JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION-2022

M.Sc. Biotechnology-III Semester

MAX. MARKS: 35 COURSE CODE (CREDITS): 20MS1BT314 (2) COURSE NAME: Bioentrepreneurship MAX. TIME: 2 Hours COURSE INSTRUCTORS: Dr. Saurabh Bansal Note: All questions are compulsory. Marks are indicated against each question in square brackets. Write your answer to the point with appropriate diagrams. Q1. a) What do you understand by ethics? Why is it important for any business? 2 b)) What are the major reasons for unethical behavior shown by different enterprises? [2] Q2. a) Differentiate between social responsibility and social obligation. [2] b) Why should a company go for social responsibility? What are the different advantages related to CSR? Give a suitable example related bio-based company. Q3. a) Why does a startup need money? What are the different sources through which a startup can get funds? b) What do you understand by bootstrapping? Explain with at least two examples for the same. [3] [2] c) Differentiate between equity financing and debt financing. Q4. What are venture capitals? How they are different from business angels. Give one example of a [3] venture capitalist who invested in a biotech startup. Q5. a) What are regulatory compliance's importance and scope in the bio-based industries? [2] b) What do you understand by GCP? Why is it important? [3] Q6. In India, who are the major regulatory bodies in the context of the following: Also, state where their head quarters are located.

Analyze the following case studies and the questions that follow:

a) Food safety

Case Study 1: In the mid-1980s Alec Jeffries (now Professor Sir Alec Jeffries) at the University of Leicester developed a technique to research human genetics, and in a striking intellectual leap he recognized that a seemingly incomprehensible level of variation came from sensitivity so exquisite that

b) Drugs & cosmetics

it absolutely matched individual identity. The technique was found its applications in crime detection, immigration, and paternity testing. This potential was proven when it successfully resolved several difficult and important criminal and other identity cases. For several years, the Jeffries research group provided the technique as a contract service, but the importance of the growing portfolio of applications and the workload eventually made it necessary to find alternative approaches to its and expansion.

The technique was licensed by the University of Leicester to ICI (now AstraZeneca) who further researched the scientific background to the technique, its range of applications, and quality assurance methods crucial to its capability of formal, absolute proof of identity and/or presence at a place or event. In 1987 this new part of ICI's business became Cellmark Diagnostics. Cellmark has been extremely successful in continuous development of the technique, and in providing it as a forensic service in crime, paternity, and more recently in agricultural applications. Now known as the Orchid Cellmark, the company operates from four locations in the US and one in the UK and generates global sales of in excess of 60 million USD per annum.

The case of Cellmark's history and development is an excellent example of university research providing a solution to a range of hugely important practical problems and creating an entire new commercial market in doing so. In addition, it illustrates how the transfer and translation of the technology into a commercial operation requires the combination of technical and commercial management skills, and how the operational challenge of a highly specialized new field was solved by creation of a new company that developed the management and processes to match the new operational and market needs.

- Q7. a) Why did the University of Leicester transfer this technique to ICI through a license? [1]
 - b) What are the different applications identified by the technology developed by Sir Alec Jeffries?
 - c) Do you think giving a license to ICI is a good strategy, or may there be other options that may be opted for by the group? Justify your answer.

 [2]

Case study 2: The US study pharmaceutical company BenGay, which is best known for its pain relief creams, attempted to launch a range of orally taken analgesics. Market research indicated that the company had a solid reputation for its creams and sprays and it seemed logical to create a suite of pain relief products trading on this brand. Consumers, however, associated the brand with warming creams, to the extent that the idea of swallowing a BenGay product was both unusual and, for too many, unattractive. Market research only told part of the story that people trusted the company for the pain relief products. It failed to identify that this trust extended only to a particular type of pain relief product.

- Q8. a) What kind of products the company Bengay was planning to launch?
 - b) What are the chances of success of such products based on the above-stated paragraph? Give the justification for your answer.[2]