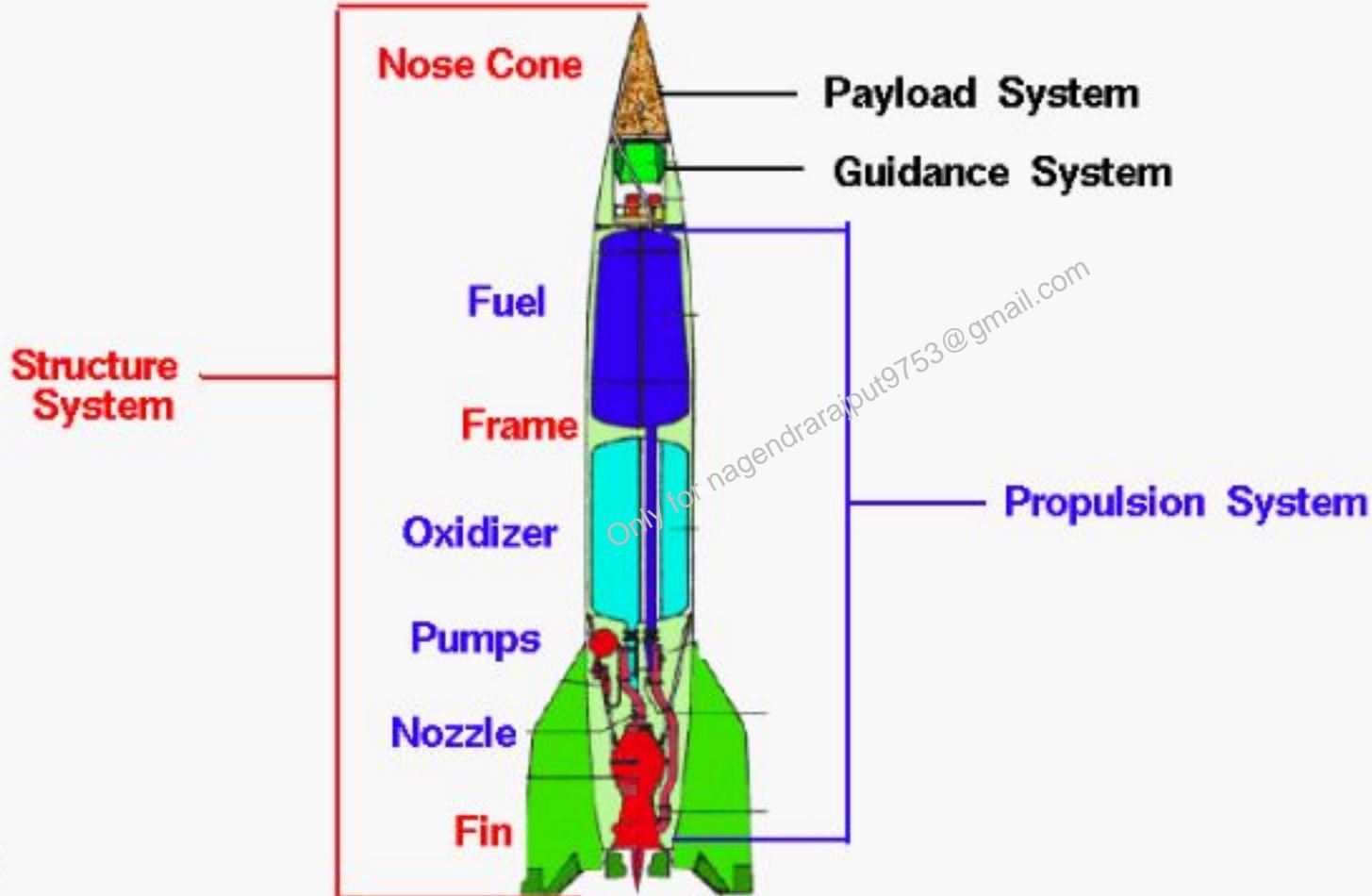


Defence Technologies



INSPIRATION
INNOVATION



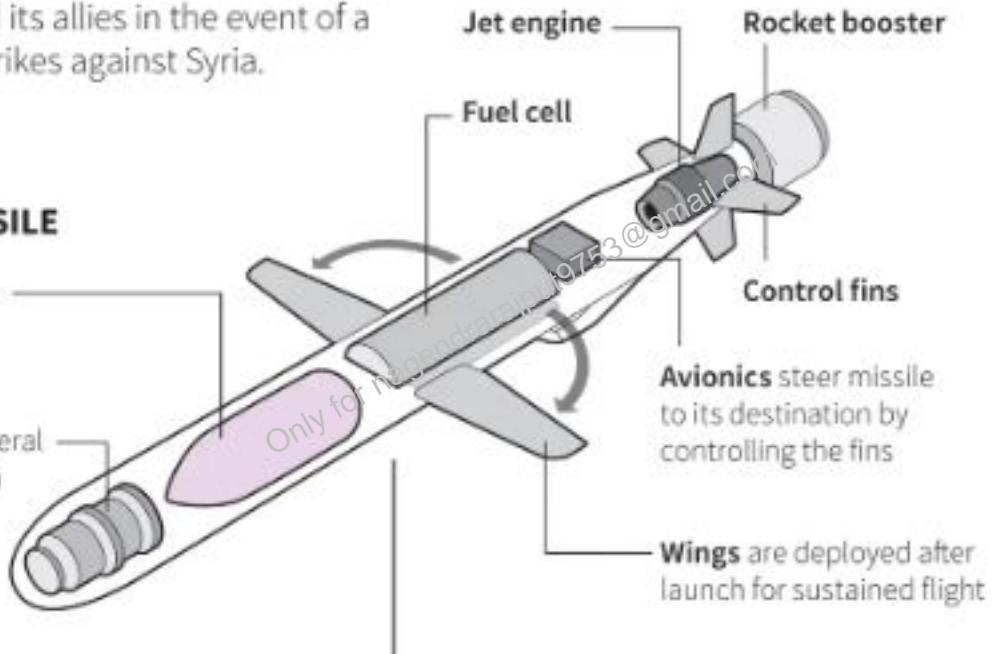
Cruise missiles

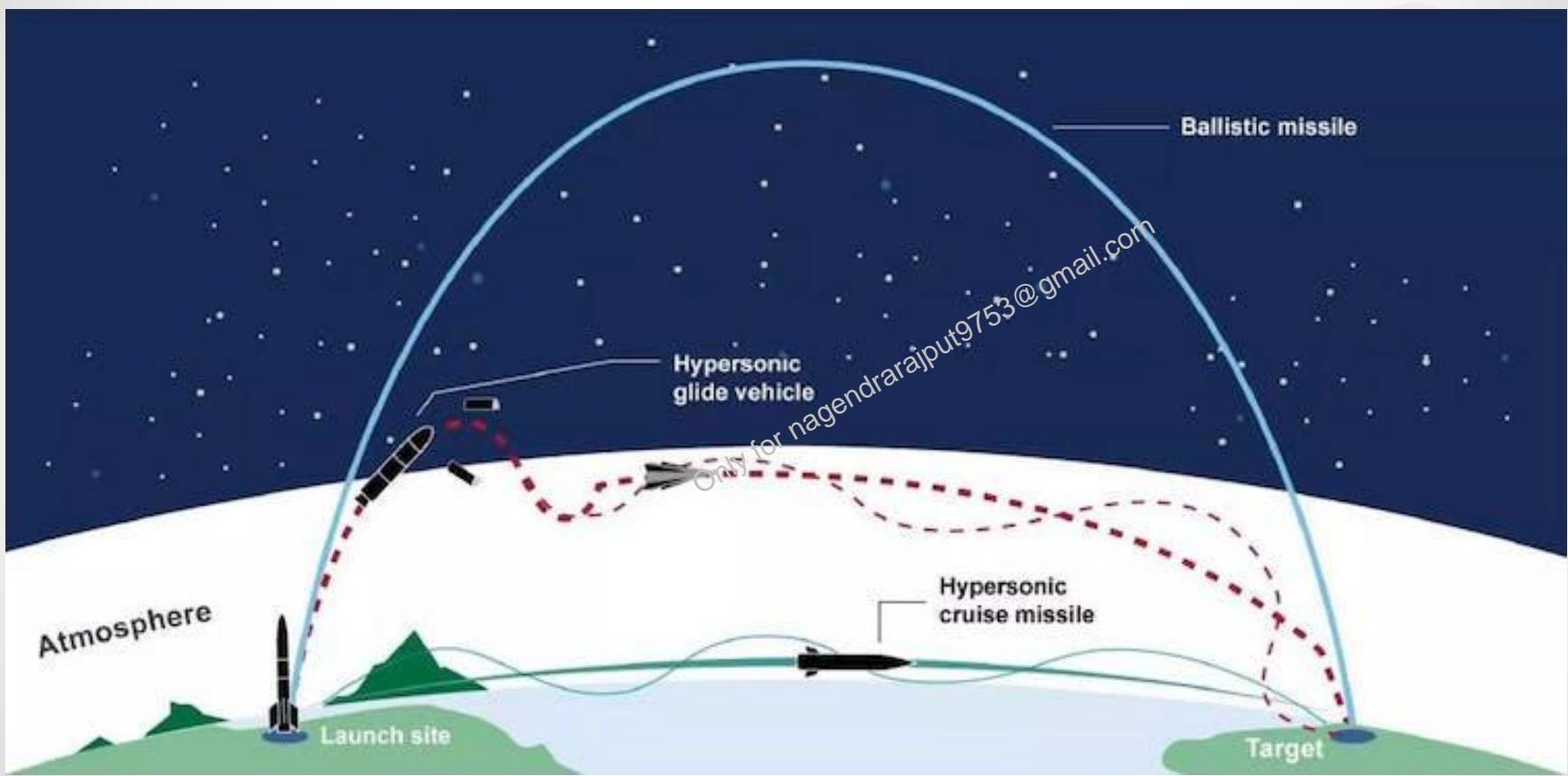
Self-guiding missiles are part of the arsenal at the disposal of the U.S. and its allies in the event of a decision to carry out strikes against Syria.

