

• 1 ).What is the scientific reason behind the usage of CO<sub>2</sub> to extinguish the fire caused due to electrical or other fire accidents?

- a . It reduces the heat generation around the accident spot
- b . CO<sub>2</sub> reacts with oxygen thereby reduces the source for the flame.
- c . It is heavier than oxygen and covers fire like a blanket
- d . The lighter nature of CO<sub>2</sub> makes it to act as a catalyst to extinguish the fire

- 1 mins 3 s
- Explanation
- Status

- Carbon dioxide extinguishers work because carbon dioxide molecules are heavier than oxygen molecules. When the liquid carbon dioxide inside the extinguisher expands into a gas, the carbon dioxide pushes out any oxygen surrounding the fire. Without oxygen available to fuel the chemical reaction, the fire goes out quickly. This property can also make them dangerous in confined spaces since the carbon dioxide also pushes out any oxygen that the user needs to breathe.

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• 2 ).Which of the following statements is/are correct?

1. Mechanical wave doesn't require a medium for propagation.
2. Electromagnetic waves require medium for propagation.

Select the correct answer using the code given below:

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

- 0 mins 39 s
- Explanation
- Status

- Sound waves in other terms to be called as mechanical a wave which compulsorily requires a medium for its propagation. Whereas, Electromagnetic waves doesn't depends with the medium, which can even travel in the vacuum.

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• 3 ).Recently people around the world have observed a rare celestial event, "Supermoon".

With respect to this rare phenomenon consider the following statements:

1. Supermoon phenomenon is reported when the moon in the circular orbit comes close to the orbit of the earth.
2. Supermoon occurs either during the full moon day or during the new moon day.

3. Technically this phenomenon is called as Apogee-Syzygy position.
4. Supermoon is free from the occurrence of eclipse.

Which of the above given statements above is/are correct?

- a . 2 only
- b . 1 and 3 only
- c . 1, 2 and 4 only
- d . 2, 3 and 4 only

- 0 mins 40 s
- Explanation
- Status

- Asupermoon is the coincidence of a full moon or a new moon with the closest approach that the Moon makes with the Earth on its elliptical orbit. If a supermoon falls on a full moon day then it results in the largest apparent size of the lunar disk for an observer on the Earth. The technical name is the perigee-syzygy of the Earth–Moon–Sun system. Occasionally, the supermoon coincides with the total lunar eclipse.

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- 4 ) .The term “Dark matter” refers to unidentified type of matter comprising approximately about one fourth of the mass and energy in the observable universe. With respect to this “Dark matter” which one among the following statement is **not** correct?

- a . Dark matter doesn’t obey the principle of electromagnetism.
- b . Dark matters possess strong interaction with the normal matter.
- c . Dark matter holds slow moving and weak self-interacting particles.
- d . Dark matters tend to form non luminous stable halos around the galaxies.

- 0 mins 30 s
- Explanation
- Status

- Dark matter is a hypothetical material that an astronomer or scientist cannot observe through ordinary telescopes. Although dark matter has not been directly observed, its existence and properties are inferred from its gravitational effects such as the motions of visible matter. The name refers to the fact that it does not emit or interact with electromagnetic radiation, such as light, and is thus invisible to the entire electromagnetic spectrum. It is considered to be responsible for holding all the normal matter in the universe together. These dark matter particles have to be quite massive to form the observed structures, about as heavy as the heaviest particles we know already. If dark matter particles weren’t heavy enough they wouldn’t clump sufficiently, which is why they are called WIMPs for “Weakly Interacting Massive Particles. And we

know that neutrinos, even though weakly interacting, can't make up dark matter because they are too light and they wouldn't clump strongly enough to seed galaxy filaments.

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• 5 ). The New Agenda Coalition (NAC), which was often in News, is a geographically dispersed group of middle power countries seeking to build an international consensus to make progress on

- a . Chemical Weapons Convention
- b . Biological Weapons Convention
- c . Nuclear Disarmament
- d . Space Debris Convention

- 2 mins 3 s
- Explanation
- Status

• **New Agenda Coalition**

The New Agenda Coalition (NAC), composed of Brazil, Egypt, Ireland, Mexico, New Zealand and South Africa, is a geographically dispersed group of middle power countries seeking to build an international consensus to make progress on nuclear disarmament, as legally called for in the nuclear NPT.

The group was officially launched in Dublin (Ireland) in June 1998 in response to the North-South divide that stymied talks on nuclear disarmament and non-proliferation within the framework of the NPT.

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• 6 ). Consider the following statements regarding Intellectual Property Rights (IPR) Policy of India

1. The policy is deviating from the WTO's agreement on TRIPS.
2. It suggests making the department of industrial policy and promotion (DIPP) the nodal agency for all IPR issues.
3. Copyrights related issues will come under DIPP's ambit from Human Resource Development (HRD) Ministry.

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 25 s
- Explanation
- Status

- **National Intellectual Property Rights Policy**

The Policy recognizes that India has a well-established TRIPS-compliant legislative, administrative and judicial framework to safeguard IPRs, which meets its international obligations while utilizing the flexibilities provided in the international regime to address its developmental concerns.

The policy is entirely compliant with the WTO's agreement on TRIPS.

The Policy aims to push IPRs as a marketable financial asset, promote innovation and entrepreneurship, while protecting public interest.

The plan will be reviewed every five years in consultation with stakeholders.

It suggests making the department of industrial policy and promotion (DIPP) the nodal agency for all IPR issues.

Copyrights related issues will also come under DIPP's ambit from that of the Human Resource Development (HRD) Ministry.

Trademark offices have been modernised, and the aim is to reduce the time taken for examination and registration to just 1 month by 2017. The government has already hired around 100 new examiners for trademarks.

Films, music, industrial drawings will be all covered by copyright.

The Policy also seeks to facilitate domestic IPR filings, for the entire value chain from IPR generation to commercialisation. It aims to promote research and development through tax benefits.

Proposal to create an effective loan guarantee scheme to encourage start-ups.

It also says "India will continue to utilise the legislative space and flexibilities available in international treaties and the TRIPS Agreement." These flexibilities include the sovereign right of countries to use provisions such as Section 3d) and CLs for ensuring the availability of essential and life-saving drugs at affordable prices.

The policy left the country's patent laws intact and specifically did not open up Section 3d) of the Patents Act, which sets the standard for what is considered an invention in India, for reinterpretation.

On compulsory licensing (CL), India has issued only CL for a cancer drug.

As per the WTO norms, a CL can be invoked by a government allowing a company to produce a patented product without the consent of the patent owner in public interest.

Under the Indian Patents Act, a CL can be issued for a drug if the medicine is deemed unaffordable, among other conditions, and the government grants permission to qualified generic drug makers to manufacture it.

The IPR policy favoured the government considering financial support for a limited period on sale and export of products based on IPRs generated from public-funded research.

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- 7 ). Consider the following statements regarding Advanced Air Defence (AAD) Interceptor Missile known as Ashwin

1. It is an anti-ballistic missile designed to intercept incoming ballistic missiles in the endo-atmosphere at an altitude of 30 km
2. It is a single-stage, solid-fuelled missile
3. It is part of double-tiered missile defense system that India's military hopes will provide a

multi-layered defense system against any potential ballistic missile strike.

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 6 mins 24 s
- Explanation
- Status

- The Indian Ballistic Missile Defence Programme is an initiative to develop and deploy a multi-layered ballistic missile defence system to protect from ballistic missile attacks. It is a double-tiered system consisting of two interceptor missiles, namely the Prithvi Air Defence (PAD)/ Pradyumna missile for high altitude interception, and the Advanced Air Defence (AAD)/ Ashwin Missile for lower altitude interception. This two-tiered shield should be able to intercept any incoming missile launched 5,000 kilometres away.

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• 8 ) .The Treaty on the Non-Proliferation of Nuclear Weapons, commonly known as the Non-Proliferation Treaty or NPT, is an international treaty and opened for signature in 1968, the treaty entered into force in 1970. More countries have adhered to the NPT than any other arms limitation and disarmament agreement, a testament to the treaty's significance. The Treaty primarily aims to achieve which of the following objectives?

1. To prevent the spread of nuclear weapons and weapons technology.
2. To further the goal of achieving nuclear disarmament and general and complete disarmament.
3. To regulate International Nuclear Trade and to promote nuclear technology for peaceful use.

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 1 mins 22 s
- Explanation
- Status

• **NPT**

The Treaty on the Non-Proliferation of Nuclear Weapons, commonly known as the Non-Proliferation Treaty or NPT, is an international treaty whose objective is to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament.

As of 2016, 191 states have adhered to the treaty, though North Korea, which acceded in 1985 but never came into compliance, announced its withdrawal from the NPT in 2003, following detonation of nuclear devices in violation of core obligations.

