



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF BUSINESS & ECONOMICS**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS**  
**ADMINISTRATION WITH IT**  
**4<sup>TH</sup> YEAR 2<sup>ND</sup> SEMESTER 2019/2020 ACADEMIC YEAR**

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**COURSE CODE: ABA 446**

**COURSE TITLE: SUSTAINABLE SUPPLY CHAIN MANAGEMENT**

**EXAM VENUE: STREAM: (BBA SCM)**

**DATE: EXAM SESSION:**

**TIME: 2 HOURS**

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**Instructions:**

- 1. Answer questions ONE and ANY other 2 questions**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

## **SECTION A**

You are strongly advised to read carefully and analyse the information in the case study before attempting to answer question 1

### **FUTURE VEHICLES**

#### **Background**

One of the main challenges for the automotive industry in the future will be the development of more environmentally friendly vehicles in terms of both fuel consumption and carbon emissions. In response to this challenge, Future Vehicles, part of a major automotive manufacturing group is developing the group's first eco-vehicle. The vehicle, which is due to go on sale in around three years' time, will be able to run for short periods on electricity but will also have a petrol engine for longer journeys which will recharge the battery whilst the car is running. It is predicted that the new vehicle will significantly improve fuel consumption and will reduce carbon emissions by more than 50% compared to the best current vehicles.

#### **The Eco-Vehicle**

The Future Vehicles design team has been working on design and styling concepts for the eco-vehicle for the last two years. The company is now looking for support from the procurement team to start discussions with suppliers in order to develop components, build prototypes and better understand costs. As the vehicle's power delivery system differs significantly from the group's existing technologies, a number of new components will be required for this vehicle particularly within the electrical components and systems area. These include a specialised battery, motor and generator and a sophisticated power control unit to manage the changeovers between electric and petrol engine power supply.

## **Procurement Activity**

The group procurement director has established a new procurement team at Future Vehicles and plans to use the eco-vehicle programme as the pilot for the implementation of a sustainable procurement policy. The policy has been developed with input from a number of purchasing managers drawn from across the group.

During initial discussions in other parts of the group, there has been some resistance to the idea of sustainable procurement from both within and outside the procurement function. However, the group procurement director feels that the new policy is more likely to be adopted successfully at Future Vehicles as there is closer alignment with the programme objectives. The longer term plan is to roll out the policy to all other parts of the group based on a successful outcome of the Future Vehicles pilot. The key content of the sustainable procurement policy is as follows:

- Develop sustainable procurement as an organisational priority.
- Ensure all procurement staff and interfacing functions embrace sustainability principles.
- Incorporate sustainability criteria into all procurement decisions and processes.
- Maintain and develop the supply chain in a sustainable manner.
- Monitor and report regularly on sustainable procurement progress.

The group procurement director has nominated Rachel Green, the purchasing manager for electrical components and systems at Future Vehicles, to be the group champion for sustainable procurement. In this role Rachel will be

required to promote and co-ordinate sustainable procurement activity within the procurement function and act as the group representative.

### **Sustainable Procurement Challenges**

Rachel is enthusiastic about taking on the role of group sustainable procurement champion, as she believes it will give her the opportunity to positively influence procurement in other parts of the group and increase the profile of procurement with other functions. She has also identified a number of challenges which will need to be addressed if the new sustainable procurement policy is to be implemented successfully at both Future Vehicles and across the group:

- SMART objectives for sustainable procurement must be set based on the current situation.
- Group sourcing strategy must support sustainable procurement initially at Future Vehicles and longer term across the group.
- The group sourcing process must be reviewed and updated to include sustainability criteria at each stage from initial identification of requirements through to supplier selection and creation of contract.
- Specifications and required standards must be reviewed and updated to support sustainable procurement.
- Supply chain sustainability assessment, ongoing monitoring and reporting formats and processes must be developed.
- Any remaining resistance to sustainable procurement within the group must be identified and addressed.

Rachel believes she is in a good position to lead by example in responding to the above challenges through her team's involvement with the new electrical components and systems on the eco-vehicle.

## QUESTIONS

Questions 1 relate to the case study and should be answered in the context of the information provided.

**Q1 a)** Propose and justify appropriate sustainability considerations for each stage of the sourcing process for the eco-vehicle. **(15 marks)**

**(b)** Explain how Rachel could ensure the successful implementation of the sustainable procurement policy at Future Vehicles. **(9 marks)**

**(c)** Discuss how Rachel's approach for (b) would need to differ in order to ensure the successful implementation of the sustainable procurement policy at group level. **(6 marks)**

## SECTION B

Answer **TWO** questions from section B.

You are strongly advised to read carefully all the questions in section B before selecting **TWO** questions to answer.

**Q2** Compare and contrast the main internal factors influencing the implementation of sustainable procurement across different organisations and their supply chains in the public and private sectors. **(20 marks)**

**Q3 (a)** Explain the terms 'sustainable development' and 'sustainable procurement'. **(10 marks)**

**(b)** Discuss how sustainable procurement contributes to the achievement of sustainable development. **(10 marks)**

**Q4** Analyse the potential conflicts faced by an organisation attempting to implement sustainable procurement and make proposals for the management of these conflicts. **(20 marks)**

**Q5 (a)** Suggest appropriate supplier development tools and techniques to improve sustainability within a supply chain. **(10 marks)**

**(b)** Outline the potential challenges for sustainable supply chain management and development in the future. **(10 marks)**