

**23**



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**500 HIGH PROBABLE  
TOPICS FOR UPSC  
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**TOPIC 361-380**



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**Session 23**

**Rapid Revision Series  
of  
500 HIGH PROBABLE TOPICS  
for  
PRELIMS 2020**



# TOPICS TO REVISE

361. Mission Shakti (A-SAT missile)
362. Major international treaties relating to Outer Space
363. United Nations Office for Outer Space Affairs (UNOOSA) and UNISPACE+50
364. UN-SPIDER
365. Space Missions in news - NASA's Perseverance; Tianwen-1; Hope Mars Mission
366. Solar Orbiter Mission
367. SunRISE Mission
368. Lunar Polar Exploration (LPE) Mission
369. Sisir Kumar Mitra
370. Indian Ocean Naval Symposium
371. Indian Ocean Rim Association (IORA)
372. South-East Asia Regional Health Emergency Fund (SEARHEF)
373. BoBBLE: Bay of Bengal Boundary Layer Experiment
374. Comprehensive Nuclear Test Ban Treaty and CTBTO Preparatory Commission
375. New START Treaty and Intermediate-Range Nuclear Forces (INF) Treaty
376. Nuclear Suppliers Group (NSG)
377. Four foundational agreements
378. Avvaiyar
379. Thiruvalluvar
380. Dinanath Nadim



## Topic 361: Mission Shakti (A-SAT missile)

### Key points:

1. Mission Shakti --> anti-satellite missile test --> carried out by DRDO
2. A-SAT system --> successfully destroyed a live satellite in Low Earth Orbit
3. India joined exclusive group of space faring nations consisting of USA, Russia and China
4. India used the particular technology of Kinetic Kill
5. 5 known Indian satellites in LEO: India PiSat, Resourcesat 2, Radar Imaging Satellites 1 and 2 and SRMsat

### Dead wood

To India's 80, there were 4,091 pieces of debris left behind by the U.S., 4,025 by Russia and 3,524 by China

Country	Debris (in orbit)	Debris (out of orbit)
China	3,524	1,353
Russia	4,025	15,207
U.K.	1	15
U.S.	4,091	6,325
India	80	343
Japan	55	300
France	334	733



# Topic 362: Major international treaties relating to Outer Space

## Key points:

India is a party to all the major international treaties relating to Outer Space

1. 1967 Outer Space Treaty
2. Transparency and Confidence Building Measures(TCBMs); UN Space Mitigation Guidelines
3. Inter Agency Space Debris Coordination (IADC)
4. SOPA (Space Object Proximity Awareness) and COLA (Collision Avoidance)
5. UN affiliated Centre for Space and Science Technology Education in Asia and Pacific
6. UN Committee on the Peaceful Uses of Outer Space
7. UNGA resolution 69/32 on No First Placement of Weapons on Outer Space
8. Prevention of an Arms Race in Outer Space (PAROS)



## Topic 363: UNOOSA and UNISPACE+50

### Key points:

1. United Nations Office for Outer Space Affairs (UNOOSA) --> to promote the peaceful use and exploration of space through international cooperation
2. UNOOSA --> part of the United Nations Secretariat (created in 1958)
3. Headquarters --> Vienna, Austria
4. UNISPACE+50 --> the first United Nations Global Space Summit of the 21st Century
5. Shared goal --> to build, together with all stakeholders, a comprehensive Space2030 agenda

**Since 1968, the United Nations has held three conferences**

- UNISPACE I, Vienna, 1968
- UNISPACE II, Vienna, 1982
- UNISPACE III, Vienna, 1999



## Topic 364: UN-SPIDER

### Key points:

1. United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)
2. Estd. In 2006 under the UNOOSA
3. It develops solutions to address the limited access developing countries have to specialized technologies.
4. Mandate --> to enable developing countries to use all types of space-based information
5. UN-SPIDER created two global networks --> Regional Support Offices (RSOs) and National Focal Points (NFP).



## Topic 365: Space Missions in news

### NASA's Perseverance

- NASA launched Mars rover Perseverance to look for signs of ancient life.
- Atlas V rocket lifted off from the Kennedy Space Center with NASA's Perseverance rover on its way to Mars, on July 30, 2020.
- This is the world's third and final Mars launch during 2020 (UAE's Hope Probe and China's Tianwen-1)

Two other NASA landers are also operating on Mars — 2018's InSight and 2012's Curiosity rover.

