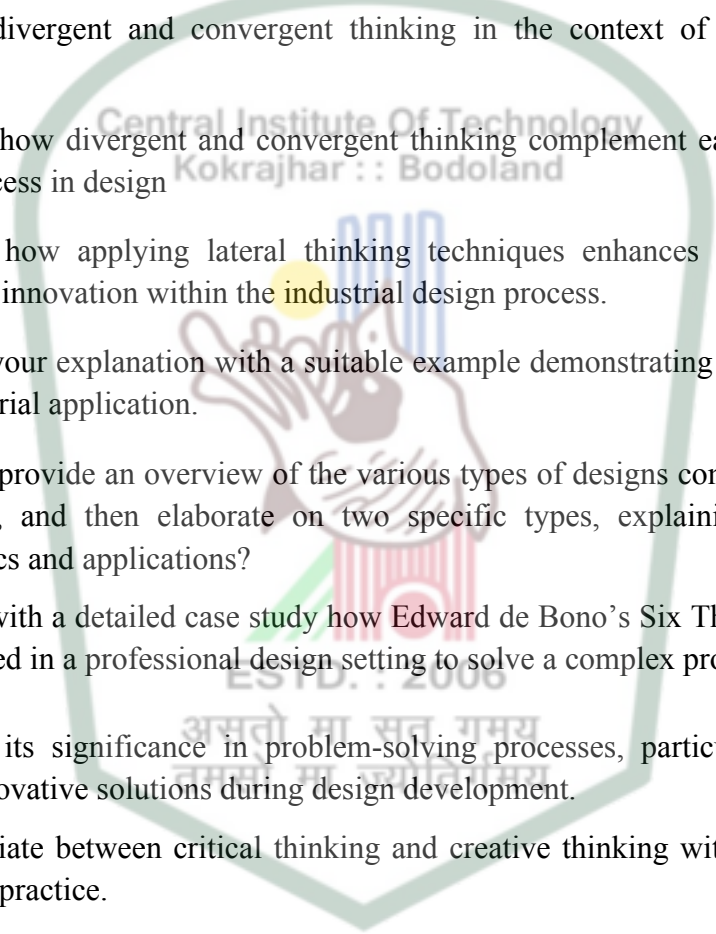
**CREATIVE THINKING PROCESS AND METHODS**

*Full Marks : 100*

**Time : Three hours**

***The figures in the margin indicate full marks for the questions.***

***Answer any five questions.***

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1. A] Define divergent and convergent thinking in the context of the creative design process. 10
- B] Analyze how divergent and convergent thinking complement each other during the creative process in design 10
2. A] Explain how applying lateral thinking techniques enhances creativity, problem-solving, and innovation within the industrial design process. 10
- B] Support your explanation with a suitable example demonstrating its impact on a real-world industrial application. 10
2. A] Can you provide an overview of the various types of designs commonly encountered in the field, and then elaborate on two specific types, explaining their distinctive characteristics and applications? 10
- B] Explain with a detailed case study how Edward de Bono's Six Thinking Hats method can be applied in a professional design setting to solve a complex problem. 10
4. A] Explain its significance in problem-solving processes, particularly how it helps generate innovative solutions during design development. 10
- B] Differentiate between critical thinking and creative thinking with suitable examples from design practice. 10
5. Design Thinking emphasizes a user-centered approach to problem-solving. Explain the stages of the Design Thinking process (Empathize, Define, Ideate, Prototype, Test) with a detailed example of a real-world design problem. Additionally, illustrate how visualisation techniques (such as sketching, mind mapping, storyboarding, or prototyping) support and enhance each stage of the process. 20
6. During rainy days, users often face difficulties while entering a car with a traditional umbrella, leading to inconvenience and discomfort. As a designer, apply the creative thinking process to identify the key problems associated with current umbrella designs. Develop an innovative, user-friendly umbrella solution that ensures smoother entry into 20

vehicles. Structure your answer by clearly describing the problem, outlining the creative thinking stages used, presenting the final solution, and supporting it with a labeled diagram. Also, explain how effective communication can help in promoting the organized design of this new umbrella product.



Evaluation criteria:

- a. Severity of the identified problems
- b. Diversity of observations
- c. Analytical skills
- d. Communication