Q.1) HySIS (Hyperspectral Imaging Satellite) is being developed by

a) NASA
b) European Space Agency
c) The China National Space Administration
d) ISRO

Q.1) Solution (d)

ISRO plans to launch HySIS (Hyperspectral Imaging Satellite) – a earth observation satellite, using a critical chip it has developed called **"optical imaging detector array".**

Hyperspectral imaging, or imaging spectroscopy**, combines the power of digital imaging and spectroscopy.**

For each pixel in an image, a hyperspectral camera acquires the light intensity (radiance) for **a large number of contiguous spectral bands.**

Every pixel in the image thus contains a continuous **spectrum in the visible and near infra-red** regions and can be used to characterize the objects in the scene with great precision and detail.

Hyperspectral images provide **much more detailed information about the scene than a normal color camera**, which only acquires three different spectral channels corresponding to the visual primary colors red, green and blue.

Hence, hyperspectral imaging leads to a vastly improved ability to classify the objects in the scene based on their spectral properties.

Do you know?

- Hyperspectral or hyspex imaging is said to be an Earth Observation trend that is being experimented globally. Adding a new dimension to plain-vanilla optical imagers, it can be used for a range of activities from monitoring the environment, crops, looking for oil and minerals all the way up to military surveillance — all of which need images that show a high level of differentiation of the object or scene.

THINK!

- 'CATSCAN'

(Source: http://www.thehindu.com/sci-tech/science/isro-to-develop-full-fledged-earth-observation-satellite/article19458651.ece)

https://www.isro.gov.in/isro-develops-optical-imaging-detector-array-hyperspectral-imaging-applications

Q.2) Consider the following pairs.

Name	Definition
1. Meteor	(astronomy) any of the small solid extraterrestrial bodies that enters Earth's atmosphere.
2. Meteorite	A small body moving in the solar system before it enters Earth's atmosphere.
3. Meteoroid	A piece of stone or metallic object that remains from a meteor and has landed on the surface of the Earth.

Which of the above pairs is/are correctly matched?

a) 1 only
b) 1 and 2 only
c) 3 only
d) All the above

Q.2) Solution (a)

Meteor

Definition: Any of the small solid extraterrestrial bodies that enters Earth's atmosphere

Meteorite

Definition: A piece of stone or metallic object that remains from a meteor and has landed on the surface of the Earth.

Meteoroid

Definition: A small body moving in the solar system before it enters Earth's atmosphere

Do you know?

- **Perseid shower** is the dust of **Comet Swift Tuttle** which passes through earth every year.

THINK!

- Asteroids

Q.3) Which of the following is true about spacecraft OSIRIS-Rex?

a) (OSIRIS-REx) is NASA's first unmanned asteroid sampling mission.
b) (OSIRIS-REx) is NASA's first manned asteroid sampling mission.
c) (OSIRIS-REx) is NASA's first unmanned meteoroid sampling mission.
d) None of the above.

Q.3) Solution (a)

Recently, spacecraft OSIRIS-REx passed by earth to reach **Asteroid Bennu** using Earth's gravity.

About OSIRIS-Rex

Spectral Interpretation, Resource Identification, Security-Regolith Explorer (OSIRIS-REx) is **NASA's first unmanned asteroid sampling mission** which was launched in September 2016.

Asteroid Bennu orbits around the Sun however its orbit is more tilted as compared to Earth's and it crosses Earth's orbit only twice a year. Therefore OSIRIS-REx will have to make adjustments in its path to intersect with Asteroid

Do you know?

- Cassini mission to Saturn is ending its journey. It will dive towards the Saturn and burn up in its atmosphere.
- Cassini is an ambitious space missions launched through collaboration between NASA, ESA and the Italian space agency, Agenzia Spaziale Italiana.

THINK!

- Mangalayana (MOM).