Four UN member states have never accepted the NPT, three of which are thought to possess nuclear weapons: India, Israel, and Pakistan. In addition, South Sudan, founded in 2011, has not joined.

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- 9 ).Based upon applications we have different satellite orbits. The ones that receive the most attention are the geostationary orbit used as they are stationary above a particular point on the earth. In this context consider the following statements with respect to Geostationary Orbit:

1. Geostationary orbit is a circular orbit which encircles the earth parallel to the equator.
2. A satellite placed in this orbit tends to remain in a stationary condition.
3. Every geostationary orbit is a geosynchronous orbit but not the vice versa.

Which of the given above statements is/are correct?

- a . 1 only
- b . 1 and 2 only
- c . 1 and 3 only
- d . 2 and 3 only

- 2 mins 21 s
- Explanation
- Status

- A geostationary orbit is a geosynchronous orbit which is circular in nature and it lies exactly above the line of the equator. With those additional constraints, it remains stationary above a fixed point on the equator for an observer from the ground because it synchronises the time period and movement of the earth.

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- 10 ).Recent scientific award titled as “MANAK” is given under which of the following scientific scheme?

- a . INSPIRE
- b . KIRAN
- c . DISHA
- d . PURSE

- 0 mins 35 s
- Explanation
- Status

- The Department of Science and Technology (DST) is revamping a popular outreach programme, conceived to hook children early on to science and research, and tweaking it to reflect a thrust on technology and exposing children to the “innovation cycle.” The INSPIRE Awards (Innovation in Science Pursuit for Inspired Research), as they are now called, will be rechristened MANAK (Million Minds Augmenting National Aspirations and Knowledge) from this year. According to officials, it’s a “reformulation” of the existing programme and reflects a thrust on original ideas, which aim to use technology to solve problems, rather than merely display a clever idea for an exhibition.

- 11 ) .Satellites with transponders are used for

1. Telemedicine
2. Search and Rescue
3. Weather forecasting
4. Disaster warning

Select the correct answer using the code given below:

- a . 1 and 2 only
- b . 2, 3 and 4 only
- c . 1, 2 and 3 only
- d . 1, 2, 3 and 4

- 1 mins 6 s
- Explanation
- Status

- A transponder is a wireless communications, monitoring, or control device that picks up and automatically responds to an incoming signal. The term is a contraction of the words transmitter and responder. Transponders can be either passive or active. Communication satellites and certain weather forecasting satellites are subjected to have the presence of transponders.

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- 12 ) .India’s indigenous global navigation satellite system NaVIC could boost India’s credentials as a regional collaborative partner. Thus NaVIC services can be used in which of the following process?

1. Time- stamping on ATM transactions
2. Surveying
3. Sending alarms during disasters
4. Geo-fencing

Select the correct answer using the code given below:

- a . 2 only
- b . 3 and 4 only
- c . 1, 2 and 4 only
- d . 1, 3 and 4 only

- 2 mins 35 s
- Explanation
- Status

- The indigenous navigation system of India or Indian Regional Navigation Satellite System (IRNSS) with an operational name of **NaVIC** (Navigation with Indian Constellation) is an Indian developed Navigation Satellite System that is used to provide accurate real-time positioning and timing services over India and region extending to 1500 km around the country.

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- 13 ) .A nuclear-weapons-free zone (NWFZ) is defined by the United Nations as an agreement which a group of states has freely established by treaty or convention, that bans the use, development, or deployment of nuclear weapons in a given area, that has mechanisms of verification and control to enforce its obligations, and that is recognized as such by the General Assembly of the United Nations. In this context which of the following zones have been recognized as Nuclear Weapons Free Zone (NWFZ) by the United Nations Organizations?

1. Antarctica
2. Central Asia
3. Seabed
4. South East Asia
5. South Asia

Select the correct answer using the codes given below

- a . 1 and 3 only
- b . 1, 2, 3 and 4 only
- c . 1, 2 and 3 only
- d . 1, 2, 3, 4 and 5

- 1 mins 5 s
- Explanation
- Status

- NWFZ

A nuclear-weapons-free zone (NWFZ) is defined by the United Nations as an agreement which a group of states has freely established by treaty or convention, that bans the use, development, or deployment of nuclear weapons in a given area, that has mechanisms of verification and control to enforce its obligations, and that is recognized as such by the General Assembly of the United Nations. NWFZs have a similar purpose to, but are distinct from, the Treaty on the Non-Proliferation of Nuclear Weapons to which most countries including five nuclear weapons states are party. Another term, nuclear-free zone, often means an area which has banned both nuclear power and nuclear weapons, and sometimes nuclear waste and nuclear propulsion, and usually does not mean a UN-acknowledged international treaty.



Today there are five zones covering continental or sub continental groups of countries (including their territorial waters and airspace), one UN-recognized zone consisting of a single country, Mongolia, and three governing Antarctica, the seabed, and outer space which are not part of any state. The Antarctic, seabed, and space zones preceded all but one of the zones on national territories. Most of the Earth's oceans above the seabed are not covered by NWFZs since freedom of the seas restricts restrictions in international waters.

NWFZs do not cover international waters (where there is freedom of the seas) or transit of nuclear missiles through space (as opposed to deployment of nuclear weapons in space).

Five such zones exist today, with four of them spanning the entire Southern Hemisphere. The regions currently covered under NWFZ agreements include: Latin America (the 1967 Treaty of Tlatelolco), the South Pacific (the 1985 Treaty of Rarotonga), Southeast Asia (the 1995 Treaty of Bangkok) Africa (the 1996 Treaty of Pelindaba) and Central Asia (the 2006 Treaty of Semipalatinsk).

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- 14 ) .The Pelindaba Treaty, which is frequently in News, is related with which of the following?

- a . Claims to the UNSC Permanent seat
- b . Nuclear Weapons Free Zone
- c . International Space Station
- d . Maritime cooperation treaty

- 0 mins 31 s
- Explanation
- Status

- **Pelindaba Treaty**

The ANWFZT also known as the Treaty of Pelindaba (named after South Africa's main Nuclear Research Centre, run by The South African Nuclear Energy Corporation and was the location where South Africa's atomic bombs of the 1970s were developed, constructed and subsequently stored), establishes a Nuclear-Weapon-Free Zone in Africa. Namibia, the world's fourth largest uranium producer, signed an agreement with India in 2009 for uranium supply. However, as a member of the African Nuclear Weapon-Free Zone Treaty (ANWFZT), it is barred from trading in uranium with India, which is not a member of the Treaty on the Non-Proliferation of Nuclear Weapons, aka the Non-Proliferation Treaty (NPT).

Recently In June 2016, Indian President Pranab Mukharjee paid State Visit to Namibia. During his visit, the Namibian President Hage Geingob regretted the world order that allowed a handful of powerful countries to dictate terms on nuclear technology and termed it as "nuclear apartheid."

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- 15 ). The Pandemic Emergency Finance Facility (PEF), a new financing mechanism to quickly mobilize funds to tackle global disease outbreaks and create a new insurance market for pandemic risk, was launched by which of the following agency in recent times?

- a . International Monetary Fund (IMF)
- b . World Health Organisation (WHO)
- c . World Bank
- d . World Economic Forum (WEF)

- 0 mins 34 s
- Explanation
- Status

- **Pandemic Emergency Finance Facility (FEP)**

The World Bank (WB) has recently launched the Pandemic Emergency Finance Facility (PEF), a new financing mechanism to quickly mobilise funds to tackle global disease outbreaks and create a new insurance market for pandemic risk. The new facility will accelerate both global and national responses to future outbreaks with pandemic potential. It was built and designed in collaboration with the World Health Organization (WHO) and the private sector. The major epidemics covered under the facility include new influenza pandemic virus A, B and C, SARS, MERS, Ebola, Marburg, Crimean Congo, Rift Valley, Lassa fever, etc.

PEF is expected to bring the much needed coordination and speed for future global disease outbreak response efforts.

It was unveiled at the G-7 Finance Ministers Summit held in Ise-Shima, Japan. Japanese Government has committed to donate \$50 million dollars to it, becoming the first donor. It was designed and built by World Bank in collaboration with the World Health Organization (WHO) and the private sector reinsurance companies etc.

The insurance window under it will combine the funding from the reinsurance markets with the proceeds of catastrophe or Cat bonds (World Bank issued pandemic bonds) as well as a complementary cash window. It will be for the first time World Bank Cat Bonds will be used to combat infectious diseases.

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- 16 ). Consider the following statements with respect to ISRO's indigenous air-breathing propulsion system "Scramjet", which aims to reduce the cost and fuel weight in the forthcoming launches:

1. Scramjet accelerates the air to supersonic velocity before combustion.
2. Scramjet operates at faster rate by consuming the liquid oxygen fuel from the atmosphere.

