13 Storch Street Private Bag 13388 Windhoek NAMIBIA

T: +264 61 207 2220 F: +264 61 207 9220 E: dml@nust.na W: www.nust.na

Faculty of Management Sciences

Department of Management

QUALIFICATION: Bachelor of Business Managemen	nt (Honours Degree)
QUALIFICATION CODE: 08BBMA	LEVEL: 8
COURSE: Management of Technology	COURSE CODE: MTC821S
DATE: November 2019	SESSION: 1st Opportunity
DURATION: 3 Hours	MARKS: 100

1st OPPORTUNITY EXAMINATION QUESTION PAPER

EXAMINER: J. V. OLU OJO **MODERATOR:** E. MBANGA

THIS PAPER CONSISTS OF 6 PAGES (INCLUDING THIS FRONT PAGE)

INSTRUCTIONS

1.	Answer all questions.
2.	Read all the questions carefully before answering.
3.	Marks for each question are indicated at the end of each question.
4.	Please ensure that your writing is legible, neat and presentable.

Section A: Multiple Choice Questions. (1 mark X 20 = 20 Marks).

- 1. The single most important driver of competitiveness in most industries is
 - a. Process innovation
 - b. Product innovation
 - c. Combination of Process and Product innovations
 - d. Strategic Management
 - e. None of the above
- 2. Sources of Innovation may arise from one or more of the following.......
 - a. Government funded research
 - b. Competition
 - c. Value Chain of the business
 - d. Disgruntled employees
 - e. All of the above
- 3. One of the most impactful outcome of innovation on the economy is
 - a. Increased Gross Domestic Product
 - b. Negative externalities
 - c. a + b
 - d. More effective and efficient delivery of customer services in the areas of transportation, health care and food production
 - e. a+b+d
- 4. Individual creativity is not driven by one of the following.......
 - a. Intellectual abilities
 - b. Finance
 - c. Personality
 - d. Motivation
 - e. Knowledge
- 5. Development of a solar powered automobile vehicle is
 - a. Radical innovation
 - b. Process innovation
 - c. Destructive innovation
 - d. Component innovation
 - e. a+b+d
- 6. The selection and dominance of designs and/or innovations will depend on the following....
 - a. Government regulatory support
 - b. Large technologically installed base
 - c. Prior learning and absorptive capacity
 - d. All of the above
 - e. a + b

- 7. The categories and increasing order of diffusion of innovation and adopters are
 - a. Innovators; Early Adaptors; Early Majority; Late Majority; Laggards
 - b. Developers; Affordable customers; Matured Customers; Declining Customers; Loyal Customers
 - c. Early Adaptors; Innovators; Laggards; Early Majority; Late Majority
 - d. All of the above
 - e. None of the above
- 8. The path that a technology follows through time is called
 - a. development route
 - b. technology trajectory
 - c. technology path
 - d. innovation route
 - e. all of the above
- 9. Product innovation is embodied in..........
 - a. How the organization conducts business
 - b. The retailing channels of the products
 - c. Outputs, goods and services of the organization
 - d. Human resources of the organization
 - e. None of the above
- 10. Process innovation is.....
 - a. innovation in the way organization conducts business
 - b. innovation in product
 - c. project management
 - d. all of the above
 - e. none of the above
- 11. The following is a type of innovation....
 - a. Continuous
 - b. Incremental
 - c. Novelty
 - d. Explosive
 - e. Popular
- 12. In S-curve of technology diffusion, adoption is initially low because of...
 - a. high pricing
 - b. improper marketing
 - c. globalization
 - d. regulations
 - e. unfamiliarity with the technology
- 13. What percentage of individuals adopting an innovation are early majority
 - a. 2.5%

- b. 15% c. 25% d. 34% e. 40%
 - 14. Technological change is usually cyclical. Which of these describes the trend?
 - a. initial period of turbulence → calmness → diminishing returns → extinction
 - b. initial period of turbulence → discontinuity → diminishing returns → termination
 - c. turbulence →rapid improvement →diminishing returns → technological discontinuity
 - d. diminishing returns → technological discontinuity → rapid improvement → termination
 - e. None of the above
 - 15. Which one of the characteristics below is a dimension of an Innovation
 - a. architectural
 - b. passionate
 - c. foundational
 - d. service
 - e. integration
 - 16. A technology value is driven by the following......
 - a. standalone value and price
 - b. location and price
 - c. standalone value and network externality value
 - d. availability and affordability
 - e. all of the above
 - 17. Individual creativity is a function of
 - a. Intellectual ability, knowledge, style of thinking, personality and motivation
 - b. Knowledge, family background, style of thinking, wealth
 - c. Motivation, science, education, intellectual ability
 - d. a + c
 - e. None of the above
 - 18. One of the advantages of entering a market early include
 - a. Achieving brand loyalty and technological leadership
 - b. Getting the best customers
 - c. Less expenditure on marketing
 - d. All of the above
 - e. Cost effectiveness
 - 19. A technology/innovation stand-alone value will include one of the following factors
 - a. Ease of usage by customers; aesthetics; functions that can be performed
 - b. Price
 - c. Availability

- d. Package; customer service delivery; distribution channels
- e. All of the above

20. Being a first mover confers the following disadvantages

- a. Brand disloyalty
- b. High research and development expenses
- c. Preemption of scarce assets
- d. Reaping increasing returns
- e. None of the above

Total marks - 20 marks

Section B: Essay type questions

Question 1

Illustrating with examples, discuss some of the advantages and disadvantages of technological innovation? (10marks)

Question 2

- a. What are some of the reasons that both technology improvement and technology diffusion exhibit s-shaped curves?

 (10 marks)
- b. Think of an example of an innovation you have studied at work or school. How would you characterize it using relevant dimensions? (10 marks)

Question 3

- a. Explain the traits that appear to make individuals most creative and discuss if these are the same traits that lead to successful inventions? (10marks)
- b. Why are some of the established firms resistant to the adoption of a new technology? (10marks)

Question 4

Discuss the importance of innovation for firms to achieve competitive edge in many industries? (10 marks)

Question 5

What are some of the ways a firm can try to increase the overall value of its technology, and its likelihood of becoming the dominant design?

(10marks)

Question 6

List and discuss some of the advantages of entering a market early? Are there any advantages to entering a market late? (10marks)

[80 MARKS]

THE END