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Current Affairs

Q.NO.1

In the 20th century and before the maximum of power was determined by economy and military muscles. But in 21st century, technology has evolved into another determinant.

Introduction:

→ Great power politics is very dynamic. Till 20th century, it was economy and military muscles that decided the global hierarchy. However, the 21st century has ushered in a new era, where technological prowess has emerged as a decisive factor in determining the nation's influence and standing on the world stage. The seismic shift has re-defined the rules of International relations, economic competitiveness, and geopolitical dynamics.

As one navigates this new landscape, its

essential to understand how technology and maintainin
has become third pillar of global power, regions.

Economy and Military ... 20th Centu...

Economic power and Military muscles as a determinant of Maximization of Power:

In the 20 th century

Table: Economic and Military muscles aided European admirals to

Era / Period	Economic Muscle	Military Muscle	Outcome
European Colonialism	• Exploited colonies for resources (e.g., gold, spices) • Dominated global trade routes and Markets • Industrialization enabled mass production and economic dominance.	• Advanced militaries and powerful navies. • Conquered and controlled vast territories • Military force supressed resistance and secured colonies • Arms race among European powers for global dominance.	• European powers like Britain, France and Spain established vast empires, dominating global commerce and politics.

Era/ Period	Economic Muscle	Military Muscle	Outcome
US vs Soviet Union (cold war Era)	• US became the largest economy by early 20th century. • US outpaced Soviet Union in economic growth and technological innovation • Soviet economy struggled under centralized planning and military expenditures	• Global arms race with vast nuclear arsenals. • US built a global network of alliances (NATO). • US outspent the Soviet union in military advancements during the 1980s.	• The US and Soviet Union emerged as superpowers, with economic and military rivalry shaping global geopolitics. • Soviet economic strain led to its collapse, ending the cold war.

Fig: US dominated in cold war due to strong economy and military muscles.

Era / Period	Economic Muscles	Military Muscles	Outcome
US as the world's Superpower	• US solidified economic dominance post-WWII, and lead global financial institutions and trade systems. • Technological innovation and global trade networks expanded influence.	• Unmatched military capabilities with the most advanced nuclear arsenal and global military presence. • US military interventions and alliances reinforced global leadership.	• The US emerged as the sole superpower post Cold-War, shaping a new world order and maintaining global stability through its strong economy and military muscles.

Table: US prevailed over all other states due to strong economy and military muscles.

Keep the description in this part of the answer a bit brief

Technology evolved into another determinant in 21st century:

→ Advances in Science and technology (S and T) have influenced the course of international politics. Technology, in-fact, is one of the key determinants in shaping relations among nations, alongside was and economic shifts. Technologically advanced industrialized nations accumulate and exercise their vast economic and military powers in order to establish their supremacy over less advanced parts of the world, in effect creating a hierarchy among nations. Moreover, by making war more destructive, technology has made war unreliable means of conducting great power relations, thereby fostering cooperation among states. Adding to this, it has also accelerated competition among states.

The role of Information and Communication technologies (ICT) in Global Relation:

→ Information and communication technologies have significantly impacted the dynamics of

International relations. Charles Weiss identifies four main mechanisms through which ICT has influenced global politics;

