Current Affairs 16th October 2023 by Saurabh Pandey

International law on war

What are the laws of war?

There are two separate and independent international law questions related to wars.

First, under what conditions or when can countries use force in their international relations?

This is known as jus ad bellum, regulated by the United Nations (UN) Charter. Second, how is a war to be fought, that is, what military actions are permissible?

This is known as jus in bello.

Assuming a country is justified under the UN Charter to use force, it still must ensure that it satisfies jus in bello obligations.

Justification to use force does not relieve a country of its obligations to use such force in accordance with international law.

The 'how' of using force or the law of war is known as international humanitarian law (IHL), which provides the rules that must be followed during an armed conflict.

IHL is contained in customary international law, the Geneva Conventions of 1949 and the Additional Protocols of 1977. It regulates the conduct of the parties or groups engaged in an armed conflict.

Its primary objective is to protect civilians and reduce the suffering a war unleashes

International law classifies armed conflicts into two categories: international armed conflict (IAC) and non- international armed conflict (NIAC).

According to Common Article 2 of the Geneva Conventions, IAC includes all cases of declared war or any other armed conflict between two or more countries.

NIAC includes non-governmental

forces (Hamas) involved in battle with governmental forces (Israel).

Common Article 3 of the Geneva Convention applies to NIAC. Thus, Israel and Hamas are obliged to abide by IHL.

The Hindu

UNSC on Haiti

A round a year after Haiti approached the United Nations seeking urgent help to combat deadly gang violence, the United

Nations Security Council (UNSC) has approved international intervention in the form of a foreign security mission, led by Kenya, to restore security, protect critical infrastructure and control spiralling violence in the country. Haiti has experienced a surge in violence over the past year as armed groups took control of large parts of the country, including the capital Port- au -Prince.

Why is the UN sending a mission to Haiti?

Haitian Prime Minister Ariel Henry first sought international support to assist the national police in October last year after the country plunged into a crisis when a group of gangs called "G9 and Family" seized control of the entry of the main fuel port Varreux in the capital protesting the PM's decision to cut fuel subsidies.

The blockade brought the country to a standstill and led to massive shortages. The lack of gas and diesel adversely affected transportation and forced several hospitals and other medical institutions that relied on fuel- powered generators to halt operations.

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Jailbreaking

Jailbreaking is the process of exploiting the flaws of a locked-down electronic device to install software other than what the manufacturer has made available for that device.

Jailbreaking allows the device owner to gain full access to the root of the operating system and access all the features.

It is called jailbreaking because it involves freeing users from the 'jail' of limitations that are perceived to exist.

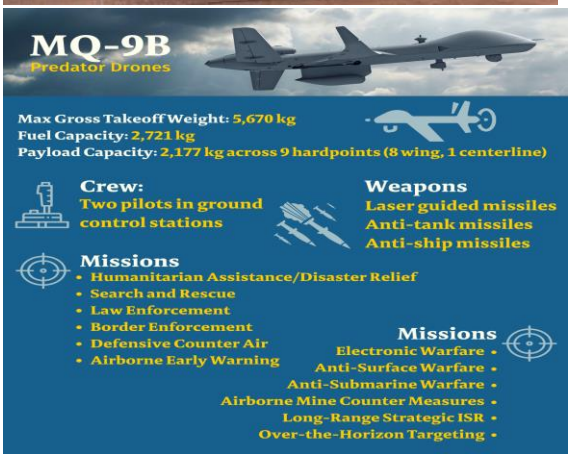
The term jailbreaking is most often used in relation to the iPhone: it is considered the most 'locked down' mobile device currently on sale.

Early versions of the iPhone did not have an app store, and the iOS interface was considered more limited for users than it is today.

31MQ9B

The Ministry has only accorded the Acceptance of Necessity to acquire 31 MQ 9B HALE Drones. Only the United States has these drones. China has been trying to acquire it but has not been able to do so.

India has formally requested the acquisition of 31 top-grade MQ-9B Reaper or Predator-B drones from the United States.



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RCEP

Four years after India walked out of the Regional Comprehensive Economic Partnership (RCEP) agreement, neighbors Sri Lanka and Bangladesh are now considering their chances of membership in the 15- nation trading bloc.

Radiation detection equipment (RDE)

Radiation detection equipment (RDE) will soon be installed at eight land crossing points along India's borders with Pakistan, Bangladesh, Myanmar and Nepal to check the trafficking of radioactive materials for its possible use in making nuclear devices, officials said. The RDE will be installed at the integrated check posts and land ports of Attari (Pakistan border), Petrapole, Agartala, Dawki and Sutarkandi (all on the Bangladesh border), Raxaul and Jogbani (Nepal) and Moreh (Myanmar). The Union government has taken the initiative to install the RDE so that the trafficking of radioactive materials across international borders can be checked.

The Hindu

Aestivation

Felt the urge to sleep through a hot

day? Some animals do exactly that to beat the heat, but for a whole season. This is called estivation (or aestivation). It is a biological phenomenon whereby the animal enters a long period of dormancy, or inactivity, in response to high temperature or maybe even drought -like conditions.

It is a survival strategy that helps the animal conserve energy and water in a difficult time. During estivation, the animal often seeks shelter in a cool underground burrow, crevice or cocoon, where it will remain in a state of reduced metabolic activity, which in turn reduces the rate at which the body consumes energy.

Estivation can also be a way to avoid desiccation extreme dryness of the skin and also lower the risk of being preyed on by a predator.

For example, the West African lungfish (Protopterus annectens) burrows into the mud of a drying water body and secretes a cocoon of mucus around itself during a drought.

Desert tortoises (Gopherus agassizii) dig burrows and retreat into them in hot summer months.

The Hindu

Pauli principles

Physicists in Germany have come up with a way to convert the energy difference between two quantum states of a group of atoms into work.

The device adapts the principles of the familiar classical engine to the subatomic realm, giving physicists a way to study the nascent field of quantum thermodynamics in more detail as well as, possibly, build better quantum computers.

Pauli's principle All subatomic particles can be classified as either fermions or bosons. Fermions are the building blocks of matter; bosons are particles that carry the forces acting between them.

Now, when a bunch of particles are cooled to very nearly absolute zero, so that their quantum nature comes to the fore, they would all like to have the lowest energy possible but they can't.

This is known as Pauli's exclusion principle. All particles in a system are distinguished by four quantum numbers, sort of like their Aadhaar numbers.

The values of the four numbers together tell us something about how much energy a particle has.

The exclusion principle states that, in a given system, no two particles can have the same four quantum numbers, that is, they can't occupy the same energy level.

Fermions are particles that are bound by this rule. Bosons are not bound by the exclusion principle: they can all occupy the same lowest energy level at a given low temperature.

Fermions to bosons and back Classical engines convert heat into work. For example, the internal combustion engine in a car uses the heat released by the combustion of petrol or diesel to push a piston. Overall the engine has four steps: the fuel is compressed, ignition causes the fuel air mix to expand and push the piston out, the mix cools and stops expanding, and the piston is brought back to the first step.

The quantum engine, or what the researchers are calling a 'Pauli engine', has a similar set of four steps. First, the atoms collected in the trap are compressed and kept in a bosonic state. Second, the strength of a magnetic field applied on the atoms is increased by a small amount.

Interactions between the atoms and the field cause the former to slip into a fermionic state:

They are forced to move out of the lowest energy level and

progressively occupy higher levels.

Third, the compression applied in the first step is eased.

Fourth: the magnetic field strength is reduced to its original value.

The energy of the atoms increases during the third step and this can be converted to work.

The Hindu

Azerbaijani president raises national flag in Karabakh

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