Which of the above given statements is/ are correct?

- a . 1 only
- b . 2 only
- c . Both 1 and 2 only

d . Neither 1 nor 2

- 1 mins 47 s
- Explanation
- Status

- Scramjet engines are a type of ramjet engine in which the combustion takes place in supersonic airflow. Scramjet too relies on the combustion of fuel and an oxidizer to produce thrust. Similar to conventional jet engines, scramjet-powered aircraft carry the fuel on board, and obtain the oxidizer by the ingestion of atmospheric gaseous oxygen. This requirement limits scramjets to suborbital atmospheric propulsion, where the oxygen content of the air is sufficient to maintain combustion.

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• 17 ) .Consider the following statements about United Nations

1. Only in General Assembly and Economic Social Council all members of United Nations are members.

2. Budget of United Nations is contributed by all member countries on voluntary basis.

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

- 0 mins 34 s
- Explanation
- Status

- General Assembly is the only organ of the United Nations in which all members all represented.

In Economic and Social Council only 54 elected countries are members.

Budget of United Nations is contributed by all the member countries based on their paying capacity but it is mandatory for all countries.

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• 18 ) .Calcium carbide is used for artificial ripening of green mangoes because it is capable to produce

- a . Auxin
- b . Cytokinin
- c . Ethylene
- d . Gibberellin

- 0 mins 9 s
- Explanation
- Status

- Calcium carbide is used in some countries for artificially ripening fruit. When calcium carbide comes in contact with moisture, it produces acetylene gas, which is quite similar in reaction to the natural ripening agent ethylene. In some fruits like mangoes Acetylene acts like a catalytic agent and triggers the production of ethylene in the fruits in a faster manner and thus it accelerates the ripening process.

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- 19 ).Consider the following statements regarding United Nations Flag

1. It was adopted in 1945 San Francisco Conference.
2. It consist of the official emblem of the organization, which is a circular world map as seen from the South Pole surrounded by a wreath of olive branches symbolizing peace, centered in white on a light blue background.

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

- 0 mins 12 s
- Explanation
- Status

- The UN flag, adopted in 1947, consists of the official emblem of the organisation, which is a circular world map as seen from the North Pole surrounded by a wreath of olive branches symbolising peace, centred in white on a light blue background.

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- 20 ).Which one among the following statements relates to ISRO's developing technology which allows it to carry out some action in space?

- a . Human space flight through MANAV launch vehicle
- b . Transferring humans from one spacecraft to another
- c . Promoting space travel through black holes
- d . Establishing a launching pad at Bay of Bengal

- 0 mins 35 s
- Explanation
- Status

- The Indian Space Research Organization (ISRO) is developing a technology that will allow it to transfer humans from one vehicle or spacecraft to another in space. Technically the terminology is called as Space Docking. The immediate goal is to enable refuelling of spacecraft to give them a longer life and transfer other crucial systems to an existing spacecraft, by transporting another to space. It will help to minimize the rate of space debris. In order to achieve this India need to become a member of the international space station or have a human space programme in its immediate plan.

- 21 ) .With reference to “Gravitational waves”, recently in news, which of the following statements is/are correct?

1. These are faint ripples in space time which are considered to be the fourth dimension.
2. It is caused by the most violent and energetic processes in the Universe.
3. Gravitational waves move at the greatest speed possible in the universe, and thus it would travel at the speed of sound through the universe.

Select the correct answer by using the codes given below:

- a . 1 and 2 only
- b . 1 and 3 only
- c . 2 and 3 only
- d . 1, 2 and 3

- 0 mins 39 s
- Explanation
- Status

- Gravitational waves are 'ripples' in the fabric of space-time caused by some of the most violent and energetic processes in the Universe. Albert Einstein predicted the existence of gravitational waves in 1916 in his general theory of relativity. Einstein's mathematics showed that massive accelerating objects (such as neutron stars or black holes orbiting each other) would disrupt space-time in such a way that 'waves' of distorted space would radiate from the source (like the movement of waves away from a stone thrown into a pond). Furthermore, these ripples would travel at the speed of light through the Universe, carrying with them information about their cataclysmic origins, as well as invaluable clues to the nature of gravity itself.

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- 22 ) .In order to enhance the vision of locomotive pilots in the inclement weather, recently Ministry of Railways had proposed to install which among the following technological devices?

- a . COMPAS
- b . TCAS
- c . DRISHTI
- d . TRI-NETRA

- 0 mins 32 s
- Explanation

- Status

- There is no explanation for this question.

•

- 23 ). Consider the following statements regarding National Capital Goods Policy
  1. It is the first-ever policy for the country's capital goods sector, envisaging creation of over 21 million new jobs by 2025.
  2. The policy aims to increase direct domestic employment and indirect employment.
  3. It also advocates adoption of a uniform Goods and Services Tax (GST) regime.
 Which of the given above statements is/are correct?
  - a . 1 and 2 only
  - b . 2 and 3 only
  - c . 1 and 3 only
  - d . 1, 2 and 3

- 4 mins 21 s
- Explanation
- Status

- **National Capital Goods Policy**

The Union Cabinet approved the first-ever policy for the country's capital goods sector, envisaging creation of over 21 million new jobs by 2025.

The objectives of the National Capital Goods Policy are to create an ecosystem for a globally competitive capital goods sector and achieve total production in excess of Rs. 7.5 lakh crore by 2025 from the current Rs. 2.3 lakh crore.

The policy aims to increase direct domestic employment from the current 1.4 million to at least 5 million and indirect employment from the current 7 million to 25 million by 2025, thus providing additional employment to over 21 million people.

It also envisages increasing the share of domestic production in India's capital goods demand from 60 per cent to 80 per cent by 2025 and in the process improve domestic capacity utilisation to 80-90 per cent.

The policy envisions increasing the share of capital goods in total manufacturing activity from 12 per cent at present to 20 per cent by 2025.

It also advocates adoption of a uniform Goods and Services Tax (GST) regime ensuring effective GST rate across all capital goods sub-sectors competitive with import duty after set-off with a view to ensure a level-playing field.

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- 24 ). The Global Review on Antimicrobial Resistance in its final report has appreciated India's Medicines with the Red Line campaign on antibiotics. In this context consider the following Statements regarding this campaign

1. It aims to curb the over-the-counter sale of Drugs.
2. It aims to control the rising threat of superbugs.
3. It was launched by the Ministry of Chemicals and Fertilizers.

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 18 s
- Explanation
- Status

- **Red Line campaign of Medicines**

The Global Review on Antimicrobial Resistance in its final report has appreciated India's Medicines with the Red Line campaign on antibiotics.

India's model of putting a red line on antibiotic packages to curb their over-the-counter sale can be used globally to counter the rising threat of superbugs. The campaign should be considered as a starting point to curb overuse of antibiotics and the labelling and symbols can be used globally. The sale of antibiotics and other antimicrobials over-the-counter is prevented by laws, but their weakly enforcement in some countries and non-existent in many is serious problem. By 2050, deaths due to antimicrobial resistance could rise to 10 million each year if action is not taken and it will cost the global economy \$100 trillion.

The campaign was launched in February 2016 by the Union Ministry of Health and Family Welfare to tackle the problem of growing misuse of antibiotics across the country. Its aim was to curb irrational use of antibiotics and create awareness on the side effects of taking antibiotics without prescription. Under it, all prescription only antibiotics should be marked with a vertical red line on the packets. The red line antibiotics packets should be consumed on doctor's advice and the patients need to complete the full course prescribed by the doctor.

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- 25 ) .Consider the following Statements regarding Global promotion of Traditional Systems of Medicine

1. Ministry of AYUSH and the World Health Organization (WHO) have signed an historic Project Collaboration Agreement (PCA) for cooperation on promoting the quality, safety and effectiveness of service provision in traditional and complementary medicine.
2. The PCA is aimed at delivering for the first time WHO benchmark document for training in Yoga, and WHO benchmarks for practice in Ayurveda, Unani and Panchakarma.
3. It will pave the way for India's long-term collaboration with the WHO in fostering the global promotion and integration of AYUSH systems of medicine including through the inclusion of Ayurveda and Unani in the International Classification of diseases and the International

Classification of Health interventions.

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 27 s
- Explanation
- Status

- **Global promotion of Traditional Systems of Medicine**

The ministry of AYUSH and the World Health Organisation (WHO) signed Project Collaboration Agreement (PCA) for promoting quality, safety and effectiveness of service provision in traditional medicine. The PCA is aimed at delivering for the first time WHO benchmark document for training in Yoga, and WHO benchmarks for practice in Ayurveda, Unani and Panchakarma.