Q.4) Balloon Borne measurement campaigns of Asian Tropopause Aerosol Layer (BATAL) is a collaborative programme of?

a) NASA-European Space Agency
b) ISRO-China Space Administration
c) ISRO-DRDO
d) NASA-ISRO

Q.4) Solution (d)

Atmospheric aerosol and clouds play important role in weather and climate. A recent discovery of high altitude (~ 16km) Aerosol layer occurring during monsoon in the south

Asian region using CALIPSO (Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation) has started puzzling the atmospheric scientists.

Very little is known on the composition and the formation mechanisms of this intense aerosol layer.

This layer is of concern since it could play an important role on the climate and weather. To understand this enigmatic layer, balloon borne experiments along with ground based observations are being conducted under a **ISRO-NASA collaborative program** – "Balloon Borne measurement campaigns of Asian Tropopause Aerosol Layer (BATAL)".

Q.5) India is set to launch its first solar mission Aditya-L1 in 2019. Consider the following statements about it.

1. Aditya L1 is to be the first satellite to study the magnetic field of the sun's corona.
2. The Aditya L1 will be placed in a halo orbit around a vantage point in space known as L1 Lagrange point.
3. The Aditya L1 is expected to help study that why the photosphere, the deeper layer of the sun is at much lower temperature than the corona.

Which of the above statements is/are correct?

a) 1 and 3 only
b) 1 only
c) 2 and 3 only
d) All the above

Q.5) Solution (d)

The Aditya L1 will be placed in a **halo orbit around a vantage point** in space known as L1 Lagrange point. The point L1 has the major advantage of viewing the **sun without any occultation/ eclipses.**

The mission will carry seven payloads including the main payload the **Visible Emission Line Coronagraph (VLEC).**

Aditya L1 is to be the **first satellite to study the magnetic field** of the sun's corona.

The Aditya L1 is expected to help study that why the photosphere, the deeper layer of the sun is at much lower temperature than the corona.

It will also **study aspects that affect space weather**, the origin of solar wind ions, their reaction to coronal mass ejections, the distribution of these in the heliosphere- the space around the sun that extends up to Pluto.

Do you know?

- **Lagrange Point:** It is the point where the combined gravitational force of two large bodies is equal to the centrifugal force that is felt by a third body which is relatively smaller

THINK!

- Solar and Heliospheric Observatory (SOHO).

(Source: http://www.thehindu.com/sci-tech/science/here-comes-the-sun-watcher-indias-aditya-l1/article20942099.ece)

Q.6) Which of the following best describes the NASA'S SOFIA Mission?

a) It is a satellite launched to study the atmosphere of the Saturn.
b) It is the Lander and Rover sent to the Titan.
c) It is the world's largest airborne astronomical observatory.
d) None of the above.

Q.6) Solution (c)

It is an **aircraft (Boeing 747SP jetliner) modified to carry a 100-inch diameter telescope**. It is a **joint project** of NASA and the German Aerospace Centre, DLR.

It is the world's largest airborne astronomical observatory and is in fourth year of operation now. Its 2.5 diameter telescope allows astronomers to access the visible, infrared and sub millimeter spectrum. It has the ability to produce a higher resolution image, three times higher in quality than those captured by other observatories.

Do you know?

SOFIA studies many different kinds of astronomical objects and phenomena, but some of the most interesting are:

- Star birth and death
- Formation of new solar systems
- Identification of complex molecules in space
- Planets, comets and asteroids in our solar system
- Nebulae and dust in galaxies (or, Ecosystems of galaxies)

- Black holes at the center of galaxies

THINK!

- Star-Planet Activity Research CubeSat (SPARCS).

(Source: https://www.nasa.gov/mission_pages/SOFIA/overview/index.html)

Q.7) Consider the following pairs.

Phenomenon	Description
1. Blue moon	Occurs when the full moon is at the closest point of its orbit to the Earth, which is also called the perigee.
2. Blood moon	The moon turns into red color during the height of the eclipse as some light does reach it even though the moon is in the shadow of the Earth.
3. Super moon	When two full moons appear in the same calendar month, the second is termed a super moon

Which of the above pairs is/are matched correctly?

a) 1 and 3 only
b) 2 only
c) 2 and 3 only
d) All the above

Q.7) Solution (b)

Blue Moon: When two full moons appear in the same calendar month, the second is termed a "blue moon".

