



STRATHMORE BUSINESS SCHOOL

**BACHELOR OF SUPPLY CHAIN AND OPERATIONS MANAGEMENT
SPECIAL EXAMINATION**

SCM 4203: SUPPLY CHAIN 4.0 AND INDUSTRIAL INTERNET OF THINGS

DATE: Monday, 11th May 2026

TIME: 14:00 – 16:00

INSTRUCTIONS

- 1) Answer **QUESTION ONE** and any other **TWO QUESTIONS**
- 2) Question **one is compulsory** and carries **30 marks**
- 3) **All other questions carry 15 marks each**

QUESTION ONE

[30 MARKS]

- a) Tiwari et al (2024) proposes a number of technologies to comprise the Supply Chain 4.0.

Required:

Explain the meaning and application of the following technologies in the supply chain.

- i). Next Generation Genomics **(3 marks)**
- ii). Mobile Internet **(3 marks)**
- iii). Energy storage **(3 marks)**

- b) It is suggested that the value opportunities for SC 4.0 are in the areas of process improvement, flexibility increase, data exploitation and customer experience.

Required:

Take any two of these and explain how they could become a reality for the supply chain. Bring out the technologies involved and how they contribute to each of the chosen value opportunities. **(8 marks)**

- c) Explain the key components of IoT devices that together enable the collection and dissemination of data. **(4 marks)**

- d) It is argued that block chain technologies will make a major difference in the way that supply chains of organisations are structured and operate. Some pundits however, say it is a non-starter.

Discuss

(9 marks)

QUESTION TWO

[15 MARKS]

AI is now in ubiquitous use and healthcare supply chains are no exception.

- a) With reference to the discussion on AI use in the healthcare supply chain by the guest lecturer, Wasilwa, discuss ways that AI could be used in inventory management. **(9 marks)**
- b) Explain the ethical concerns that arise from AI use, especially in healthcare supply chains. Bring out at least one way to allay such concerns. **(6 marks)**

QUESTION THREE

[15 MARKS]

It is argued that manufacturing will in the future become the preserve of the Industrial 4.0 technologies combined, eliminating the use of human beings.

Discuss.

(15 marks)

QUESTION FOUR

[15 MARKS]

- a) Big data is both a blessing and a curse in the supply chain. Discuss this statement based on your knowledge of supply chain 4.0 and its application in supply chains. **(9 marks)**
- b) Explain the role of robotics in the supply chain. **(6 marks)**

QUESTION FIVE

[15 MARKS]

- a) The trend in business has increasingly been characterized by demanding customers and the push towards a batch of one.

Required:

Explain the role of Supply Chain 4.0 in addressing these trends without sacrificing the efficiency and effectiveness of organizations.

(9 marks)

- b) Explain any **two** hurdles to the implementation of SC 4.0 and for each suggest a way that it can be overcome. **(6 marks)**