



MUEO

**MOI UNIVERSITY**

OFFICE OF THE DEPUTY VICE CHANCELLOR, ACADEMIC AFFAIRS, RESEARCH  
& EXTENSION

**MOI UNIVERSITY EXAMINATIONS**

**2022/2023 ACADEMIC YEAR**

**SPECIALS/SUPPLEMENTARY EXAMINATIONS**

**FOR THE DEGREE OF EXECUTIVE MASTER OF BUSINESS ADMINISTRATION**

**COURSE CODE: MBA 838**

**COURSE TITLE: AVIATION SAFETY AND SECURITY**

**DATE: 14<sup>TH</sup> NOVEMBER 2023**

**TIME: 2PM – 5PM**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE AND ANY OTHER THREE QUESTIONS**

*THIS PAPER CONSISTS OF (3) PRINTED PAGES INCLUDING COVER PAGE PLEASE*

*TURN OVER*

**QUESTION ONE: (35mks)**

a) The International Civil Aviation Organization (ICAO) Global Aviation Safety Plan (GASP): 2023-2025 edition identifies five global high-risk categories of safety occurrences (G-HRCs). Through National Aviation Safety Plan (NASP) these G-HRS are required to be domesticated by Air Operators in their Safety Management System. Discuss three of the five G-HRCs categories of occurrences which are considered of the utmost priority because of the high number of fatalities. (20 Marks)

b) Aviation security risks and threats evolve rapidly and manifest themselves in different forms. Discuss two emerging threats to the Global Civil Aviation industry. (15 Marks)

**QUESTION TWO: (15mks)**

a. Safety Oversight is part of safety regulatory process dedicated to ensuring that applicable safety regulatory requirements are met, and the monitoring of the safe provision of Aviation services. Discuss four elements of a State rule making process. (9 marks)

b. Briefly explain three layers of safety regulation as applied in the aviation sector. (6 marks)

**QUESTION THREE: (15mks)**

Voluminous amount of safety data is collected by Organizations through safety reports, safety investigations and various hazard identification programmes. Discuss the application of safety data analysis. (15 marks)

**QUESTION FOUR: (15mks)**

a. How can risk management be integrated into the operations of the aviation industry? Explain your answer with the help of examples. (7 marks)

b. The objective of risk management is to ensure that the risks associated with hazards to flight operations are systematically and formally identified, assessed, and managed within acceptable safety levels. Name and explain four elements of risk management. (8 marks)

**QUESTION FIVE: (15mks)**

a. The element of security risk that remains after application of mitigating factors is known as residual risk. What is the formula for calculating residual risk? (10 marks)

b. How are security risk handled in the aviation sector? (5 marks)

**QUESTION SIX: (15mks)**

- a. Human error in various forms has been categorized as a major causal factor in the majority of aircraft accidents, incidents, and safety occurrences. Discuss in detail with the help of illustrations two categories of human error. (9 marks)
- b. How can aviation personnel avoid some of the common human errors from occurring in their work place and duties? (6 marks)