Defence & Security · GS - III

Examine the emerging challenges posed by human intelligence operations and social engineering to the protection of strategic technologies. Suggest suitable countermeasures.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 09/11/2026	GS - III	Defence & Security

MARKS	WORD LIMIT
10	~ 150 words

Answer Hint

Human intelligence, honey-trapping, social engineering, insider threats, AI chip technology, intellectual property theft, counter-intelligence, cybersecurity, corporate security, national security.

Model Answer

Introduction

Strategic technologies such as artificial intelligence and advanced semiconductors have become important components of national security. Intelligence operations and social engineering can threaten their confidentiality and integrity.

Emerging Challenges

- **Human intelligence:** Personal interactions may be exploited to obtain sensitive information.
- **Social engineering:** Manipulation and deception can bypass organisational security systems.
- **Insider threats:** Employees or business associates may expose confidential research.
- **Technology theft:** Unauthorised access to intellectual property can undermine strategic and economic advantages.

Countermeasures

- Strengthen counter-intelligence and corporate security mechanisms.

- Conduct employee awareness and background verification programmes.
- Restrict access to sensitive information through robust access controls.
- Improve cybersecurity and monitoring of critical research infrastructure.
- Encourage information-sharing between intelligence agencies and technology companies.

Conclusion

Protecting strategic technologies requires an integrated approach combining human-source awareness, cybersecurity, corporate accountability and effective intelligence coordination.