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## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

### End Semester Examination, April 2018

<b>Program:</b>	MBA_Core (Operations)-Elective	<b>Semester –</b>	IV
<b>Subject (Course):</b>	Technology Management	<b>Max. Marks:</b>	100
<b>Course Code:</b>	MBCG 722	<b>Duration:</b>	3 Hrs.
<b>No. of page/s:</b>	03		

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#### Section A

[20 Qs. x 1 Mark = 20 Marks]

- (i) Answer all questions of this section.
- (i) Technology Management is one of the core activities of 'Value Chain Management'. [True / False]
  - (ii) Technology is a resource for economic growth of a \_\_\_\_\_. [Country/ Industry/ Firm/ All]
  - (iii) One of the 'technology management' practice is to attain higher productivity. [True/ False]
  - (iv) Technology is a commodity, which is bought and sold. [True/ False]
  - (v) Entrepreneurs are associated with the \_\_\_\_\_ stage of TLC.
  - (vi) Material handling technologies are used in \_\_\_\_\_ stage(s) of the value chain. [In-bound logistics/ Core-operations/ Out-bound logistics/ All]
  - (vii) One of the 'technology management' practice is to build R&D institutions. [True/ False]
  - (viii) Can a technology be embodied in a document? [Yes/ No]
  - (ix) Testing technologies are used in \_\_\_\_\_ stage(s) of value chain. [In-bound/ Operations/ Both]
  - (x) \_\_\_\_\_ appears to be a technology risk. [Which of the following can be perceived as 'technological risk'.
    - a. Time to adoption
    - b. Type of adaptation
    - c. Obsolescence in technology trading
    - d. a and b
    - e. all
  - (xi) Can a technology be embodied in a training module? [Yes/ No]

- (xii) S-Curve of Technology Development shows time along x-axis and \_\_\_\_\_ along y-axis.
- Technological figure of merit
  - Advancement through substitution
  - Both of the above
  - None of these
- (xiii) Technology Life Cycles (TLC) are getting shorter like Product Life Cycles (PLC). [True/ False]
- (xiv) What is not one of the stages of TLC? [Growth/ Syndication/ Diffusion/ Substitution]
- (xv) 'Design for X' principle is applicable for technology also. [True/ False]
- (xvi) According to \_\_\_\_\_, microchip is the dynamo of a new economy. [Intel / Motorola]
- (xvii) Technology is a game for the \_\_\_\_\_.
- (xviii) Technology is a \_\_\_\_\_ for the poor.
- (xix) \_\_\_\_\_ shows the overall growth of technology for satisfying a need. [S-curve/ TLC/ Both]
- (xx) Technology is a key for \_\_\_\_\_.

**Section B**

**[4 Qs. x 5 Marks = 20 marks]**

2. Answer any four questions in short.

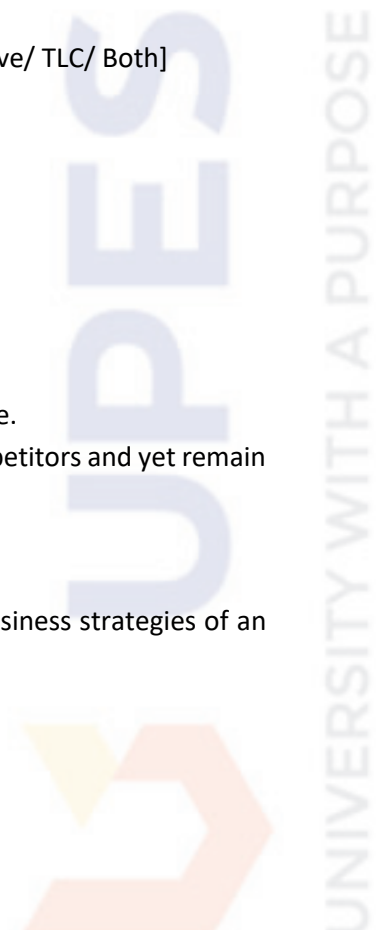
- Give an example of technology innovation preferably from your experience.
- How can an e-business company maintain its technological edge over competitors and yet remain financially successful?
- Describe with examples the classification of technologies.
- Write short notes on 'environment-friendly technology'.
- Explain how technology plays an important role in fulfilling the overall business strategies of an organization.
- Write short notes on 'cold chain technology'.

**Section C**

**[3 Qs. x 10 Marks = 30 Marks]**

3. Answer any three questions in detailed with description or analysis.

- Compare the TLC and PLC describing their similarities and dissimilarities in the light of 'technology management'.



- (ii) Explain why technology management and project management need to function with a higher degree of synchronization.
- (iii) Explain how technology plays an integrational role in the value chain of an organization.
- (iv) What is appropriate technology? Explain how an appropriate technology is selected?
- (v) Write short notes on –
  - a) Disruptive technologies; and
  - b) Emerging technologies.

**Section D [Answer the case questions with a thorough reading and analysis] [30 marks]**

4. Answer the case question with proper description and analysis.

**CASE: Linux**

Linux is an operating system created by Linus Torvalds, who was a Finnish university student at the time of its development. The operating system is offered free and has become the leading competitor to proprietary operating systems like UNIX and Microsoft. The heart of the system is referred to as the Linux kernel, which is the code that forms the basis of any firm's operating system. The firm is then able to take that code and build on it. This adaptability has led firms such as IBM and Hewlett-Packard to use Linux as a base operating system. The development of a system like Linux demonstrates a consistent theme in many technological areas: the pattern of development is difficult to predict. Firms must constantly scan the business horizon for changes that are occurring and look for the unexpected. A free operating system that becomes the backbone of many firms' efforts would have been difficult to predict five years ago. Today, however, the resource is widely used. Other firms such as Red Hat, VMware and Novellus Systems have specialized in developing Linux applications. These smaller firms are subject to acquisition. This raises many technology management issues for the users of the applications.

Case Question:

- (i) What type of technology does Linux represent continuous, disruptive, or next generation? Explain what such a classification of type of technology would mean for competitors and consumers.
- (ii) If your competitor acquires a firm that owns an application that is key to your business, what issues would you face? What would happen to the value of the acquired firm?