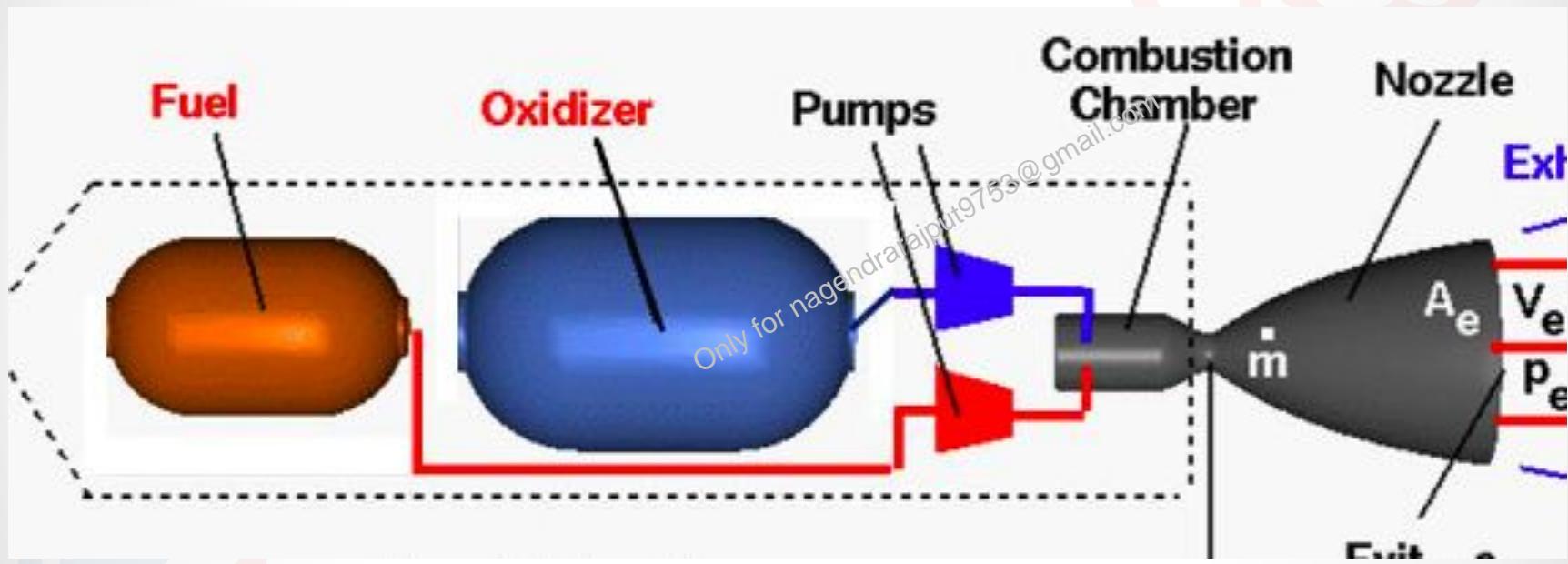
INSIDE A CRUISE MISSILE

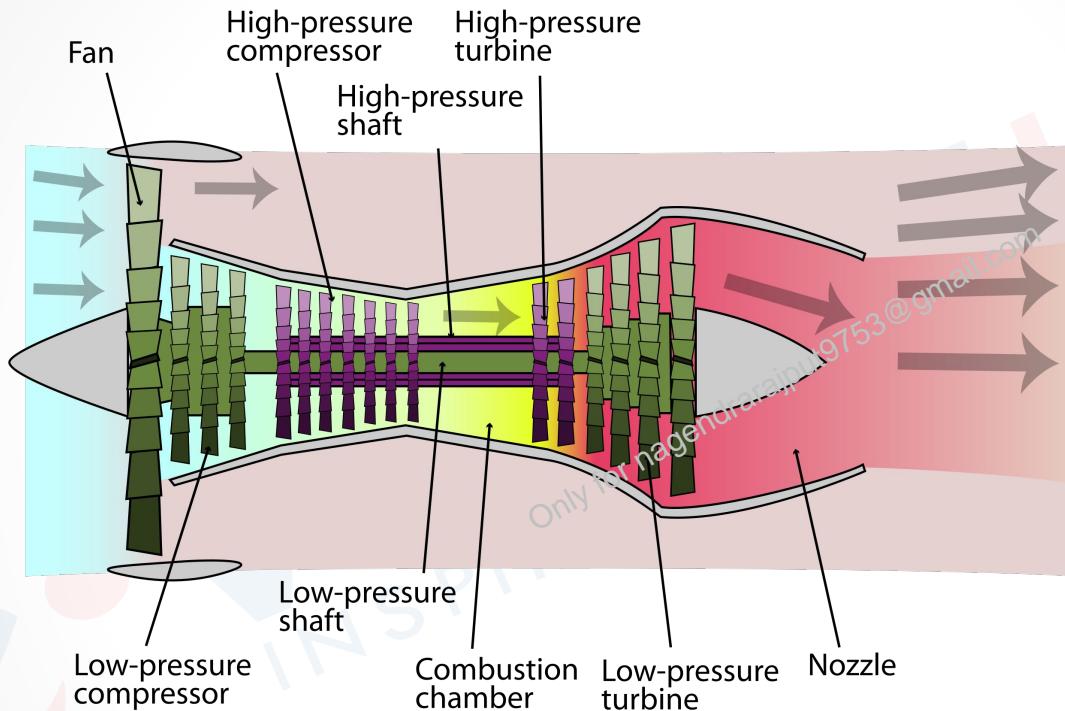
Warhead can be bomblets, ballistic or thermonuclear

Navigation is based on several systems that include terrain referencing, GPS (Global Positioning System) and time of arrival control

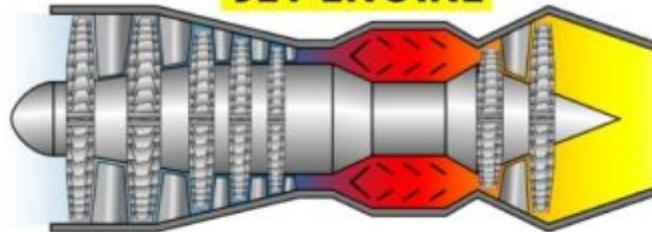