### Tianwen-1

- China's first Mars probe
- Tianwen--> "Questions to Heaven"
- Mission --> aims to study the thickness and sub-layer distribution of the Martian soil (Martian topography and geology)
- launched on a Long March 5 rocket

### Hope Mars Mission

- The probe is also known as Al-Amal.
- It was launched on a Japanese Rocket.
- It will not land on the planet, but instead orbit it for a whole Martian year, or 687 days





# Topic 366 and 367: Solar Orbiter Mission and SunRISE Mission

## Key points: SOM

1. Sun-observing mission jointly organised by the NASA and ESA
2. 1st mission that will provide images of the sun's north and south poles
3. It can provide more insight about the sun's powerful magnetic field and how it affects Earth
4. Observations of the sun's corona (which is its atmosphere), the poles and the solar disk
5. Measures the sun's magnetic fields and solar wind

## Key points: SunRise

1. NASA's new mission to study giant solar particle storms
2. Sun Radio Interferometer Space Experiment (SunRISE)
3. The mission will help in greater understanding of the solar system; impact of solar storms while astronauts travel to Mars or the Moon
4. SunRISE contains six CubeSats which will work together as a large radio telescope
5. Observes radio images of low-frequency emission from solar activity and create 3D maps
6. About NASA's Missions of Opportunity



## Topic 368: Lunar Polar Exploration (LPE) Mission

### Key points:

1. Japan (JAXA) and India (ISRO) will be launching this joint lunar mission
2. Aims to put a lander and rover on Moon's surface
3. Mission will be launched after 2023 --> from Japan, H3 rocket
4. Intends to obtain data on the quantity and forms of water resources present

## Topic 369: Sisir Kumar Mitra

### Key points:

1. Chandrayaan-2 took photos of various craters on the moon while it was flying over its north pole
2. Sisir Kumar Mitra --> noted Indian physicist
3. Working Group for Planetary System Nomenclature (WGPSN), an arm of the International Astronomical Union (IAU) --> names one of the craters --> Mitra Crater
4. Mitra --> Working Group for Planetary System Nomenclature (WGPSN), an arm of the International Astronomical Union (IAU)
5. Other Indian scientists who have their names etched on the moon is Dr Vikram Sarabhai.



# Topic 370: Indian Ocean Naval Symposium (IONS)

## Key points:

1. They are a series of biennial meetings among the littoral states of the Indian Ocean region.
2. Regional forum of Indian Ocean littoral states --> represented by their Navy chiefs
3. Launched by India in February 2008
4. Objectives



