AMID08 CREATIVITY AND PROBLEM SOLVING

UNIT-1 INTRODUCTION

1.1 Definitions of creativity, understanding components of creativity, definitions of problem solving, theories of creativity, goals and objectives,

1.2 Value judgments, defining problems, information gathering, creative incubation, creative thinking and creative process.

UNIT-2 THINKING TECHNIQUES

2.1 Principles in generative, convergent, lateral, interactive, graphical thinking, check lists, analysis and synthesis simulation, action ability and implementations of intentions.

2.2 Blocks in creative thinking. Simple exercises based on thinking techniques.

UNIT-3 TOOLS AND TECHNIQUES OF CREATIVITY

3.1 Mind mapping, brain storming with related stimuli and unrelated stimuli, positive techniques for creativity, creative pause, Focus,

3.2 Challenge, alternatives, concepts, provocation, movement, setting up provocations, sensitizing techniques, group or individual techniques.

UNIT-4 PROBLEM STATEMENTS

4.1 Brain writing with unrelated stimuli, idea mapping, random input, story boarding exercises, problem solving techniques

4.2 Divide and conquer, hill climbing strategy, means- ends analysis, trial and error, brain storming, morphological analysis, method of focal objects,

4.3 Lateral thinking, steps developed by Polya, Dekker, De Bono and others, research, analogy, reduction (complexity), TRIZ, Halpern‟s techniques etc.

UNIT-5 CREATIVE SOLUTIONS APPLICABLE TO DESIGNS

5.1 Design, Invention, opportunity, problems, improvement, planning, projects, conflicts.

5.2 Simple Design exercises.

5.3 Creative Design process- conceptual design, embodiment design, detail design, Iterations

Reference Books:

1. Geoffrey Broadbent. Design in Architecture, London:D.Fulton
2. Christopher Alexander. Pattern Language. New York: Oxford University Press Thomas Mitchell.
3. Redefining Designing: Form to Experience
4. Edward De Bono, Lateral Thinking.