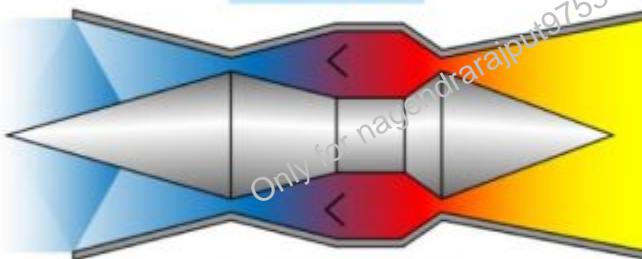




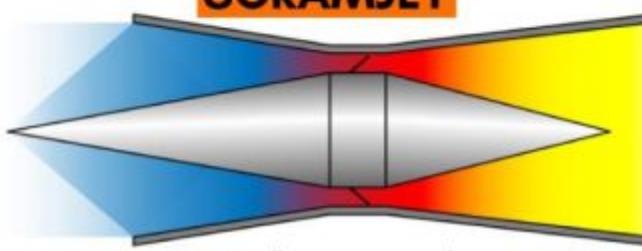
JET ENGINE



RAMJET



SCRAMJET



Compression

Combustion

Expansion

Only for nayandraraiput9753@gmail.com

Hypersonic weapons

Considered the next generation of arms with conventional or nuclear warheads that are hard to detect and can travel more than five times the speed of sound