Super Moon: Occurs when the full moon is at the closest point of its orbit to the Earth, which is also called the perigee. The moon appears 30% brighter and 14% bigger than the apogee full moon.

Blood Moon: The moon turns into red color during the height of the eclipse as some light does reach it even though the moon is in the shadow of the Earth. Fine particles in the atmosphere scatter (Rayleigh scattering) the blue component of solar spectrum, & what reaches us is the longer wavelength red light.

Do you know?

- On January 31, 2018, a rare Blue Moon event was experienced on large parts of the globe. It was a rare moment as blue moon, a super moon and a total lunar eclipse fell on same day after more than 150 years.

THINK!

- Lunar eclipse.

(Source: http://www.thehindu.com/sci-tech/science/rare-super-blood-blue-moon-visible-on-jan-31/article22544956.ece)

Q.8) "Innovation in Science Pursuit for Inspired Research (INSPIRE)" is an innovative programme sponsored and managed by the Department of Science & Technology. Which of the following programs are included in INSPIRE Scheme?

1. Scheme for early Attraction of Talents for Science (SEATS)
2. Scholarship for Higher Education (SHE)
3. Assured Opportunity for Research Careers (AORC)

Select the code from below:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) All of the above

Q.8) Solution (d)

INSPIRE Scheme

INSPIRE is an innovative programme developed by the the Department of Science & Technology to attract talent to the excitement and study of science at an early age, and to help the country build the required critical resource pool for strengthening and expanding the S&T system and R&D base. It is a programme with long term foresight.

INSPIRE has three components:

i. Scheme for Early Attraction of Talent (SEATS)

ii. Scholarship for Higher Education (SHE)

iii. Assured Opportunity for Research Careers (AORC)

http://www.inspire-dst.gov.in/inspire.html

Q.9) An umbrella scheme KIRAN was launched by Ministry of Science and Technology. Which of the following statements are correct regarding the scheme?

1. The aim is to increase the women researchers in India.
2. Provide Research grants particularly to those female researchers and technologists who had to take a break in career owing to household reasons.
3. To provide 50% quota to women in premier Science institutes for research.

Select the code from following:

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) All of the above

Q.9) Solution (a)

KIRAN Scheme

The Union Ministry of Science & Technology has launched KIRAN (Knowledge, Involvement, Research, Advancement through Nurturing) for women scientists.

Objectives

- To increase the number of women researchers in India.
- Provide Research grants particularly to those female researchers and technologists who had to take a break in career owing to household reasons.
- Bring about, as far as achievable, gender parity in the field of science and technology.

The scholarships will be provided under three categories

- For those women linked in research work in basic or applied sciences with any central or state level organization or university.
- For those women scientists involved in research and application of innovative solutions for several social problems.
- For those researchers who are self-employed

Q.10) The Traditional Knowledge Digital Library (TKDL) is an Indian digital knowledge repository of the traditional knowledge. It has been created by

a) MeitY
b) Council of Scientific and Industrial Research
c) IISER Pune
d) National Council of Science Museums

Q.10) Solution (b)

Traditional Knowledge Digital Library (TKDL)

The Traditional Knowledge Digital Library (TKDL) is an Indian digital knowledge repository of the traditional knowledge, especially about medicinal plants and formulations used in Indian systems of medicine. Set up in 2001, as a collaboration between the Council of Scientific and Industrial Research (CSIR) and the MINISTRY OF AYUSH the objective of the library is to protect the ancient and traditional knowledge of the country from exploitation through biopiracy and unethical patents, by documenting it electronically and classifying it as per international patent classification systems. Apart from that, the non-patent database servers to foster modern research based on traditional knowledge, as it simplifies access to this vast knowledge of remedies or practices.

