

2. India needs a holistic approach to tackle newest threat in the cyber space sector from quantum techniques. Explain.

Introduction

Recent report that the Indian Army is developing cryptographic techniques to make its networks resistant to attacks by systems with quantum capabilities.

Need of the Hour

↳ Encryption models at risk, the deployment of quantum resistant is needed.

↳ Current protocols like RSA will quickly become outdated.

↳ Hack Proofing these system will require considerable investments.

↳ So India will have to proactively deal with cyber risks arising from quantum computing

Lesson from other countries

↳ US National Quantum Initiative Act has already allocated \$ 1.2 bn for research

↳ China now hosts two of the world's fastest Quantum computers.

India's Improvement

↳ A joint team of Defence Research and Development Organisation and IIT Delhi

UPSC

Answer Questions in NOT MORE THAN the Word Limit specified for each in the Parenthesis.
Content of the Question is more important than length.
(Specimen Answer Booklet - For Practice Purpose Only)

इस सीमा में
नहीं लिखना
कहिए
Candidate
must not
write on the
margin

Successfully Demonstrated a QKD link
between two cities UP Prayagraj & Rindhyat

↳ India has few capabilities in developing
advance system capable of withstanding
Quantum cyberattacks.

↳ India must consider procuring the US (NSA)
Suite B Cryptography Quantum Resistant Suite as
its official Encryption mechanism

Cyberspace sector

↳ It help to establish a nationwide Communi-
cation network integrated with quantum
Cryptographic systems, thereby protecting
Cyberspace from any cross border cyber
offensive.

Conclusion

A Diplomatic partnership with other
'techno democracies' countries with top
technology sectors, advanced economies, and
commitment to liberal Democracy.

India needs a holistic approach to
tackle these challenge and threat in
Cyber space sector.