TRAJECTORY AND DETECTION

HYPersonic GLIDE VEHICLE

Speed: at least Mach 5

Launched from a rocket. Hard to detect, track and intercept

Hypersonic cruise missiles are powered by "scramjets", maneuvered at lower altitude toward target

Detected by radar

Atmosphere (100 km)

CONVENTIONAL BALLISTIC MISSILE

Between Mach 1 and Mach 5.

Easier to predict and intercept

Launch

Target

Prithvi and Akash



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Trishul and Barak

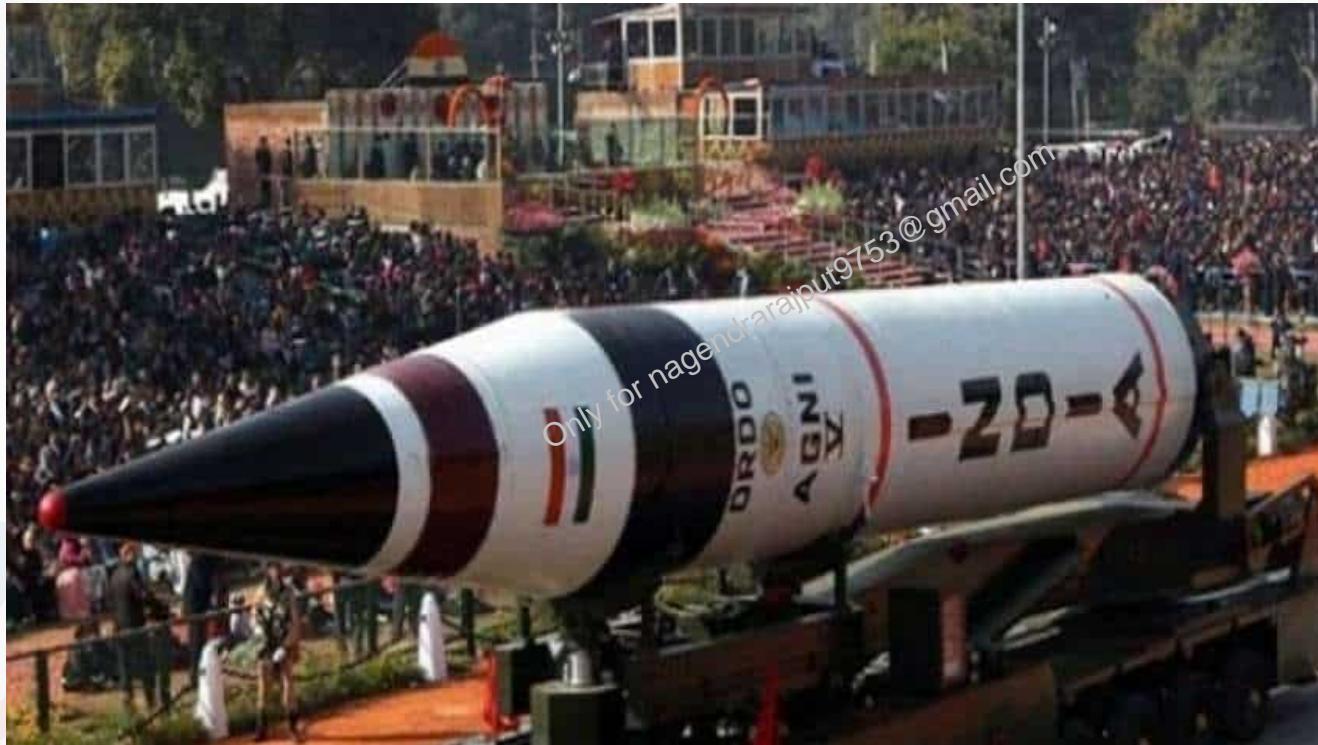


Nag/Helina

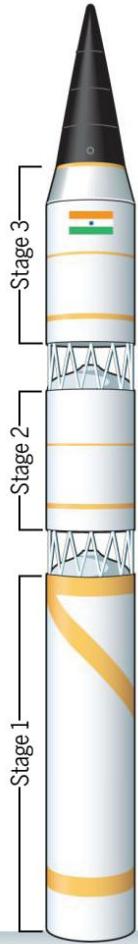


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Agni V missile



AGNI SERIES OF LONG RANGE BALLISTIC MISSILES



AGNI V

- Operational range: **5,000 km**
- Payload: **1360.78 kg**
- Height **17m**
- Future development possible for variant that could be launched from a submarine