Think

- Biopiracy
- Cartagena Convention

Q.11) Which of the following programs come under Ministry of Earth Sciences?

1. Atmosphere and Climate Research – Modelling, Observing Systems and Services (ACROSS)
2. Ocean Services, Technology, Observations, Resources, Modelling and Science (OSTORMS)
3. Polar and Cryosphere Research (PACER)
4. Seismology and Geosciences (SAGE)

Select the code from following:

a) 1 and 2
b) 3 and 4

c) 1,3 and 4
d) All of the above

Q.11) Solution (d)

The mandate of the Ministry of Earth Sciences (MoES) is to provide services for weather, climate, ocean and coastal state, hydrology, seismology and natural hazards; to explore marine living and non-living resources in a sustainable way and to explore the three polar-regions (Arctic, Antarctic and Himalayas). To achieve this mandate, the research & development and operational activities of MoES are carried out under the following five major programs:

1. Atmosphere and Climate Research – Modelling, Observing Systems and Services **(ACROSS)**

2. Ocean Services, Technology, Observations, Resources, Modelling and Science **(OSTORMS)**

3. Polar and Cryosphere Research **(PACER)**

4. Seismology and Geosciences **(SAGE)**

5. Research, Education, Outreach and Training **(REACHOUT)**

The above schemes are central sector schemes. They are for the entire country and not specific to any State/UT.

For details of the above programs go through the following link:

www.moes.gov.in/writereaddata/files/LS_S_186_15032017.pdf

Q.12) Which of the following is the objective of Nidhi – Prayas initiative of department of Science and technology?

a) To promote young and aspiring innovators and startups
b) To provide global standard education in schools
c) To remove gender inequality in scientific education
d) None of the above

Q.12) Solution (a)

Objectives of NIDHI-PRAYAS:

• To enable translation of an innovative idea to a prototype.

• To provide a platform for faster experimentation and modify approaches in the idea to market journey.

• To generate innovative solutions relevant to the local and global problems.

• To attract a large number of youth who demonstrates problem solving zeal and abilities

• To work on their new technology/knowledge/innovation based startups.

• To enhance the pipeline in terms of quality and quantity of innovative startups to the incubators.

• To build a vibrant innovation ecosystem, by establishing a network between innovators, academia, mentors and incubators.

Q.13) National Center for Antarctic and Ocean Research has established a high altitude research station called Himansh. Where is it located?

a) Himachal Pradesh
b) Antarctica
c) Jammu and Kashmir
d) Sikkim

Q.13) Solution (a)

Himansh

National Centre for Antarctic and Ocean Research (NCAOR), Goa, under the Ministry of Earth Sciences has established a high altitude research station in Himalaya called HIMANSH (literally meaning, a slice of ice), situated above 13,500 ft (> 4000 m) at a remote region in Spiti, Himachal Pradesh.

The station houses many instruments to quantify the glacier melting and its relation to changing climate. Some of the instruments that are available at this research facility include, Automatic Weather Stations for weather monitoring, water level recorder for quantifying the glacier melt, ground penetrating radar to know the thickness of glaciers, geodetic GPS systems to study the glacier movements, snow fork for studying snow thickness, steam drill, snow corer, temperature profilers, as well as various glaciological tools. Further, the researchers would be using this as a base for undertaking surveys using Terrestrial Laser

Scanners (TLS) and Unmanned Aerial Vehicles (UAV) that would digitize the glacier motion and snow cover variations with exceptional precision.

Q.14) Which of the following statements is correct regarding 'Cryonics'?

a) It is a process of deep freezing gases into liquid state to be used as fuel.
b) It is a process of preserving a body by deep freezing it.
c) It is a process of burning a body with cold fire.
d) It is a process of making a substance superconduncting.

Q.14) Solution (b)

Cryonics

Cryonics is the low-temperature preservation (usually at −196°C) of people who cannot be sustained by contemporary medicine, with the hope that resuscitation and restoration to full health may be possible in the far future. Cryopreservation of humans is not reversible with present technology; cryonicists hope that medical advances will someday allow cryopreserved people to be revived.

