

GS-III Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology

1. What is Quantum Technology? Discuss the various applications and Challenges Associated with the Technology.

Why this Question?

- In the Budget 2020, the government proposed spending of ₹8,000 crore on a National Mission on Quantum Technologies and Applications over the next Five Years.

Key Demands of Question:

- Explain the concept of quantum technology and its various applications and challenges associated with them.

Directive word:

Discuss:

- This is another common directive which is an all-encompassing one – you have to debate on paper by going through the details of the issues concerned by examining each one of them. You have to give reasons for both for and against arguments. And once all the discussion is done, a suitable apt conclusion may be given at the end of the answer.

Structure of Answer:

Introduction:

- Explain the concept or definition of quantum technology.

Body:

- Discuss the various applications associated with the technology like secure communication, enhanced meteorology, etc.
- Discuss the challenges while pursuing the technology like creating algorithms, lack of sufficient resources, etc.
- Highlights the initiative taken by the government in this regard like National mission on quantum technology.

Conclusion:

- Conclude with the significance of the Quantum Technology.