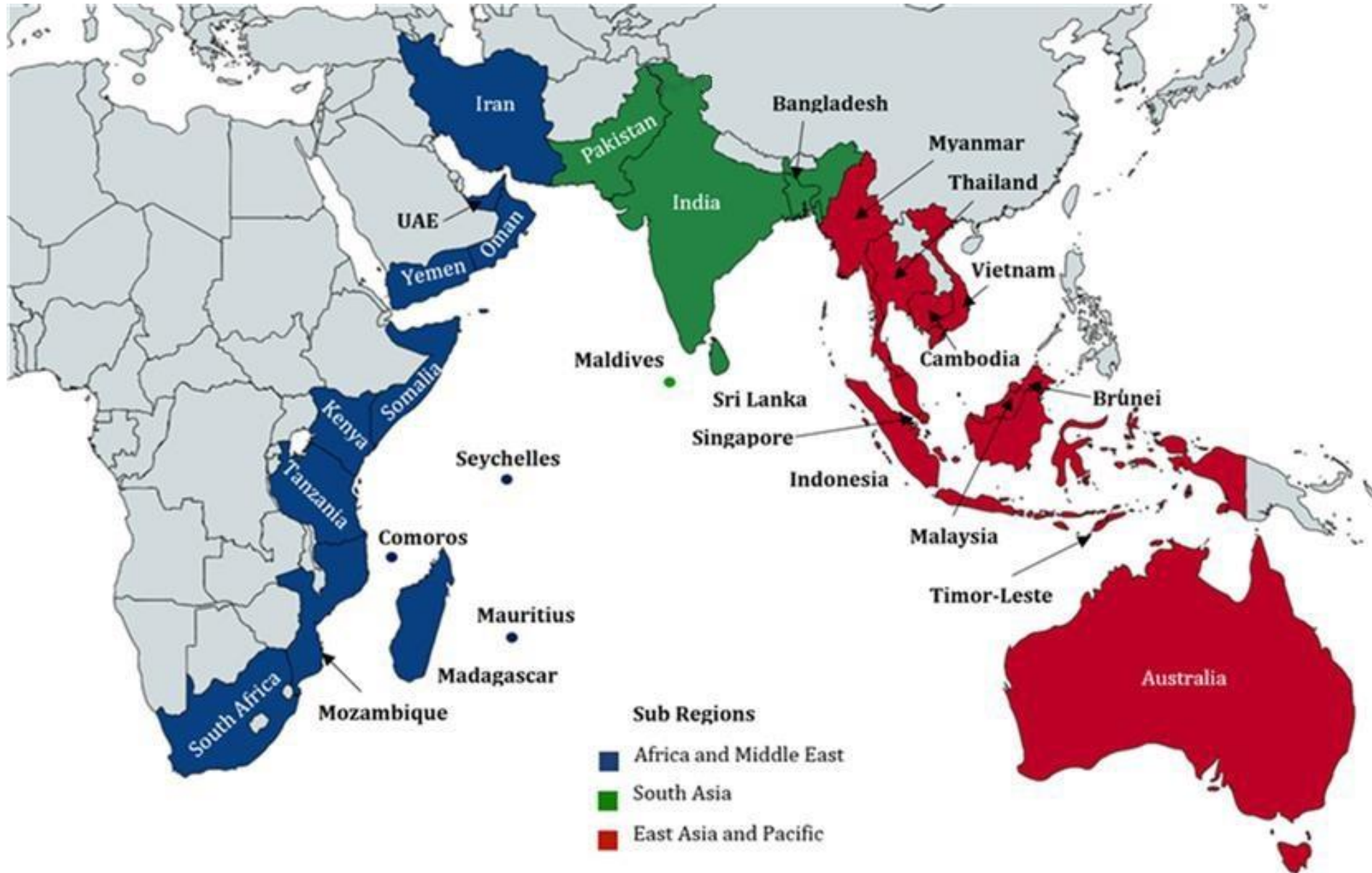


# Topic 371: Indian Ocean Rim Association (IORA)

(19th IORA Council of Ministers meeting was held at Abu Dhabi)

## Key points:

1. Formerly known as the Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)
2. International organisation --> consisting of 22 coastal states bordering the Indian Ocean
3. IORA is a regional forum --> tripartite in nature
4. Based on the principles of Open Regionalism for strengthening Economic Cooperation
5. Secretariat of IORA --> Ebene, Mauritius
6. Member States - Australia, Bangladesh, Comoros, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, UAE, and Yemen.





# Topic 372: South-East Asia Regional Health Emergency Fund (SEARHEF)

## Key points:

1. It is a mechanism that allows for a more rapid response to disasters from natural and human-generated hazards.
2. Fund has been established by the WHO South-East Asia Regional Office and its 11 Member States
3. 11 member states --> Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste

## **The fund will be used for emergencies, whether natural or man-made, in which the following may occur:**

- Declaration of a state of emergency;
- Official request for external assistance by the national government; or
- Appointment of a humanitarian coordinator by the UN Secretary-General for that particular emergency.





## Topic 373: BoBBLE

### Key points:

1. Bay of Bengal Boundary Layer Experiment
2. Accurate prediction of monsoon, tropical cyclones and other weather related forecasts
3. Understand the role of thermodynamic surface and mixed layer processes in the monsoon
4. Understand the role of large-scale ocean structure, ocean dynamics and ocean biogeochemistry in the monsoon
5. It is a joint India-UK project



# Topic 374: Comprehensive Nuclear Test Ban Treaty (CTBT) and CTBTO Preparatory Commission

## Key points: CTBT

1. Multilateral treaty that bans all nuclear explosions in all environments.
2. Adopted by UNGA on 10 September 1996 (but not entered into force)
3. Of the 44 listed countries, to date only 36 have ratified the treaty. China, Egypt, Iran, Israel and the U.S. have signed but not ratified.
4. North Korea, India and Pakistan are the three who have not signed.
5. CTBT has therefore not entered into force and lacks legal authority.
6. The CTBT is a “zero-yield” treaty.