Cryonics is regarded with skepticism within the mainstream scientific community and is not part of normal medical practice. It is not known if it will ever be possible to revive a cryopreserved human being. Cryonics depends on beliefs that the cryonics patient has not experienced information-theoretic death. Such views are at the speculative edge of medicine.

Cryonics procedures can only begin after legal death, and cryonics "patients" are considered legally dead. Cryonics procedures ideally begin within minutes of legal death, and use cryoprotectants to prevent ice formation during cryopreservation.

Q.15) The human brain is made of neurons and glial cells. What is the role of the latter?

a) To convey messages from the neurons to different parts of the body
b) To conduct electrical impulses
c) To support neurons and insulate them from each other
d) They create neurons when neurons die

Q.15) Solution (c)

The brain is made up of two broad cell types, **nerve cells or neurons** and **glia**, which are **non-nerve cells** that make up more than half the volume of the brain.

Neurobiologists have tended to focus on the former because these are the cells that form networks that process information.

However, given the preponderance of glia in the brain's cellular make-up, the researchers hypothesised that they could play a fundamental part in brain development.

Recently, researchers found that the **coordination of nerve-cell development is achieved through a population of glia**, which are non-nerve cells.

They found that glia, a collection of non-neuronal cells that had long been regarded as passive support cells, in fact are **vital to nerve cell development in the brain**.

For more information: http://www.thehindu.com/sci-tech/science/new-source-for-brains-growth-found/article19610992.ece

The four main functions of glial cells are:

- to surround neurons and hold them in place,
- to supply nutrients and oxygen to neurons,
- to insulate one neuron from another, and
- to destroy and remove the carcasses of dead neurons (clean up).

Do you know?

Unlike neurons, **glial cells do not conduct electrical impulses**. The glial cells surround neurons and provide support for and insulation between them. Glial cells are the most abundant cell types in the central nervous system. Types of glial cells include oligodendrocytes, astrocytes, ependymal cells, Schwann cells, microglia, and satellite cells.

Q.16) There is a fall in boiling points of water and other liquids at hills, because –

a) of high pressure at mountainous regions, the liquid experiences less downward force pushing down on it from above.
b) Boiling point of water changes with altitude because atmospheric pressure changes with altitude.
c) Boiling point of water changes with altitude because of temperature inversion.
d) At mountainous regions, water molecules have tough time escaping off the surface when the air pressure above them is less.

Q.16) Solution (b)

In mountainous regions, the air pressure is a little lower than what it is at sea or normal ground level.

Any liquid boils at that temperature at which its vapour pressure equals that of the atmospheric pressure. At the ground level, water boils at 100 degrees C at normal atmospheric pressure. At very high altitudes, the atmosphere thins and the pressure will be less, so that water boils at a temperature below 100 degrees C.

This makes it difficult to cook in open pans in hilly regions, and we have to use a pressure cooker. In the pressure cooker the pressure inside the container will be 2-3 times higher than at ground level. Hence water will boil at around 120 degrees C, and the materials get cooked completely. Thus one can observe a fall in boiling points of water and other liquids at hills due to the fall in the atmospheric pressure.

Q.17) Aeons, eras, periods, epochs, and ages denote different segments on the geological timescale. Which global body is responsible for setting these time standards to express Earth's history?

a) The International Commission on Stratigraphy
b) The International Society of Ankylography
c) The International Union of Balneography
d) The International Commission on Zoological Nomenclature

Q.17) Solution (a)

The International Commission on Stratigraphy is the largest and oldest constituent scientific body in the International Union of Geological Sciences (IUGS). Its primary objective is to precisely define global units (systems, series, and stages) of the International Chronostratigraphic Chart that, in turn, are the basis for the units (periods, epochs, and age) of the International Geologic Time Scale; thus setting global standards for the fundamental scale for expressing the history of the Earth.