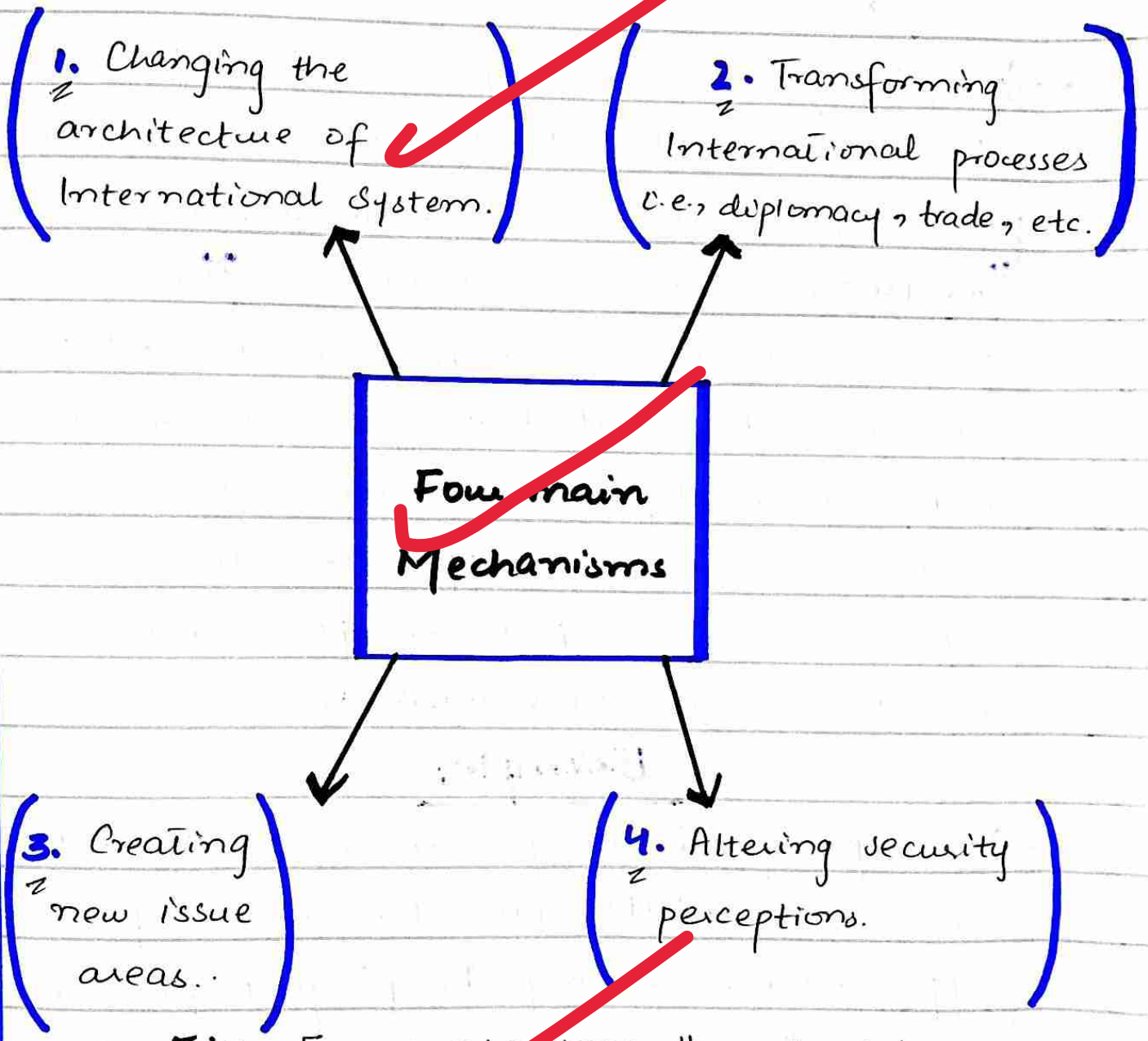

Fig: Four mechanisms through which ICT influenced global politics.

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Rapid globalization of technology has transformed international relations:

→ Rapid globalization of technology has transformed international relations, creating both opportunities and challenges. The "revolution in dual-use technologies" has fundamentally altered how wealth and power are generated and how wars are fought. Technological diffusion is now almost instantaneous and unstoppable, which has equalized some aspects of power but also introduced new vulnerabilities.

Example:

→ The proliferation of commercial satellites, GPS, and internet data has military applications, leveling the playing field for nations that may not have been traditional powers. However, it has also empowered non-state actors, such as, terrorist groups, to exploit these technologies for asymmetrical warfare.

Emerging technologies and future power shifts:

→ Advancements in next generation technologies like;

(1) Micro electronics
(2) Biotechnology
(3) Robotics
(4) Artificial Intelligence (AI)
(5) Silicon chips

are expected to upset existing power balances and shape future military capabilities. By 2030, several states will have developed formidable military capabilities, including long-range, precise, and destructive weaponry, leading to a transformation in how wars are fought.