The PCA is titled as ‘Co-operation on promoting the quality, safety and effectiveness of service provision in traditional and complementary medicine between WHO and AYUSH, India, 2016-2020’. It aims to support WHO in its global programme called ‘The WHO Traditional Medicine Strategy 2014–2023’, which was developed and launched in response to the World Health Assembly resolution on traditional medicine. The strategy aims to support WHO’s member states in developing proactive policies and action plans. The documents produced through the collaboration will contribute in establishing regulatory frameworks for traditional medicine products. They will also help in their integration in India’s healthcare system.

The PCA with WHO is a further recognition of India’s rich experience in the development and governance of traditional medicine. It will pave the way for India’s long-term collaboration with the WHO in fostering the global promotion and integration of AYUSH systems of medicine including through the inclusion of Ayurveda and Unani in the International Classification of diseases and the International Classification of Health interventions.

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- 26 ). With reference to “Magellanic Clouds”, sometimes seen in the news, which of the statements given below is/are **not** correct?

1. They are irregular elliptical galaxies visible from the southern hemisphere.
2. They orbit inside the Milky Way.

Select the correct answer by using the codes given below:

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



- 0 mins 23 s
- Explanation
- Status

- The Magellanic Clouds are two irregular dwarf galaxies visible from the southern hemisphere. They are the members of the local group and are orbiting inside the Milky Way galaxy.

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- 27 ) .Consider the following statements regarding Comprehensive Nuclear-Test-Ban Treaty (CTBT)

1. It is a multilateral treaty that bans all nuclear explosions, for both civilian and military purposes, in all environments.
2. It was adopted at the United Nations General Assembly by a large majority, exceeding two-thirds of the General Assembly's Membership in 1996 and entered into force as that of NPT.
3. As of 2016, China, Egypt, Iran, Israel and the United States have signed but not ratified the Treaty while India, North Korea and Pakistan have not signed it.

Which of the given above statements is/are correct?

- a . 1 only
- b . 1 and 2 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 56 s
- Explanation
- Status

- **CTBT**

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is a multilateral treaty that bans all nuclear explosions, for both civilian and military purposes, in all environments. It was adopted by the United Nations General Assembly on 10 September 1996 but has not entered into force as eight specific states have not ratified the treaty.

The treaty will enter into force 180 days after the 44 states listed in Annex 2 of the treaty have ratified it. These "Annex 2 states" are states that participated in the CTBT's negotiations between 1994 and 1996 and possessed nuclear power reactors or research reactors at that time. As of 2016, eight Annex 2 states have not ratified the treaty: China, Egypt, Iran, Israel and the United States have signed but not ratified the Treaty; India, North Korea and Pakistan have not signed it.

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- 28 ) .Consider the following statements regarding the Hague Code of Conduct (HCOC) in which India became a party recently

1. It is a voluntary legally non-binding multilateral body aimed at preventing the spread of ballistic missiles that can deliver weapons of mass destruction
2. It does not ban ballistic missiles, but it does call for restraint in their production, testing, and export.

Which of the given above statements is/are correct?

- a . 1 only
- b . 2 only
- c . Both 1 and 2
- d . Neither 1 Nor 2

- 0 mins 38 s
- Explanation
- Status

- **International Code of Conduct against Ballistic Missile Proliferation**

The International Code of Conduct against Ballistic Missile Proliferation, also known as the Hague Code of Conduct (HCOC), was established on 25 November 2002 as an arrangement to prevent the proliferation of ballistic missiles.

The HCOC is the result of international efforts to regulate access to ballistic missiles which can potentially deliver weapons of mass destruction. The HCOC is the only multilateral code in the area of disarmament which has been adopted over the last years. It is the only normative instrument to verify the spread of ballistic missiles. The HCOC does not ban ballistic missiles, but it does call for restraint in their production, testing, and export.

Strengthening worldwide attempt to contain the spread of ballistic missiles, India has joined The Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) which is a voluntary legally non-binding multilateral body aimed at preventing the spread of ballistic missiles that can deliver weapons of mass destruction, the Ministry of External Affairs said.

- 

- 29 ). The term “OSIRIS-REX”, which was recently in the news refers to
  - a . It is an unmanned spacecraft sent to the planet Saturn.
  - b . It is a space probe that carries out exploration study in an asteroid.
  - c . It is an interplanetary space probe to study the objects in Kuiper belt.
  - d . It is a robotic aided spacecraft which carries out scientific studies in a comet.

- 0 mins 41 s
- Explanation
- Status

- The Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (**OSIRIS-REx**) is a NASA asteroid study and sample return mission. OSIRIS-REx will

travel to a near-**Earth** asteroid called Bennu and bring a small sample back to **Earth** for study.

- 

- 30 ) .Why do chips manufacturers usually flush bags of chips with gas such as nitrogen?

- a . To maintain the crispness of the chips
- b . To prevent the chips from getting oxidized
- c . To prevent air from getting into the bag
- d . To prevent the chips from getting gelled together

- 0 mins 27 s
- Explanation
- Status

- Potato chip bags are not full of air, but of nitrogen gas. This is done to prevent the chips from oxidizing, which is part of what makes them go stale. Oxygen is very reactive, and likes to combine with other molecules whenever it can, causing chemical changes to take place.

- 31 ) .Recently China had switched on the world’s largest radio telescope in the name of “FAST” to carry out its ambitious space exploration from its soil. In this context consider the following statements with respect to FAST:

1. It is locally called as “Heavenly Eye”, which will explore farther and darker regions of space.
2. It aims to report the presence of extra terrestrial intelligent life.
3. It also provides the information regarding the spinning nature of pulsars and neutron stars.

Which of the above given statements is/are **not** correct?

- a . 1 only
- b . 1 and 2 only
- c . 1 and 3 only
- d . None of the above

- 1 mins 3 s
- Explanation
- Status

- China had successfully built the world’s largest single aperture telescope in the name of FAST (Five-hundred-meter Aperture Spherical Telescope) and it is considered to be the world's biggest radio telescope, whose 1,650-foot-wide dish will scan the heavens for signs of intelligent alien life, among other tasks like to carry out the research on pulsars and neutron stars.

-

• 32 ) .The Square Kilometre Array (SKA) is a large multi radio telescope project aimed to be built in Australia and South Africa. If built, then it would have a total collecting area of one square kilometer. In this context which one among the following statements best describes the objective of “Square Kilometre Array”?

- a . To conduct exclusive deep survey for black holes.
- b . To study the changes that occurs in photosphere and chromosphere region of the sun.
- c . To carry out the research about Galaxies, Dark matter and Dark energy.
- d . To study about magnetic field and astronomical debris.

- 1 mins 43 s
- Explanation
- Status

- The Square Kilometre Array (SKA) is a large multi radio telescope project aimed to be built in Australia and South Africa. If built, it would have a total collecting area of approximately one square kilometre. It will carry out the scientific studies regarding the galaxies origin, dark matter composition and dark energy.

•

• 33 ) .India has made tremendous strides in launch vehicle technology to achieve self-reliance in satellite launch vehicle programme with the development of historical and operational launch vehicle system. With respect to that which one among the following statements is correct regarding to India’s space launch vehicles

- a . RLV is a kind of winged vehicle which is capable to perform hypersonic launch.
- b . PSLV is a hybrid vehicle which is used to place a satellite in geostationary orbit.
- c . GSLV uses hypergolic propellant in its first stage.
- d . PSLV-XL uses Ramjet engine and GSLV-MKIII uses the cryogenic engine.

- 0 mins 18 s
- Explanation
- Status

- The PSLV is one of the world’s most reliable launch vehicles. Where it is considered to be the Hybrid vehicle since it uses both the solid and liquid propellants. Due to its unmatched reliability, PSLV has also been used to launch various satellites into Geosynchronous and Geostationary orbits, like the satellites from the IRNSS constellation.

•

• 34 ) .The Mount Sinabung, which had been dormant for four centuries before reviving in 2010 and 2014 and once again in 2016, which unleashed volcanic ash as high as 8,000 meters, the highest of its eruptions in recent days, is located in which of the following country?

- a . Malaysia
- b . Philippines
- c . Indonesia
- d . East Timor

- 0 mins 36 s
- Explanation
- Status

- **Mount Sinabung**

Mount Sinabung is among more than 120 active volcanoes in Indonesia, which is prone to seismic upheaval due to its location on the Pacific “Ring of Fire,” an arc of volcanoes and fault lines encircling the Pacific Basin.

- 

- 35 ) .Recently the Union Government has launched an initiative called MICE, which is based on meetings, incentives, conferences and exhibitions, is related with which of the following sector?

- a . Education
- b . Health
- c . Agriculture
- d . Tourism

- 0 mins 48 s
- Explanation
- Status

- **MICE initiative**

The government has initiated upgradation of tourism sector. For this, it has launched an initiative called MICE which is based on meetings, incentives, conferences and exhibitions.