Q.18) This telescope is said to be 100 times more powerful than the Hubble Space Telescope, and is expected to find the first galaxies formed in the early universe. Name the telescope.

a) Planck Observatory

b) James Webb Space Telescope
c) Herschel Space Observatory
d) Galileo Telescope

Q.18) Solution (b)

The National Aeronautics and Space Administration (NASA) of the United States has successfully completed building the largest space telescope, called James Webb Space Telescope — one that is 100 times powerful than the Hubble Space Telescope and may find the first galaxies that were formed in the early universe.

The James Webb Space Telescope will be the successor of NASA's 26-year-old Hubble.

Q.19) Lucy may well be one of the world's most famous fossil. Which species does she belong to?

a) Australopithecus afarensis
b) Homo habilis
c) Homo heidelbergensis
d) Denisovan Neanderthal

Q.19) Solution (a)

Lucy, world's most famous fossil hominid, is the best-known specimen of the species Australopithecus afarensis, and her partial skeleton, found in 1974, revealed that she and her kin could walk upright.

'Lucy' is a collection of fossilised bones that once made up the skeleton of a hominid from the Australopithecus afarensis species. She lived in Ethiopia 3.2 million years ago.

First discovered in 1974, the discovery was remarkably 'complete' - 40 per cent of her skeleton was found intact, rather than just a handful of incomplete and damaged fossils that usually make up remains of a similar age.

One of the most important things about Lucy is the way she walked. By studying her bones, in particular the structure of her knee and spine curvature, scientists were able to discover that she spent most of her time walking on two legs - a striking human-like trait.

Q.20) A cave in Burzahama region in Kashmir depicts a scene which has recently been interpreted as an astronomical event of significance. What is this event?

a) The earliest known record of a total solar eclipse
b) The earliest known depiction of a binary star
c) The earliest known record of a supernova explosion
d) The earliest known record of a god particle

Q.20) Solution (d)

The oldest of the human observations are scattered through various Palaeolithic epochs. These observations are seen in the form of the cave paintings at various sites in France and Spain and include the phases of moon leading to ephemeris, bright stars and basic constellations.

In India, a stone carving is excavated from a site in the Kashmir region, where permanent settlements are dated to a period around 3000 - 1500 BC. The stone slab shows two bright objects in the sky with a hunting scene in the foreground. These have been assumed to be a depiction of a double star system, first record of a supernova.

Q.21) In a first, researchers have estimated that along with sea level rise, the sea floor is also sinking. What might be the cause of the latter?

a) Weight of additional meltwater is pressing down on the seafloor
b) Inner core of the Earth is shrinking
c) Collision of tectonic plates
d) Reduces seafloor spreading

Q.21) Solution (a)

In recent decades, melting ice sheets and glaciers driven by climate change are swelling Earth's oceans. And along with all that water comes an unexpected consequence — the weight of the additional liquid is pressing down on the seafloor, causing it to sink.

Refer: https://www.livescience.com/61328-ocean-bottom-is-sinking.html

So much extra water is being added to the world's oceans from melting glaciers that the ocean floor is sinking underneath the increasing weight.

Over the past 20 years, ocean basins have sunk an average of 0.004 inches per year. This means that the ocean is 0.08 inches deeper than it was two decades ago. While this small

fragment of an inch may not seem much, oceans cover 70 percent of our planet, making the problem bigger than it seems at first glance.

Q.22) Consider the following statements about 'AGRI-UDAAN'

1. It enables farmers to sell their agricultural products through auction
2. It is managed by Indian Council of Agricultural Research (ICAR)
3. It will provide logistics support for sellers and buyers

Select the correct statements

a) 1 and 2
b) 2 Only
c) 2 and 3
d) 1, 2 and 3

Q.22) Solution (b)

AGRI UDAAN is a Food & Agribusiness Accelarator organised by NAARM, a-IDEA and IIM-A, CIIE in partnership with Caspian Impact Investment and supported by DST. The program focuses on catalyzing scale-up stage Food & Agribusiness startups through rigorous mentoring, industry networking and Investor pitching.

