**TASK 2**

Assume you are a R&D Engineer

For a new Project your company wants a survey

Collet research Publication using lot for SHM

Identify

(i) What sensor is used

(ii) What controller is used

(iii) What will be the IDE

(iv) What cloud is used

(v) Prepare minimum 3-questions from the refence and discuss

Based on the provided search results, here are the details regarding the use of sensors and technologies in Structural Health Monitoring (SHM):

(i) Sensors Used

Various sensors are employed in SHM, including:

Smart Sensors: These provide a decentralized approach to monitoring and include middleware services for data management.

MEMS Sensors: Used for damage detection and monitoring structural integrity.

Acoustic Emission Sensors: For detecting stress and damage in structures.

(ii) Controllers Used

While specific controllers are not detailed in the search results, common controllers in SHM systems typically include microcontrollers or embedded systems that process data from sensors and manage communication with cloud services.

(iii) Integrated Development Environment (IDE)

The search results do not specify a particular IDE used in SHM projects. However, common choices include platforms like Arduino IDE or MATLAB for programming embedded systems and analyzing data.

(iv) Cloud Services Used

The search results do not explicitly mention cloud services. However, cloud platforms like AWS, Azure, or Google Cloud are commonly used for data storage and analysis in SHM applications.

(v) Sample Questions for Discussion

What are the advantages of using smart sensors in SHM compared to traditional sensors?

This question can prompt a discussion on scalability, data management, and real-time monitoring capabilities.

How does the integration of AI enhance the effectiveness of SHM systems?

This can lead to exploring AI's role in predictive maintenance and anomaly detection.

What challenges do researchers face when implementing IoT solutions in SHM?

Discussing issues like sensor reliability, data security, and network connectivity can provide insights into practical applications.

These questions can guide further exploration into the advancements and challenges in SHM technologies.