Emerging Technology in Management
IB-402
Trimester – IV, End-Term Examination: 12ᵗʰ September 2021

Time allowed: 2 Hrs 30 Min
Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the Answer Sheet. All other instructions on the question paper / notifications should be followed meticulously.

Sections	No. of Questions to attempt	Marks	Total Marks
A	Minimum 3 question with internal choices and CILO (Course Intended Learning Outcome) covered	3*10	30
B	Compulsory Case Study with minimum of 2 questions	20	20
			50

Section A

Question 1: What are essential ingredients of a platform business? Considering YouTube is a platform what are its sources of revenue and cost elements . Suggest few improvement that you think YouTube can make to make it suitable for Education. (CILO2)

OR

Successful platforms have shown that openness of the platform gives distinct scale advantages. However, full openness does not always result in success of business launching the platform. Explain using examples. (CILO2)

Question 2: What are different types of risk associated with the mobile devices? How would you protect your personal mobile device from these risks? (CILO2)

OR
What is the principle of Crowd sourcing? How can it help in knowledge dissemination amongst the mass population in India? Suggest a solution for the same of an application of crowdsourcing that you think will be useful . (CILO2).

Question 3 : What is so challenging about the mobile ecosystem? What are the cloud computing layers that are applicable in a mobile service ? (CILO2)

OR
A leading export house is facing problems of tracing containers in the yard . They want to use the latest technology with real time update. They also want to track and trace the contents of the containers. Propose a solution which is also cost effective . (CILO2)

Section B Answer both Questions Total Marks 20

Innovation in extreme times

(**source : https://www.innoviatech.com/insight/innovation-in-extreme-times/**) **Published April 2020**

We live in unprecedented times. The COVID-19 crisis is putting us all under great personal and professional pressure and causing us to re-think long-held assumptions. This article suggests how well-targeted innovation can help to improve the ways we respond.
There are three major reasons why the crisis is causing such enormous upheaval:

The pace of change is so rapid – the infection doubling rate is around 3–4 days.
The degree of change is so enormous – the worldwide impact is unprecedented.
The agent of change is unfamiliar and intangible – this creates feelings of fear, anxiety, and inability to act.

In all this chaos and change, the skills of innovation become paramount. These include:

Dealing well with uncertainty and ambiguity
Thinking in a systematic and structured, yet creative and non-linear way
Seeing the challenge from different perspectives
Working across multiple knowledge-sets to arrive at holistic solutions

These help us to navigate challenges in the domains of organisation, safety, logistics, relationships, technology, society, and the economy. Today we face many or all of these at the same time.

Innovation – radical and super-fast innovation – is needed to address these challenges. These challenges are not just linear extrapolations from our normal ones, they are more complex and more multi-domain.

The key to addressing complex, multi-domain challenges is to focus on the innovation process. That's hard when you're under pressure, but it is critical in order to save time and find solutions that work. I'm going to cover the part most people find hardest in a crisis: understanding the problem that you need to solve.

PROBLEM DEFINITION
I've chosen a stark example from recent personal experience. Most of us probably know about the "ventilator problem": not enough of them for hospital Intensive Care Units (ICUs). Recently, an Innovia colleague and I joined a hackathon on the web to address the problem.

What we heard is that there are plenty of lower-tech ventilators in hospitals, but they don't trap the air breathed out and aerosolised – that's an infection threat to the health workers. We thought that a solution might be a fairly simple tubing, mask, and valve solution.

Meanwhile, we'd contacted medic friends, and within a few hours got through to the head anaesthetist at the local hospital – anaesthetists run the ventilators. He told us that the more sophisticated functions of the scarce machines (such as precise pressure and volume regulation) were vital to handling the severity of COVID-19 pneumonia. So, the hackathon had fed us the wrong problem: we were focusing on the infection risk rather than routes to simplified manufacture of very specific functionalities. But at least we found out quickly. More about this later…

But let's now switch scene to two different people in Oxford and London tackling the ventilator challenge at the same time as us: but this time one is a Professor of Anaesthesiology. It's a brilliant story of right-sized, super-fast multi-disciplinary innovation

Crucially, these two knew the problem inside-out. They also had teams with multiple skills, and drew up well-considered constraints. For example, they knew what kinds of tubing, valves, airbags, and so on were routinely available in hospitals.

Due to their contextual expertise, they also knew which orthodoxies to jettison, so they replicated only the COVID-19–critical functions of more costly ventilators. Their design can be produced by unskilled people at a tenth of the cost and a tenth of the time of the scarce ventilators. Inspirational!

Let's pull out the lessons:

Take time to really understand the problem. Find an expert stakeholder up-front. Understand exactly what you need, and what you don't.
Get a multi-skilled team on the job. Breakthrough innovation often involves skills you don't expect.
Iterate, experiment, play, imagine but stay true to the real constraints on the problem, including the resources available.

I CAN'T STRESS ENOUGH THAT FIRST POINT ABOUT PROBLEM DEFINITION!
To return to Cambridge, and my colleague and me: what else had that weekend taught us?

First, that there is huge untapped innovation skill and energy, in universities, R&D departments, and living rooms, wanting to help with COVID-19 – which will go to waste if it's not properly harnessed. Second, this highlighted a bigger problem-definition challenge from the pandemic: how to connect this vast resource productively to the right problems.

As a result, by Monday morning Innovia had created an outline plan to form an innovation hub, to channel our innovation capability together with the communities' resources. We'll see if we can get traction with this. I'll leave you with a final thought. We are living in challenging times, and the old adage has never been more appropriate: "necessity is the mother of invention".

Question 4 : During pandemic times we all faced several problems in the society . Identify one problem that you considered the most daunting which you thought needs solution. Define this problem precisely using lessons form the case. (CILO3)

Question 5 :   What emerging technology will you use to arrive at a solution of the problem defined above . Describe the solution in brief giving reference of the case. (CILO3)