AGRI UDAAN is a unique platform for scale up stage innovators, entrepreneurs and startups in the Food & Agribusiness sectors to showcase their products/ services and to receive valuable inputs from mentors, incubators, R&D institutions, Agribusiness industries and investors.

It is managed by the Indian Council of Agricultural Research (ICAR)

Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=169569

Q.23) Consider the following statements about Pradhan Mantri Paridhan Rojgar Protsahan Yojana (PMPRPY)

1. It is under the aegis of Ministry of Skill Development and Entrepreneurship
2. It incentivises employers for generation of new employment
3. Establishment should be registered with Employees' Provident Fund Organisation (EPFO) for claiming benefit under the scheme

Select the correct statements

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) All of the above

Q.23) Solution (b)

The Scheme is under the Ministry of Textiles, benefitting the apparel industries.

The scheme enables incentives towards employers, registered with Employees' Provident Fund Organization (EPFO), for creation of new employment.

Under Pradhan Mantri Paridhan Rojgar Protsahan Yojana (PMPRPY), Ministry of Textiles will bear additional 3.67% share of the employer's contribution of the Employers Provident Fund Scheme in addition to the 8.33% already covered under Pradhan Mantri Rojgar Protsahan Yojana (PMRPY), for all new employees of apparel and made-up units enrolling in EPFO, for the first three years of their employment.

Source: http://pib.nic.in/newsite/PrintRelease.aspx?relid=169584

Q.24) Consider the following statements about Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)

1. It was established in the aftermath of the 2004 Indian Ocean tsunami
2. African countries on the western coast are not members of the RIMES
3. CLMV countries are members of the RIMES