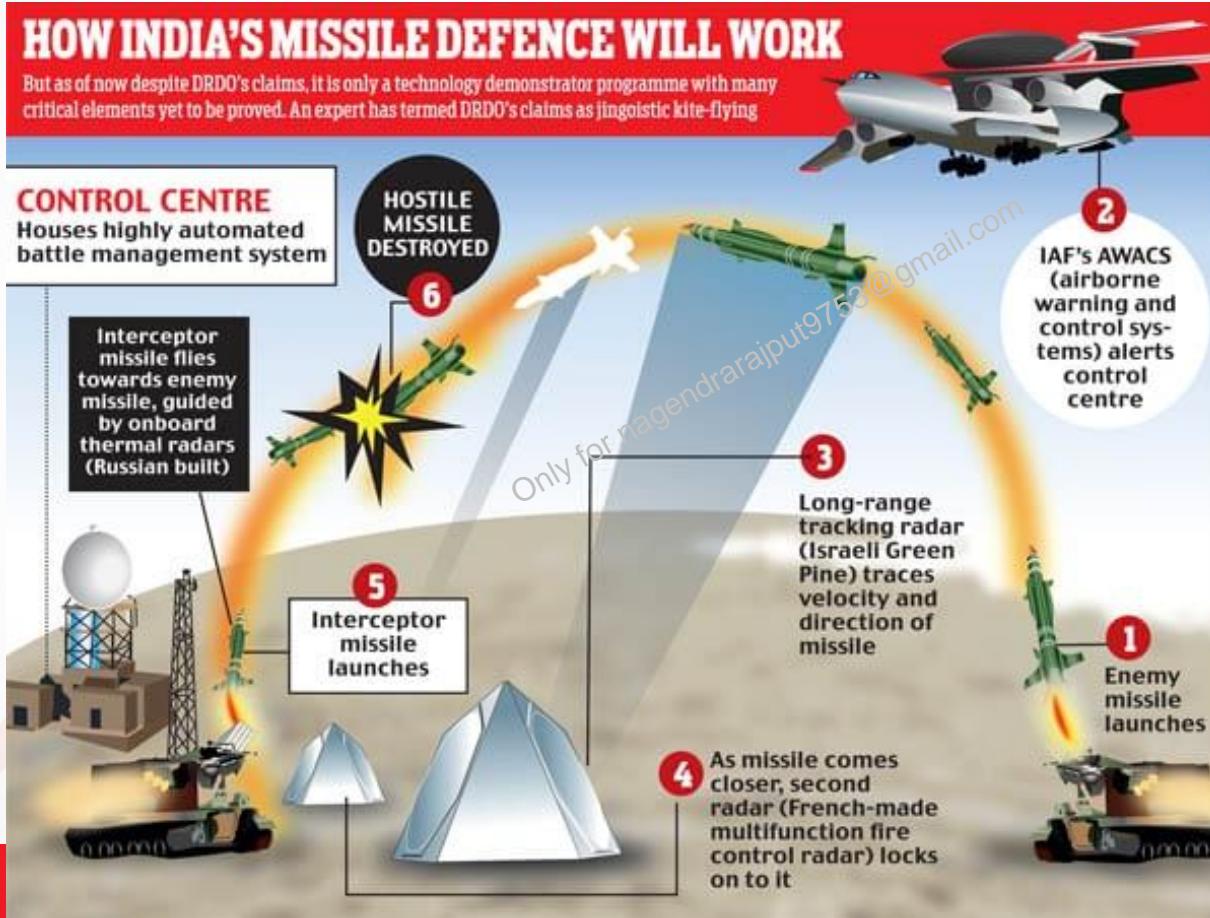


Agni Missile Series	Agni I	Agni II	Agni III	Agni IV
Range (km)	700	2,500	3,000	4,000
Payload (kg)	1,000	1,000	1,500	1,000
Height (m)	15	20	16.3	20

Source: Reuters, PTI



Ballistic missile defence



S400



Iron Dome - Israel



58. Consider the following statements :

1. Ballistic missiles are jet-propelled at subsonic speeds throughout their flights, while cruise missiles are rocket-powered only in the initial phase of flight.
2. Agni-V is a medium-range supersonic cruise missile, while BrahMos is a solid-fuelled intercontinental ballistic missile.

