Course Code: **CIT882**
Course Title: **Internet of Things**
Credit: **2 units**
Time allowed: **3 Hours**
Instruction: Answer Question **ONE (1)** and any other **TWO (2)** Questions

1a. What are personal identifiable information (PII) **(3Marks)**
 b. Mention four (4) IoT security considerations for protecting PII **(4Marks)**
 c. What are sensitive data **(3Marks)**
 d. What regulatory guidelines must service providers adopt to ensure security and protection of IoT data **(7Marks)**
 e. Identify seven (7) IoT security best practices established by standard organizations **(7Marks)**
 f. What three (3) measures are necessary to secure IoT networks **(6Marks)**

2a. Identify six (6) types of sensors deployed in an IoT-based smart city application **(6Marks)**
 b. Briefly explain the two (2) important security threats in the IoT support layer **(8marks)**
 c. Enumerate six (6) IoT application layer protocols for secure exchange of packets between systems **[6Marks]**

3a. Mention three (3) specific application layer considerations for mitigating security issues **(6Marks)**
 b. Explain how Firmware Replacement Attack works **(5Marks)**
 c. List six (6) security threats/vulnerabilities at IoT application layer **(9Marks)**

4a. Identify four (4) major challenges of IoT security **(4Marks)**
 b. Write short notes on the following IoT security considerations **(10Marks)**
    (i) Data integrity (ii) Data confidential (iii) Data availability
    (iv) Authentication (v) Authorization
 c. List two (2) security solutions each for wired and wireless IoT network layer **(6Marks)**