STRATHMORE UNIVERSITY

MASTER OF SCIENCE IN DATA SCEIENCE AND ANALYTICS

**ASSIGNMENT**

**DSA 8304 Risk Management Analytics**

**Total Marks: 60 Marks Time: 6 Hours**

**Comprehensive Assessment of Operational Risk and Regulation in the Modern Banking Industry**

1. Explore how operational risk has evolved in recent years. Investigate the various sources of operational risk in the current banking landscape, such as cyber threats, process failures, human errors, system failures, or external events. Use real-world case studies to highlight operational risks in practice.
2. Explore different models and approaches used for operational risk measurement, such as the Loss Distribution Approach (LDA), the Risk Indicator Approach, and more advanced methods, like Bayesian Networks, Monte Carlo simulations, etc.
3. Identify and critically assess existing strategies for managing and mitigating operational risk. Your analysis should consider a range of dimensions, including technology, people, and processes.
4. Investigate how technology can be both a source of operational risk (e.g., through cyber attacks) and a tool to manage it (e.g., through automated risk detection and mitigation systems).
5. Examine the role of regulatory frameworks in shaping operational risk management in the banking sector. Discuss the impact of specific regulations such as the Basel III accord and the pillars of the Basel III Accord.
6. Predict future trends and challenges in operational risk management in the banking industry.