Tourism is one of the segments which the new government is looking at to boost the nation's economy. Having realised that the MICE segment can be a game changer for tourism growth, the Ministry of Tourism had adopted an aggressive approach to promote this segment. In fact, the new Tourism Policy which is to be released anytime soon has identified MICE as a major growth driver for the Indian tourism industry. The Ministry is also looking to extend the e -Tourist Visa initiative to the MICE sector.

- 

- 36 ) .The World Wildlife Crime Report, which takes stock of the present wildlife crime situation with a focus on illicit trafficking of specific protected species of wild fauna and flora, is being released by which of the following agency?

- a . United Nations Environment Programme (UNEP)
- b . INTERPOL
- c . International Union for Conservation of nature (IUCN)
- d . United Nations Office on Drugs and Crime (UNODC)

- 1 mins 3 s
- Explanation
- Status

- **World Wildlife Crime Report**

The United Nations Office on Drugs and Crime published its inaugural World Wildlife Crime Report, the first global assessment of its kind. The study highlights how the poaching and illegal trade of thousands of species worldwide presents real environmental dangers and ultimately undermines the rule of law by potentially fuelling conflict. Launched at Commission on Crime Prevention and Criminal Justice (CCPCJ), the report was developed by UNODC with data provided by partner organizations under the International Consortium on Combating Wildlife Crime (ICCWC), including the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the World Customs Organization (WCO). TRAFFIC contributed information towards the study, in particular on the reptile skin trade. While partner organizations in the project included those under the International Consortium on Combating Wildlife Crime (ICCWC), such as the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the World Customs Organization (WCO).

- 

- 37 ) .Consider the following statements with respect to GSLV-F05
1. It was a Text book launch for ISRO
  2. It was the first time that an indigenous cryogenic engine was used on an operational flight mode by ISRO.
  3. The mission had successfully placed INSAT-3DR in Geostationary orbit
  4. INSAT-3DR provides services both for meteorological department and for defence sector.
- Which of the above given statements is/are **not** correct?
- a . 1 only
  - b . 1 and 2 only
  - c . 3 and 4 only
  - d . 2, 3 and 4 only

- 0 mins 6 s
- Explanation
- Status

- The INSAT-3DR satellite continues the mission of the INSAT-3D satellite, which was launched in 2013. Both of them belong to the larger class of meteorological satellites operated by ISRO, which includes the KALPANA-1 and the INSAT-3A. KALPANA-1, INSAT-3A and INSAT-3D are in the geostationary orbit. The F05 mission had launched the INSAT-3DR into the geostationary transfer orbit. An operational flight means ISRO will not be testing any components, flight parameters or flight routes. The launch will solely be about the mission: delivering the payload. INSAT 3DR provides services both for the meteorological department and for defence sector. Moreover this launch is a non text book launch since the mission was delayed by 40 minutes.

•

- 38 ). The United Nations was established with the objective of preventing future war, protecting human rights, establishing international law, promoting social progress on better standard of life in larger freedom. In this context which of the following organ of United Nations is called as Enforcement wing
  - a . International Court of Justice
  - b . Trusteeship Council
  - c . General Assembly
  - d . Security Council

- 0 mins 22 s
- Explanation
- Status

- The Security Council bears the primary responsibility for the maintenance of peace and security. It is designed to be the UN's only action agency and is often described as the 'enforcement wing' of the UN. The Council originally consisted of eleven members but expanded to fifteen in 1965. Of the fifteen members, five are permanent and the remaining ten are non-permanent members. The permanent members are China, France, Russia", the UK and the US. The non-permanent members are elected for a two-year term by a two-thirds majority of the General Assembly. Five non-permanent members retire every year.

•

- 39 ). Which one among the following statements is **not** correct regarding to PSLV C-35?
  - a . It was the longest and most complex mission that ISRO had done so far.
  - b . It's a kind of two-in-one mission that puts India in a unique league of nations.
  - c . It had placed Weather satellites and Communication satellite in lower earth orbit.
  - d . The mission had utilized expandable launch vehicle.

- 0 mins 17 s
- Explanation
- Status

- PSLV-C35, had launched the SCATSAT-1 for weather related studies and seven co-passenger satellites into Sun Synchronous Orbit (SSO) and in polar orbit respectively. Moreover, this is the first mission of PSLV in which payloads were launched into two different orbits.

•

- 40 ). Consider the following statements about “Exomars Trace Gas Orbiter-2016”:  
1. It is a mars exploration programme jointly developed by ESA and NASA.  
2. The mission aims to find out the evidence of biological or geological process in the Martian surface.  
3. The mission has Entry, Descent and Landing Demonstrator Module to carry out the exploration outside the Mars.

Which of the above given statements is/are correct?

- a . 2 only
- b . 1 and 2 only
- c . 1 and 3 only
- d . 2 and 3 only

- 3 mins 11 s
- Explanation
- Status

- The ExoMars Trace Gas Orbiter 2016 is the first in a series of Mars missions to be undertaken jointly by the two space agencies, ESA and Roscosmos. A key goal of this mission is to gain a better understanding of methane and other atmospheric gases that are present in small concentrations (less than 1% of the atmosphere) which could be the evidence for possible biological or geological activity.

- 41 ). Which one among the following is ISRO’s web GIS service for Earth observation data?

- a . GAGAN
- b . BHUVAN
- c . MOSDAC
- d . SAKAAR

- 0 mins 39 s
- Explanation
- Status

- Earth Observation Systems of ISRO for Atmosphere and Ocean Monitoring have been providing continuous data since 2000. The Bopal Earth Station (BES), at Space Applications Centre, Ahmedabad was established and an operational set-up was positioned in 2006 for data acquisition, data products generation and data dissemination. This service was established through the Meteorological and Oceanographic Satellite



Data Archival Centre (MOSDAC). MOSDAC archives and disseminates data from satellites like INSAT, KALPANA-1, Oceansat, Megha-Tropiques and SARAL. MOSDAC also hosts and disseminates weather related information services and alerts over Mobile devices. The portal provides a variety of products and services on a wide spectrum of applications comprised of weather forecasting, cyclone prediction and other vital ocean and atmospheric parameters needed by national/international forecasting agencies, research organisations, educational institutions, individual researchers and students for advanced research.

- 

- 42 ) .Which one among the following statements is **not** correct regarding the NISAR project?
  - a . It is the first radar imaging satellite in the world to employ dual frequency.
  - b . It will be launched into a sun-synchronous orbit.
  - c . NISAR would be the first Synthetic Aperture Radar to operate from the space.
  - d . The launching will be carried out by using GSLV vehicle.

- 3 mins 25 s
- Explanation
- Status

- The N

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- 43 ) .The term Lagrangian point often coincides with space technology. In this context consider the following statements with respect to Lagrangian point:

1. There are five Lagrangian points between the Sun – Earth.
2. These points were free from the action of gravity.
3. It is a point in which India had placed its Astrosat satellite.

Which one of the above given statements above is/are correct?

- a . 1 only
- b . 1 and 2 only
- c . 2 and 3 only
- d . None of the above

- 1 mins 7 s
- Explanation
- Status

- A Lagrange point is a location in space where the combined gravitational forces of two large bodies, such as Earth and the sun or Earth and the moon, equal the centrifugal force felt by a much smaller third body. There is only one Lagrangian point (L1) between sun and the earth and on grand total we have five Lagrangian point around the sun and earth.

India had placed the Astrosat satellite in the lower earth orbit but it plans to place Aditya solar probe in the Lagrangian point (L1).

•

• 44 ) .The SWAYAM satellite sent by ISRO recently will serve for which of the following objectives?

- a . To monitor the Disaster activity.
- b . To study the GHG emissions.
- c . To regulate the aerial navigation
- d . To establish HAM radio community

- 1 mins 30 s
- Explanation
- Status

- Swayam, a pico-satellite designed and built by students of College of Engineering in Pune, was launched into space by ISRO on Wednesday. The college's Ham Radio Club has a big role to play in its operation. This Amateur Radio Club (or Ham club) was established in 1986 and is the oldest technical club of College of Engineering, Pune. The club designed Swayam's antenna and the satellite will provide point-to-point communication for the Ham radio community.

•

• 45 ) .The fuse wire in an electric circuit is based upon which among the following property of electric current?

- a . Heating effect of current
- b . Magnetic effect of current
- c . Chemical effect of current
- d . Ionising effect of current

- 0 mins 23 s
- Explanation
- Status

- Anelectric fuse is a safety device used to prevent damage to anelectrical circuitwhen excessive current flows through it. The electric fuse works on the principle of the heating effect of electric current. It consists of a piece of wire made of a metal or an alloy of low melting point. As the current increases beyond a limit, the wire in the electric fuse melts and breaks off. The fuse is then said to have blown off. The circuit is broken and current stops flowing through it. Thus a fuse prevents fires.