## Key points: CTBTO

1. International organization based in Vienna, Austria
2. Estd. by the States Signatories to the CTBT (in 1996)
3. Objective:
  - 1) to promote the entry into force of the CTBT
  - 2) to establish a global verification regime in preparation for the Treaty's entry into force

CTBTO is just an interim organization





# Topic 375: New START Treaty and INF Treaty

## Key points:

1. New START (Strategic Arms Reduction Treaty)
2. Between US and Russian Federation
3. Was signed in 2010 and set to expire in 2021
4. The treaty has no Constraints on Missile Defense and Conventional Strike

## Key points:

1. Intermediate-Range Nuclear Forces (INF) Treaty
2. Between US and Russian Federation
3. Came into force on 1988
4. Crucial Cold War-era treaty --> bans development, testing and possession of short and medium range ground-launched nuclear missiles with a range of 500-5,000 km.



## Topic 376: Nuclear Suppliers Group (NSG)

### Key points:

1. It is a group of nuclear supplier countries --> seeks to contribute to the non-proliferation of nuclear weapons
2. NSG Guidelines contains “Non-Proliferation Principle” (which was adopted in 1994)
3. Transfer should not contribute to the proliferation of nuclear weapons
4. However, adherence to the NPT or to a Nuclear Weapon Free Zone Treaty may not by itself be a guarantee
5. NSG Guidelines implemented by each Participating Government (PG) in accordance with its national laws and practices
6. Why NSG is important?



# Topic 377: Four foundational agreements

## Key points:

1. Communications Compatibility and Security Agreement (COMCASA)
  - provides a legal basis for the U.S. to transfer secure communication equipment to India
  - Increase military equipment interoperability and real time data sharing
2. Logistics Exchange Memorandum of Agreement (LEMOA)
  - allows Indian and US defence forces to use each other's facilities
  - establish procedures of easier access to supplies and services
3. Basic Exchange and Cooperation Agreement for Geo-spatial Cooperation (BECA)
  - will allow India to use US expertise on geospatial intelligence
  - enhance military accuracy of automated hardware systems and weapons
4. General Security of Military Information Agreement (GSOMIA)

# Topic 378: Avvaiyar

## Key points:

1. Avvaiyar translates to “Respected Woman”
2. Avvaiyar was a Tamil saint-poet --> best known for Athichudi
3. FM invoked Avvaiyar by saying “Bhoomi Thiruthi Un” (‘Tend to your land, do not be excessive and then reap your harvest’).”
4. FM quoted --> Aaathichoodi’s verse 81 which translate to “first tend to till one’s land and then eat. One must eat only after work.”
5. There’s isn’t much concrete evidence on her life; she’s believed to have lived in the 3rd century BCE.





# Topic 379: Thiruvalluvar

## Key points:

1. He is fondly referred to as Valluvar by Tamils.
2. His 'Tirukkural', a collection of 1,330 couplets ('kural' in Tamil), are an essential part of every Tamil household.
3. He is an essential anchor for Tamils in tracing their cultural roots
4. FM cited Thiruvalluvar's Tirukkural to explain the "five Jewels of a good country" that are health, wealth, good agriculture produce, happiness and national security.
5. "Pini Inmai Selvam Vilaiivu Inbam Emam Ani Enba"





# Topic 380: Dinanath Nadim

## Key points:

1. Kashmiri nationalist poet Dinanath Nadim (1916-1988)
2. He inspired a powerful tradition of Kashmiri poetry
3. He was inspired by Lal Ded, or Lalla and was at the centre of Kashmir's progressive movement
4. Nadim received the Sahitya Akademi award in 1987 --> for his opera Shuhul Kull (The Shady Tree)
5. Well known works - Vitasta (Jhelum River), Safar Taa Shehjaar (The Journey And The Shade), Heemaal Taa Naaegrai (Heemaal and Naagraaj), and Bombur Taa Yamberzal (The Bumble Bee And The Narcissus Flower)
6. Myon Vatan (My Motherland) --> used in budget