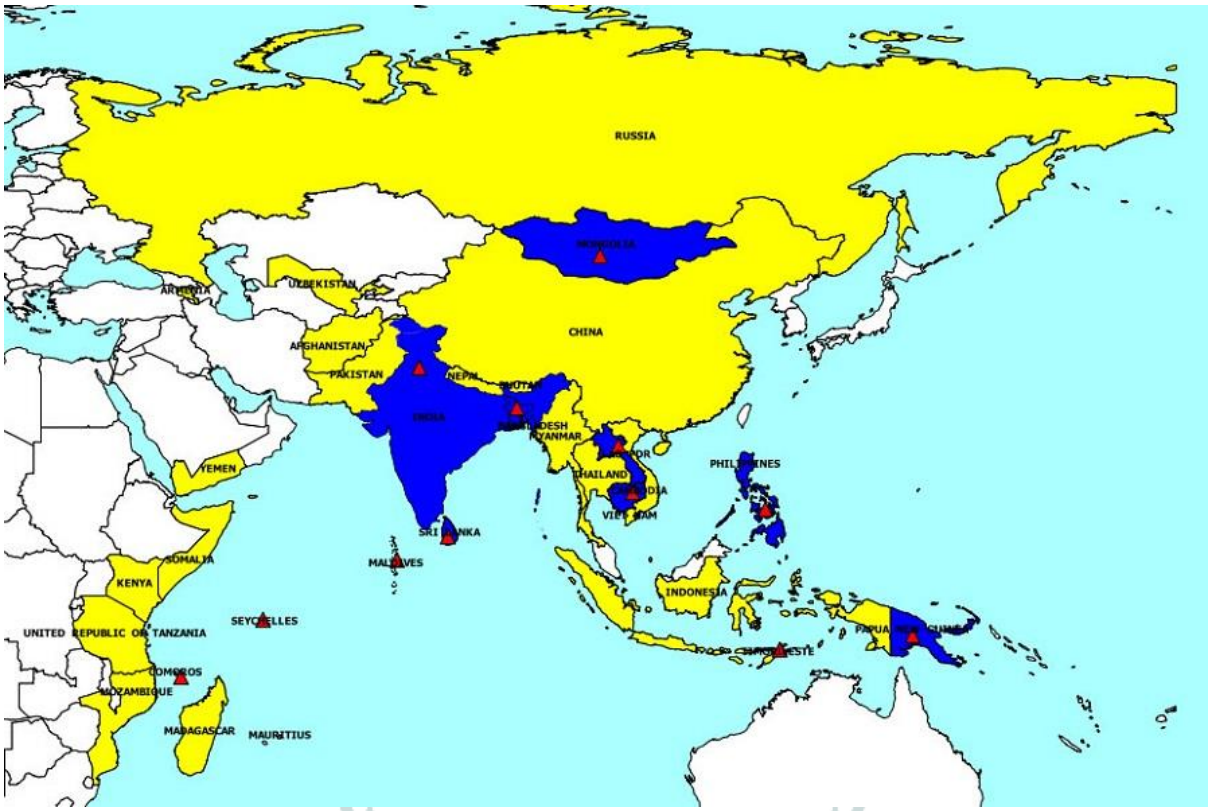
Select the correct statements

a) 1 and 2
b) 2 and 3
c) 1 and 3
d) 1, 2 and 3

Q.24) Solution (a)

The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) is an international and intergovernmental institution, owned and managed by its Member States, for the generation and application of early warning information.

RIMES evolved from the efforts of countries in Africa and Asia, in the aftermath of the 2004 Indian Ocean tsunami, to establish a regional early warning system within a multi-hazard framework for the generation and communication of early warning information, and capacity building for preparedness and response to trans-boundary hazards.



12 Member States: Bangladesh, Cambodia, Comoros, India, Lao PDR, Maldives, Mongolia, Papua New Guinea, Philippines, Seychelles, Sri Lanka and Timor-Leste.

19 Collaborating Countries: Afghanistan, Armenia, Bhutan, China, Indonesia, Kenya, Madagascar, Mauritius, Mozambique, Myanmar, Nepal, Pakistan, Russian Federation, Somalia, Tanzania, Thailand, Uzbekistan, Vietnam, and Yemen

It is a UN registered agency

Source: http://www.thehindu.com/news/national/ocean-forecasting-system-for-madagascar-and-mozambique/article19571161.ece

Q.25) Supporting Indian Trade and Investment for Africa (SITA)

1. It is a project by International Trade Centre (ITC)
2. It caters to Eastern and Central African Countries

Select the correct statements

a) 1 Only
b) 2 Only
c) Both 1 and 2
d) Neither 1 nor 2

Q.25) Solution (a)

United Kingdom of Great Britain and Northern Ireland's Department for International Development (DFID) mandated the International Trade Centre (ITC) to design and implement a project, called 'Supporting India's Trade Preferences for Africa' (SITA).

The project responds to the challenges that selected East African countries – Ethiopia, Kenya, Rwanda, Uganda and the United Republic of Tanzania – face in increasing and diversifying exports. It also addresses trade priorities of the beneficiary countries so they can achieve sustainable development.

Source: http://www.thehindu.com/business/Economy/efforts-to-promote-indian-trade-in-east-african-countries/article19481889.ece

Q.26) India Volatility Index (VIX) is released by

a) NITI Aayog
b) SEBI
c) NSE
d) RBI

Q.26) Solution (c)

India VIX is India's volatility Index which is a key measure of market expectations of near-term volatility conveyed by NIFTY stock index option prices. This volatility index is computed by NSE based on the order book of NIFTY Options. For this, the best bid-ask quotes of near and next-month NIFTY options contracts which are traded on the F&O segment of NSE are used. India VIX indicates the investor's perception of the market's volatility in the near term i.e. it depicts the expected market volatility over the next 30 calendar days. Higher the India VIX values, higher the expected volatility and vice-versa.

Source: https://www.livemint.com/Money/Eu4Aj8roGtAW5h1mpZE8KM/Volatility-at-fivemonth-high-as-markets-fall-for-fourth-str.html