•

- 46 ). Which of the following missiles is/are grouped under “surface to surface” category in India?

1. Prithvi
2. Agni
3. Trishul
4. Akash

Select the correct answer using the code given below:

- a . 1 and 2 only
- b . 3 and 4 only
- c . 1, 2 and 3 only
- d . 2, 3 and 4 only

- 0 mins 24 s
- Explanation
- Status

- Prithvi and Agni is a kind of surface to surface missile while Trishul and Akash is a kind of Surface to Air missile. All the four given missiles were developed under Integrated Missile Development Programme of India.

•

- 47 ). Consider the following statements regarding Shala Asmita Yojana (SAY)

1. It aims to track the educational journey of close to 25 crore school students from Class I to Class XII across 15 lakh schools in the country
2. It will be launched and monitored by the Ministry of home Affairs under which Department of Internal Security comes

Which of the given above statements is/are correct?

- a . 1 only
- b . 2 only
- c . Both 1 and 2
- d . Neither 1 Nor 2

- 2 mins 20 s
- Explanation
- Status

- **Shala Asmita Yojana**

Asmita stands for All School Monitoring, Individual Tracing Analysis.

Shala Asmita Yojana (SAY) aims to track the educational journey of close to 25 crore school students from Class I to Class XII across 15 lakh schools in the country. In other words, this online database will carry information about student attendance and enrolment, mid-day meal service, learning outcomes and infrastructural facilities, among other things, on one platform for both private and government schools.

THE HRD Ministry is set to launch a programme that would probably be the world's largest student tracking system.

The government will track students through their Aadhaar numbers. According to official estimates, almost 65 per cent of school students in the age group of 5 to 18 years have Aadhaar numbers. Those who don't will be given a unique identity number for tracking.

- 

- 48 ). The World Cities Report 2016, a new global flagship report on sustainable urban development, was released under which of the following authority?

- a . World Bank
- b . United nations Development Group
- c . United nations Environment Programme
- d . United Nations Human Settlements Programme

- 1 mins 47 s
- Explanation
- Status

- **World Cities Report**

The United Nations Human Settlements Programme (UN-Habitat) is the United Nations agency for human settlements and sustainable urban development

The UN Human Settlements Programme (UN-Habitat) has published a flagship report intended to inform preparation of the New Urban Agenda at the Habitat III meetings in Quito in October.

Assessing changes in urbanization since the Habitat II meetings in Istanbul in 1996, and then proposing how urbanization, urban planning, and policy needs to change in the years ahead, World Cities Report 2016: Urbanization and Development: Emerging Futures results from a two year process

- 

- 49 ). Simhashta Declaration, which is in news recently, is the joint declaration between

- a . India and Nepal
- b . India and Bhutan
- c . India and Srilanka
- d . India and Myanmar

- 0 mins 47 s
- Explanation
- Status

- **Simhashta Declaration**

The Prime Minister along with Sri Lankan President Maithripala Sirisena have released

‘Simhastha Declaration’ at Ninora village in Ujjain. Both leaders addressed the concluding session of the three day International Vichar Mahakumbh held on side-lines of the month-long Simhastha mela.

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• 50 ). The term “TAPAS” related to DRDO is recently seen in the news. Which of the following statements best describes about this term?

- a . It is an Unmanned Combat Aerial Vehicle developed to carry out surgical strikes.
- b . It is an Unmanned Aerial Vehicle developed to carry out Intelligence, Surveillance and Reconnaissance roles for the Armed forces.
- c . It is an anti-ballistic missile jointly developed by India and France
- d . It is an indigenous subsonic cruise missile developed by DRDO for the Armed forces.

- 0 mins 13 s
- Explanation
- Status

- TAPAS is a long endurance Unmanned aerial vehicle (UAV) which used to be previously referred as Rustom-II, being developed by India on the lines of the American Predator drones. It is a kind of Medium Altitude Long Endurance (MALE) UAV. It has an endurance of 24 hours and can conduct surveillance and reconnaissance missions for the country’s armed forces.

• 51 ). Consider the following statements regarding Organization for the Prohibition of Chemical Weapons (OPCW), which was frequently in News

1. It promotes and verifies the adherence to the Chemical Weapons Convention which prohibits the use of chemical weapons and requires their destruction.
2. It is an agency of the United Nations and was awarded the 2013 Nobel Peace Prize.
3. All the parties to the Chemical Weapons Convention (CWC) are automatically members of the OPCW.

Which of the given above statements is/are correct?

- a . 1 and 3 only
- b . 2 and 3 only
- c . 1 and 2 only
- d . 1, 2 and 3

- 0 mins 12 s
- Explanation
- Status

- **OPCW**

The Organization for the Prohibition of Chemical Weapons (OPCW) is an intergovernmental organization, located in The Hague, Netherlands. The organization

promotes and verifies the adherence to the Chemical Weapons Convention which prohibits the use of chemical weapons and requires their destruction. The verification consists both of evaluation of declarations by member states and on-site inspections. The organisation was awarded the 2013 Nobel Peace Prize. The organization is not an agency of the United Nations, but cooperates both on policy and practical issues. All 192 parties to the Chemical Weapons convention are automatically members of the OPCW. Other states which are eligible to become members are UN member states Israel, which is a signatory state that has not ratified the Chemical Weapons Convention, and Egypt, North Korea and South Sudan, which have neither signed nor acceded to the Chemical Weapons Convention, as well as UN observer state Palestine, which has also neither signed nor acceded to the CWC.

International Organization

•

- 52 ) .Consider the following statements regarding Missile Technology Control Regime (MTCR)

1. It is an informal and voluntary partnership among 35 countries and is the part of the United Nations Organization
2. It aims to prevent the proliferation of missile and unmanned aerial vehicle technology capable of carrying above 500 kg payload for more than 300 km.
3. It was supplemented by the International Code of Conduct against Ballistic Missile Proliferation (ICOC), also known as the Hague Code of Conduct

Which of the given above statements is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 26 s
- Explanation
- Status

- International Code of Conduct against Ballistic Missile Proliferation

- The International Code of Conduct against Ballistic Missile Proliferation, also known as the Hague Code of Conduct (HCOC), was established on 25 November 2002 as an arrangement to prevent the proliferation of ballistic missiles.

- The HCOC is the result of international efforts to regulate access to ballistic missiles which can potentially deliver weapons of mass destruction. The HCOC is the only multilateral code in the area of disarmament which has been adopted over the last years. It is the only normative instrument to verify the spread of ballistic missiles. The HCOC does not ban ballistic missiles, but it does call for restraint in their production, testing, and export.

- Strengthening worldwide attempt to contain the spread of ballistic missiles, India has joined The Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) which

is a voluntary legally non-binding multilateral body aimed at preventing the spread of ballistic missiles that can deliver weapons of mass destruction, the Ministry of External Affairs said.

•

• 53 ). Which of the following institute / treaty / convention was / were established in 1992 Rio Summit of United Nations?

1. United Nations Environment Programme.
2. United Nations Framework Convention on Climate Change.
3. Convention on International Trade in Endangered Species of Flora and Fauna.
4. Convention on Biological Diversity.

Select the correct answer using the code given below.

- a . 1, 3 and 4 only
- b . 2, 3 and 4 only
- c . 1, 2 and 3 only
- d . 2 and 4 only

- 0 mins 37 s
- Explanation
- Status

•

•United Nations environment programme has established in 1972 after United Nations first environment summit held in Stockholm.

•Convention on International Trade CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as the Washington Convention) is a multilateral treaty to protect endangered plants and animals. It was drafted as a result of a resolution adopted in 1963 at a meeting of members of the International Union for Conservation of Nature (IUCN). The convention was opened for signature in 1973, and CITES entered into force on 1 July 1975. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild, and it accords varying degrees of protection to more than 35,000 species of animals and plants. In order to ensure that the General Agreement on Tariffs and Trade (GATT) was not violated, the Secretariat of GATT was consulted during the drafting process.

•

• 54 ). To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy and to promote international monetary cooperation through a permanent institution.

Which of the below Inter Governmental Organization has above objectives?

- a . World Trade Organization

- b . World Bank
- c . United Nations Conference on Trade and Development
- d . International Monetary Fund

- 0 mins 29 s
- Explanation
- Status

- **International Monetary Fund IMF**

- The IMF was established on July 22, 1944 by the Articles of Agreement signed at the UN Monetary and Financial Conference held at Bretton Woods, New Hampshire, the US, effective from December 27, 1945. (Also see World Bank Group.) It began its formal operations on March 1, 1947 with the objective of safeguarding international financial and monetary stability and providing financial backing for revival and expansion of international trade. The IMF became a UN specialised agency by an agreement with ECOSOC (approved by the General Assembly on November 15, 1947). The IMF is headquartered at Washington DC, the US.