Example:

→ China's focus in upgrading its military with high-tech command-and-control systems, cyber capabilities, and space technologies is an effort to gain strategic superority. Chinese military strategists emphasize controlling information over traditional warfare methods, viewing cyber warfare as more effective than

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nuclear weapons.

The US-China Chip War: A Technological Arms Race:

→ The ongoing US-China chip war epitomizes the broader struggle for technological supremacy between these two global powers. Semi-conductors, or chips, are the foundation of modern electronics, powering everything from smartphones to advanced military systems. Control over chip technology as seen as critical to national security, economic power and geopolitical influence.

Background of Chip War:

→ The chip war began with the US imposing restrictions on China's access to advanced semi-conductor technology, citing national security concerns. The US has since intensified its efforts to curb China's rise as a technological power by restricting exports of critical technologies, pressuring allies to follow suit, and encouraging domestic chip production.

In response, China accelerated its efforts to build a self-sufficient semi-conductor industry:

In response, China has accelerated its efforts to build a self-sufficient semi-conductor industry. The Chinese government has invested billions of dollars in;

(1) R and D (Research and Development),
(2) Subsidies
(3) talent recruitment

to reduce its reliance on foreign technology and achieve chip independence.

Far-reaching global implications:

The US-china chip war has far reaching global implications for;

(1) global supply chains,
(2) technological innovation,
(3) International relations.

It has led to decoupling of global-tech ecosystems, with nations being forced to choose sides. This rivalry could potentially lead to bifurcated global tech landscape, with separate standards, supply chains, and markets

Technological superiority allows nations to set global norms

There is a direct correlation between a nation's technological capabilities and its place in the global hierarchy. Technological superiority allows nations to set International norms and maintain their status as great powers. This competition is particularly fierce among military strategists, who view technological advances as crucial to staying ahead of rivals.

Example:

The US's restrictions on high-tech transfers to China and India reflect the strategic importance of maintaining technological superiority. Both China and India have recognized this and are investing heavily in innovation and R&D to close the gap, with China aiming to become global leader in technology.

Techno-Resource Nationalism and Global Power Play:

→ The intersection of technology and resource competition has given rise to what can be termed "Techno-Resource Nationalism." Great powers are in constant competition for resources, and technology plays a central role in securing these resources and maintaining power. Historically, international orders have been based on energy resources, and the current era is no different, with oil and technology being key drivers of foreign policy.

Example:

→ China's investment in modern transportation technology to redraw the map of Eurasia, creating an alternative hub-and-spoke economic system, exemplifies techno-resource nationalism. By building pipelines, railroads, and highways linking China with Central, South West, and South East Asia, China secures raw materials and energy resources while exporting its manufactured goods, thus consolida-ting its power.

Keep the description of headings a bit brief

Future technological innovations will decide the fate of nations:

→ Future technological advancements will certainly decide the fate of nations. Emerging economies, like China, have the potential to develop revolutionary technologies that could rebalance global power. However, the pace of technological change is uneven, and nations that can leverage their technological edge will dominate the global power.

Example:

→ The rapid growth of R & D in China, combined with its large domestic markets, positions it as potential source of future technological breakthroughs, such as in clean energy and advanced computing. As, China's R & D investment exceeded 1 trillion yuan in 2012 and 2 trillion yuan in 2019, and it took only 3 years to raise it to 3 trillion yuan in 2022, reflecting China's innovation driven development strategy. Thus, these innovations could shift global power balances.

Conclusion:

In the 21st century, technology will continue to play a pivotal role in shaping international relations. Geopolitical alliances and rivalries will increasingly revolve around technological advancement, resources and trade. Access to cutting-edge will determine a nation's place in the global hierarchy, and technological innovation will be the engine driving economic and military power. And the Us-China chip war is just one battle in this broader conflict, illustrating the stakes involved in the race for technological dominance.

Good attempt!

But the answer is lengthy and will affect your time management in paper. So shorten it a bit