



First Semester Examination
Academic Session 2019/2020

December 2019/January 2020

EUP501 – Engineering Management

Duration : 2 hours

Please check that this examination paper consists of **THREE (3)** pages of printed material before you begin the examination.

Instructions : This paper contains **FOUR (4)** questions. Answer **ALL** questions.

All questions must be answered in English.

Each question **MUST BE** answered on a new page.

- (1). (a). Automation in construction addresses various and serious issues related to construction for example, low quality of final product, shortages of skilled labour, safety of labour, weather condition, and construction period which nowadays are the features of construction projects. However, if automation in construction is practiced, an organisation or a project has to consider various changes. Thus, action research can be used as a tool for successful organizational or project change. Based on the given scenario and by giving your own examples and justifications:
- (i). Explain the importance of performing action-based research in accelerating the adoption of automation in construction.
[10 marks]
- (ii). Describe the strategies of managing change related to the adoption of automation in construction.
[15 marks]
- (2). (a). Discuss in brief the role of strategic management.
[5 marks]
- (b). Describe the steps that are involved in the strategic management process.
[15 marks]
- (c). Explain the approach that is applied for competitive analysis for the formulation of strategy.
[5 marks]

- (3). (a). Re-engineering is one of the best solutions for the business processes improvement. Explain the best re-engineering process related to the transformation of business processes to achieve more effective business goals.

[10 marks]

- (b). A company plans to improve the quality of newly built building. You are the right person to monitor the progress of the quality improvement. Re-engineering is the solution at this stage. You are required to prepare the re-engineering timetable and the conceptualized process for a re-engineering makeover. Explain the process in details.

[15 marks]

- (4). (a). Most of the mega building and infrastructure projects around the world have experienced time and cost overrun prior to project commissioning.

- (i). Identify the potential risk factors that could dictate time and cost overrun in construction projects. Using appropriate examples, describe their potential impact towards construction projects if they occur in the real practice.

[10 marks]

- (ii). Identify what is the best risk mitigation strategy or counter measure to minimise all the risks identified. Using appropriate examples, describe the potential implication of the strategy or counter measure proposed towards construction projects.

[15 marks]