Registration Number:

Date & Session

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU -27**

**BBA/BBASF – V SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2023**

**(Examination conducted in November /December 2023)**

**BAVOC 5623/BASFVOC 5623: TECHNOLOGY FOR BUSINESS**

**(For current batch students only)**

Time- 2 hrs Max Marks-60

**This paper contains two printed pages and four parts**

**Section A**

**I.** Answer ***any five*** of the following (**5x2 = 10 Marks)**

1. Mention any two limitations of blockchain technology.
2. What is the significance of cryptography in blockchain?
3. Mention any two applications of artificial intelligence in business functions.
4. What does MS Excel's Pivot Chart function do?
5. What is a Man-in-the-Middle (MitM) Attack?
6. What is data validation in MS Excel?

**Section B**

**II.** Answer ***any four*** of the following (**4x5 = 20 Marks)**

1. Explain why blockchain technology is gaining popularity and why it is being used in various industries?
2. Describe the importance of knowledge representation in artificial intelligence.
3. How does AI impact different business functions? Provide two examples.
4. Explain the concept of the Internet of Things (IoT) and provide two applications of IoT in business organizations.
5. Explain the purpose of financial functions in MS Excel, and provide an example of when you might use the NPV function.

**Section C**

**III.** Answer ***any two*** of the following (**2x10 = 20 Marks)**

1. Explain the components of Blockchain. What is the role of hash in enabling blockchain technology?
2. Discuss the historical evolution of artificial intelligence and its impact on modern business. Explain the ethical concerns surrounding AI.
3. Explain the challenges and security concerns associated with the widespread adoption of IoT and propose strategies to address these issues. Finally, explain the role of cloud platforms and data analytics in maximizing the potential of IoT.

**Section D**

**III. Answer the following (1x10=10 Marks)**

1. **Case Study: Smart Solutions for GreenTech Corp**

GreenTech Corp is a leading sustainable energy company known for its innovative and environmentally friendly solutions. The company operates a vast network of wind turbines and solar panels across multiple regions. They are committed to optimizing their operations for maximum efficiency and minimal environmental impact. To achieve this, GreenTech Corp is exploring the integration of Internet of Things (IoT) and Artificial Intelligence (AI) technologies into their logistics and maintenance processes.

GreenTech Corp has recently embarked on a project to enhance the monitoring and maintenance of its renewable energy assets. They have identified the need to implement IoT and AI solutions to achieve the following objectives:

***1. Asset Monitoring and Predictive Maintenance:*** GreenTech Corp wants to deploy IoT sensors on all their wind turbines and solar panels to continuously monitor performance data such as temperature, power output, and vibration.

***2. Energy Optimization:*** IoT devices will collect data on weather conditions, energy production, and energy consumption in different regions.

***3. Environmental Impact Reduction:*** IoT sensors will monitor environmental factors like air quality and wildlife activity in the vicinity of their installations.

**Questions:**

1. As a consultant for GreenTech Corp., you are requested to propose and evaluate AI applications on a project to enhance the monitoring and maintenance of its renewable energy assets. **5 Marks**
2. Explain the role of AI in asset monitoring & predictive maintenance, energy optimization and environmental impact reduction. **5 Marks**