

**Post Graduate Diploma in Management: 2016-18**

**Design Thinking**

**Sub. Code: DM-502**

Trimester – IV, END-TERM EXAMINATION: September 2017

Time: 1 Hr 30 Min

Max Marks: 30

Roll No. -----

Instructions:

1. Students are required to write their Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet.
2. Be brief and to the point. The answer to every 5 mark question should be of maximum 300 words, 10 mark question maximum 600 words and the case study analysis maximum 1000 words.

**SECTION A (2X5=10 Marks)**

**Note: Attempt any two questions**

1. What are the three R's of prototyping? Why are they important?
2. It is said that the ability to embrace uncertainty is important to succeed with Design Thinking. Why?
3. How will you go about developing the row and column headings if you want to use a Creative Matrix for ideation?

**SECTION B (1X10 = 10 MARKS)**

**Note: Attempt any one question**

1. Using the Abstraction Ladder, reframe the problem statement for "We need to redesign the tuck-shop experience at BIMTECH".
2. Develop an interview guide for the problem statement "We need to improve mobility to and from BIMTECH". Assume any key stakeholder for whom you will develop the interview guide.

**TURN OVER**

## SECTION C

### (Case Study)

Note: Case Study is Compulsory

(10 Marks)

## DESIGN THINKING AND A \$25 INCUBATOR: A CASE STUDY

Students at the Stanford d. school were challenged to design a less expensive incubator for babies born prematurely in Nepal. The students traveled to Nepal to meet with families and doctors and see the problem for themselves. During the trip, they were exposed to the angst of parents who were not able to save their premature babies. This mission of empathy helped them define who the users were and what their problem was. The students discovered that there were in fact many donated incubators in the hospitals, but surprisingly they were mostly empty. They realized that less expensive incubators would not actually solve the problem, since most premature babies were born far from hospitals, in rural areas, without access to incubators regardless of their cost.

The students changed their perception of what was needed and began to think about how babies in rural areas could stay warm for long periods of time. They used pictures, videos and storytelling of their experiences visiting Nepal to pinpoint the exact problem and brainstorm solutions. They stopped thinking of the doctors as their users and started thinking about desperate parents who need to give their babies a chance to survive. With each innovation or prototype that was suggested, they went back to the question on their whiteboard: Are we helping parents in rural areas save their babies' lives?

The design which was eventually chosen was for an infant warmer, which looks like a mini sleeping bag. It is made of material which holds in heat, so it can be thrown into a pot of boiling water to get hot and will retain the heat for a few hours. The baby is wrapped tightly inside the warmer, with a special hood to keep the face exposed which still heat the baby's head. The baby is kept warm for the amount of time it takes for the parents to reach the nearest hospital, even if it's a few hours away.

The students who undertook this project didn't stop with a prototype. They formed a company called Embrace and started manufacturing the product, which sells for a mere \$25. Embrace now has programs in 11 different countries and has helped over 50,000 premature and low birth weight infants. And all it started with the design thinking process.

### Questions:

1. Briefly explain elements of the Design Thinking process used in the Embrace project? (5 marks)
2. Develop a stakeholder map for the design problem in the case study? (5 marks)

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