



STRATHMORE BUSINESS SCHOOL
BACHELOR OF SCIENCE IN SUPPLY CHAIN AND OPERATIONS MANAGEMENT
END OF SEMESTER EXAMINATION
SCM 3106: INDUSTRIAL ECOLOGY AND INDUSTRIAL SYMBIOSIS

DATE: Fri, 26th July 2024

TIME: 13:00 – 15:00

INSTRUCTIONS

Answer Question **One** (**Compulsory**) and any other **Two** Questions.

Question One

- i. Elaborate on the different scopes of carbon emissions that affect industrial systems. **(6 marks)**
- ii. Justify **Three** ways industrial ecology considers principle of biological ecosystems to design and redesign industrial systems. **(6 marks)**
- iii. Discuss any **Three** strategies for decarbonizing supply chains. **(6 marks)**
- iv. Identify any **Three** value chains responsible for driving global emissions. **(6 marks)**
- v. Discuss any **Three** Design for Environment (DFE) rules applicable to supply chain businesses. **(6 marks)**

Question Two

- i. Elaborate on the role of eco-industrial parks in promoting industrial symbiosis and sustainable practices. **(10 marks)**
- ii. Discuss **Five** recommendations that aim to reinforce industrial synergies. **(10 marks)**

Question Three

- i. Identify **Five** key drivers motivating organizations to decarbonize their supply chain. **(10 marks)**
- ii. Discuss any **Five** barriers that organisations may face in their efforts to become sustainable. **(10 marks)**

Question Four

- i. Elucidate on the role of technology in decarbonizing the supply chain. **(10 marks)**
- ii. Explain **Five** ways small and medium sized enterprises face unique challenges in achieving carbon neutrality in their supply chains. **(10 marks)**

Question Five

- i. Justify the need to plan for open spaces in industrialized cities. **(10 marks)**
- ii. Examine the conservation ethics of open space models. **(10 marks)**