- The main purpose of the IMF is “to promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems; to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy to promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive depreciation; to assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade; to give confidence to members by making the Fund’s resources temporarily available to them under adequate safeguards, thus providing them with the opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity...(and) to shorten the duration and lessen the degree of disequilibrium in the international balance of payments of members.

- 

- 55 ) .Consider the following pairs:

Which of the above given pairs is/are **not** correctly matched?

- a . 1 only
- b . 2 and 3 only
- c . 3 and 4 only
- d . None of the above

- 0 mins 4 s
- Explanation



- Status

- Lakshya is a kind of UAV which is capable to carry out Zero length launching and while Rustom – II is a kind of MALE unmanned aerial vehicle and it's a kind of light canard aircraft.

- 

- 56 ) .Consider the following statements regarding Islamic Development Bank (IDB)
  1. Its objective is to foster the economic development and social progress of member countries as well as the Muslim community in accordance with principles of Islamic (Shariah) law.
  2. The basic condition for membership is that the prospective member country should be a member of the Organisation of Islamic Cooperation (OIC), pay its contribution to the capital of the Bank and be willing to accept such terms and conditions as may be decided upon by the IDB Board of Governors.
  3. The IDB is an observer at the United Nations General Assembly.
 Which of the given above statements are correct?
  - a . 1 and 2 only
  - b . 2 and 3 only
  - c . 1 and 3 only
  - d . 1, 2 and 3

- 0 mins 10 s
- Explanation
- Status

- **Islamic Development Bank in India**

Saudi Arabia's Islamic Development Bank (IDB) has decided to open its first branch in India at Ahmedabad, Gujarat.

The IDB is a multilateral development financing institution based in in Jeddah, Saudi Arabia. Presently, it has 56 Islamic countries as its members. It was founded in 1973 by the Finance Ministers at the first Organisation of the Islamic Conference (now Organisation of Islamic Cooperation). The basic condition for membership is that the prospective member country should be a member of the Organisation of Islamic Cooperation (OIC), pay its contribution to the capital of the Bank and be willing to accept such terms and conditions as may be decided upon by the IDB Board of Governors. The IDB is an observer at the United Nations General Assembly.

IDB's objective is to foster the economic development and social progress of member countries as well as the Muslim community in accordance with principles of Islamic (Shariah) law.

Reserve Bank and the government are exploring introduction of interest-free banking, also known as Islamic Banking, to financially include sections of the society that remains excluded due to religious reasons.

In this regard, IDB and its private sector arm, Islamic Corporation for the Development

of the Private Sector (ICD), already have met with top officials of the Reserve Bank of India (RBI), EXIM Bank and India's other nationalized banks. This announcement comes as part of MoU signed between IDB and India's EXIM Bank during Prime Minister Narendra Modi visit to United Arab Emirates (UAE) in April 2016. As part of the MoU a US 100 million dollars line-of-credit (LoC) was to be given to IDB's member countries to facilitate exports. Besides, IDB also has decided to provide Gujarat state 30 medical vans as part of its social sector initiatives.

•

- 57 ). To provide a one-stop solution to problems of rice growers and help in value addition in a big way, the Government has decided to establish the Asia's First Rice Technology Park at

- a . Karnataka
- b . Andhra Pradesh
- c . Chhattisgarh
- d . Tamilnadu

- 0 mins 40 s
- Explanation
- Status

- **Asia's first Rice Technology Park**

Asia's first Rice Technology Park is being established at Navali-Karatagi villages on the outskirts of Gangavati at koppal district of Karnataka, known as the 'Rice Bowl of Karnataka', to provide a one-stop solution to problems of rice growers and help in value addition in a big way. Apart from it state government has decided to set up a Maize Technology Park at Ranebennur in Haveri district.

These parks will be established under public private partnership (PPP). These parks would pave the way for opening new avenues for rice and maize growers to add value to their produce and get better returns and also enhance quality of the produce.

The establishment of the Rice Technology Park will help paddy cultivators in the Tungabhadra Command Area in Ballari, Raichur and Koppal districts.

•

- 58 ). Which one of the following is not the part of the Multilateral Export Control Regime (MECR), which is an international body that states use to organize their national export control systems?

- a . The Wassenaar Arrangement
- b . The Australia Group
- c . The Nuclear Suppliers Group
- d . Fissile Material Cut-off Treaty

- 2 mins 48 s
- Explanation

- Status

- **Multilateral export control regime**

A Multilateral Export Control Regime (MECR) is an international body that states use to organize their national export control systems.

There are currently four such regimes:

The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies.

The Nuclear Suppliers Group (NSG), for the control of nuclear related technology.

The Australia Group (AG) for control of chemical and biological technology that could be weaponized.

The Missile Technology Control Regime for the control of rockets and other aerial vehicles capable of delivering weapons of mass destruction.

- 

- 59 ). Which one of the following agency is popularly known as “London Club”?

a . International Atomic Energy Agency (IAEA)

b . Nuclear Supply Group (NSG)

c . G7 Group

d . G20 Group

- 0 mins 57 s
- Explanation
- Status

- **London Club**

Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries that seek to prevent nuclear proliferation by controlling the export of materials, equipment and technology that can be used to manufacture nuclear weapons. The NSG was founded in response to the Indian nuclear test in May 1974 and first met in November 1975 in London, and is thus popularly referred to as the “London Club” (“Club de Londres”).

- 

- 60 ). Which one among the following is the best description of “INS Mormugao”, that was in the news recently?

a . Stealth guided missile destroyer

b . Advanced torpedo launch vessel

c . Intercepting stealth frigate

d . Fast patrolling war ship

- 0 mins 6 s
- Explanation

- Status

- INS Mormugao is the second ship of the Project 15B. The first ship of the project, stealth guided-missile destroyer 'Visakhapatnam', was launched on April 20 last year. Project 15B ships feature cutting edge advanced technology and are comparable to the best ships of similar class anywhere in the world. These ships have been designed indigenously by the Directorate of Naval Design, New Delhi.

- 61 ). Which one among the following missile developed by DRDO is capable to carry out “Kill Effect” in the Endo atmospheric altitude?

- a . PRITHVI - I
- b . PRADYUMNA
- c . ASTRA
- d . ASHWIN

- 0 mins 7 s
- Explanation
- Status

- In its efforts to have a full-fledged and multi-layered Ballistic Missile Defence system, DRDO had successfully test-fired indigenously developed supersonic interceptor missile in the name of ASHWIN, which is capable of destroying any incoming ballistic missile in the Endo atmospheric altitude. The ‘kill’ effect of the interceptor was ascertained by analysing data from multiple tracking sources.

•

- 62 ). Consider the following statements with respect to “Tejas”, which had been designed to meet the tactical requirements of a modern air force as a multi-role aircraft:

1. Tejas is the first indigenous fighter to be inducted into IAF.
2. Tejas has been pegged as world’s smallest and lightest supersonic fighter.
3. Tejas is made under Light Combat Aircraft programme.

Which of the above given statements is/are **not** correct?

- a . 1 only
- b . 2 only
- c . 1 and 3 only
- d . 2 and 3 only

- 0 mins 22 s
- Explanation
- Status

- The Tejas aircraft has a tail-less compound delta-wing configuration, which gives it high maneuverability. It came from the Light Combat Aircraft (LCA) programme, which began in the 1980s to replace India's ageing MiG-21 fighters. LCA was officially named "Tejas" in 2003, meaning "Radiant". The Tejas is the second supersonic fighter developed by Hindustan Aeronautics Limited (HAL) after the HAL HF-24 Marut.

•

- 63 ) .The term “Air Independent Propulsion system” is associated with which one among the following statements?

- a . Atmospheric re-entry operation in RLV with the help of Scramjet engine.
- b . Operating Nuclear power submarine in deep ocean waters without the help of air for combustion.
- c . Launching a cruise missile from light combat aircraft to strike a helicopter in the air.
- d . None of the above

- 0 mins 33 s
- Explanation
- Status

- Air independent propulsion is any marine propulsion technology that allows a non-nuclear submarine to operate without access to atmospheric oxygen. AIP can augment or replace the diesel-electric propulsion system of non-nuclear vessels.

•

- 64 ) .Which one among the following statements is **not** correct regarding the PAVA shells?

- a . It's a kind of non lethal weapon obtained from organic compound.
- b . It paralyses the protesters for short duration.
- c . It's a kind of dye marker grenade with irritant.
- d . It is biologically safer than chilli grenade or tear smoke shell.