Which of the statements given above
is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

INS Vagsheer



INS ARIHANT

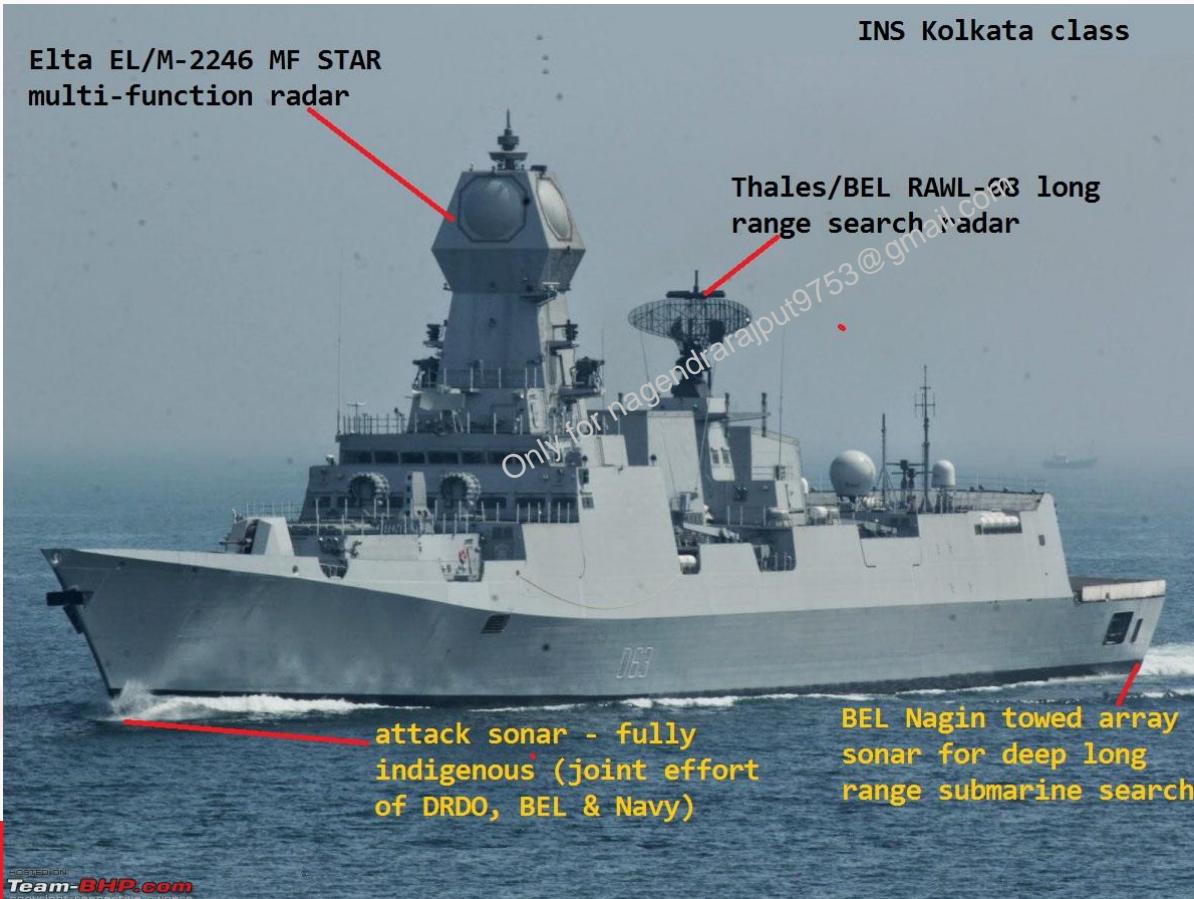


Carries K4 missile

Varunastra Torpedo



INS Kolkata - Destroyer



INS Mormugao



Sahyadri – Frigates



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Kamorta – Corvette



INS Vikrant



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Rafael and Mirage



Sukhoi and Tejas



AEW&C



Tapas 201



Pinaka



Directed Energy Weapons