- 0 mins 7 s
- Explanation
- Status

- PAVA shells contain Pelargonic Acid Vanillyl Amide, an organic compound found in chilli pepper. It derives its name from the compound, which is also known as Nonivamide. It is considered to be bio-safe, less lethal than pellet guns and equally effective. It paralyses the protesters for short duration and it's a kind of non dye marker grenade. It is also used as a food additive to add pungency, flavouring and spicy effect to food.

•

- 65 ). The term “Varunastra” is sometimes seen in the news. Which one among the following statements best describe about this term?

- a . It’s a kind of ship launched heavy weight Torpedo.
- b . It’s a kind of Beyond visual range missile launched from Sukhoi-30 MKI
- c . It’s a kind of unmanned underwater vehicle used for patrolling.
- d . It’s a kind of hull mounted sonar which detects the submarines.

- 1 mins 5 s
- Explanation
- Status

- Varunastra, is a kind of India’s first indigenous heavy weight ship launched anti-submarine electric torpedo. Varunastra is also known as underwater missile. It is capable of targeting quiet and stealthy submarines, both in deep and littoral waters in intense counter measure environment.

•

- 66 ). Consider the following pairs:

Which of the above given pairs is/are correctly matched?

- a . 1 and 3 only
- b . 2 and 4 only
- c . 1, 2 and 4 only
- d . None of the above

- 0 mins 4 s
- Explanation
- Status

- INS Tarasa, the fourth and last ship in the series of the Water Jet Fast Attack Craft (WJFAC). It is an improved variant of the Car Nicobar-class high-speed offshore patrol vessels (OPVs).

•

- 67 ). Which of the following are applications of LIDAR?

- 1. Measuring wind speed
- 2. Measuring the concentration of gases
- 3. Vehicle tracking and fleet management
- 4. Disaster management

Select the correct answer by using the codes given below

- a . 1 and 2 only
- b . 3 and 4 only

c . 1, 2 and 4 only

d . 1, 2, 3 and 4

- 0 mins 13 s
- Explanation
- Status

- LIDAR, which stands for Light Detection and Ranging, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses—combined with other data recorded by the airborne system—generate precise, three-dimensional information about the shape of the Earth and its surface characteristics. A LIDAR instrument principally consists of a laser, a scanner, and a specialized GPS receiver. Airplanes and helicopters are the most commonly used platforms for acquiring LIDAR data over broad areas. Two types of LIDAR are topographic and bathymetric. Topographic LIDAR typically uses a near-infrared laser to map the land, while bathymetric Lidar uses water-penetrating green light to also measure seafloor and riverbed elevations.

•

• 68 ) .Which of the following United Nations specialized agency is trying to achieve world peace through knowledge, technology and innovation, culture and custom?

a . United Nations Development Programme

b . World Intellectual Property Organization

c . United Nations Educational, Scientific and Cultural Organization

d . United Nations University

- 0 mins 35 s
- Explanation
- Status

- **United Nations Educational, Scientific and Cultural Organisation (UNESCO)**

In 1945, the governments of the UK and France held a conference for creating an educational, scientific and cultural organisation of the UN. A Constitution for the same was adopted at the conference, and UNESCO came into being on November 4, 1946. It was recognised as a UN specialised agency in December 1946. The headquarters is in Paris, France. Countries belonging to UNESCO agree to contribute to peace and security by cooperating in the areas of education, science, communication and culture.

•

• 69 ) .A rooftop photovoltaic power station, or rooftop PV system, is a photovoltaic system that has its electricity-generating solar panels mounted on the rooftop of a residential or

commercial building or structure. To utilize the maximum solar power in this way, where the World's Largest Single Rooftop Solar Plant was installed recently in India?

- a . Haryana
- b . Rajasthan
- c . Punjab
- d . Tamilnadu

- 0 mins 14 s
- Explanation
- Status

- **Single rooftop solar plant**

‘World’s largest’ single rooftop solar plant opened at Beas dera in Punjab. The plant has the capacity to produce 11.5MW electricity. The project will generate 27 million units of electricity per annum, enough to cater to the electricity needs of approximately 8,000 households.

- 

• 70 ). Which of the following Tiger Reserve has won “India Biodiversity Award 2016” in the category of 'Conservation of threatened species' for its Hornbill Nest Adoption Programme?

- a . Pakke Tiger Reserve
- b . Periyar Tiger Reserve
- c . Anamalai Tiger Reserve
- d . Namdapha Tiger Reserve

- 0 mins 42 s
- Explanation
- Status

- **Pakke Tiger Reserve**

It is a Project Tiger, tiger reserve in the East Kameng district of Arunachal Pradesh in north-eastern India. This Tiger Reserve has won India Biodiversity Award 2016 in the category of 'Conservation of threatened species' for its Hornbill Nest Adoption Programme.

A joint initiative of the Ministry of Environment, Forest and Climate Change, National Biodiversity Authority and United Nations Development programme, India Biodiversity Awards recognise the contribution of a range of stakeholders towards the conservation of biodiversity.

The Hornbill Nest Adoption Programme has been a major step towards conservation of four hornbill species that are found in the adjoining areas of Pakke Tiger Reserve.

• 71 ). Consider the following statements regarding World Bank Group

1. Only members of International Monetary Fund can become member of World Bank.



2. International Finance Corporation is a specialized agency of United Nations.  
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

- 0 mins 8 s
- Explanation
- Status

- **World Bank**

The World Bank was one of the two main products of the UN Monetary and Financial Conference held at Bretton Woods (New Hampshire, USA) in July 1944. The Bank was conceived as a centre for mobilising and allocating capital resources for the reconstruction of war-torn states and the expansion of world production and trade.

Established as the original institution of the World Bank Group, World Bank is structured like a cooperative that is owned and operated for the benefit of its member countries. The other Bretton Woods institution, the IMF, was created to maintain order in the field of currencies and exchange rates and, thus, to prevent a repetition of the financial chaos of the 1930s. The Article of Agreement for the two institutions came into effect on December 27, 1945 following the ratification by the required 28 states. The Bank began its operations in Washington DC (its headquarters) in June 1946.

Only members of the IMF are eligible for membership of the Bank, in turn, the membership of the Bank is a prerequisite for membership of the IDA, the IFC and the MIGA.

- 

- 72 ) .Consider the following pairs:

Which of the above given pairs is/are **not** correctly matched?

- a . 2 only
- b . 1, 4 and 5 only
- c . 2, 3 and 4 only
- d . 1, 2, 3, 4 and 5

- 0 mins 4 s
- Explanation
- Status

- Dhanush is a kind of surface to surface missile. Rohini is a kind of 3D Airforce radar. Sudarshan is a kind of laser guided bomb. MIHIR is a kind of aircraft suspended sonar. NAGAN is a kind of active cum passive array sonar.

•

- 73 ).Consider the following statements with respect to Chemical nature:

1. Isotopes have same number of protons but different number of neutrons.
2. Isobars have same atomic number but differ in their nucleon number.
3. Isotones have same number of neutrons but different mass number.

Which of the statements given above is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 30 s
- Explanation
- Status

- Isobars have different atomic numbers but same nucleon number i.e., mass number.

•

- 74 ).Which one among the ceramic polymer hybrid material provides dual protection against water and fire?

- a . CASPOL
- b . BLUE AIR
- c . POLYURETHENE
- d . OLFEX

- 0 mins 48 s
- Explanation
- Status

- CASPOL is a room temperature curable, water based formulation having self-extinguishing properties, good adhesion and water repellence characteristics. It is based on ceramic composition dispersed in an aqueous polymeric emulsion containing flame retardant components.

•

- 75 ).Consider the following statements about modification in Cactus plant:

1. Leaves were modified into spines

2. Stem performs the function of leaves

Which of the above given statements is/are correct?

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

- 0 mins 16 s
- Explanation
- Status

- In cactus plant we report the aerial modification of stem in the name of Phylloclade in which the leaves were modified into spines and the stem performs the function of leaves.

•

• 76 ) .The periodic table shows us all the elements that make up our world in the order of their atomic number, electron configurations and chemical properties. Recently the periodic table got larger after four new elements were officially named and added to the chart. With respect to this consider the following statements:

1. Now the seventh row of the periodic table is completed.
2. Among the four new element one belong to Noble gas.
3. Element 113 is the first to be discovered from an Asian country.
4. All the four elements were synthetic in nature.

Which of the statements given above is/are correct?

- a . 4 only
- b . 3 and 4 only
- c . 1, 2 and 3 only
- d . 1, 2, 3 and 4

- 0 mins 14 s
- Explanation
- Status

- Four new elements have been officially added to the periodic table, completing its seventh row. Elements 113, 115, 117 and 118 have been pencilled in on the table. All of the elements were created in the lab, by smashing lighter atomic nuclei together. Among the four elements, 113 was discovered by Japan, the first Asian country to discover the element and element 118 belong to Noble gas group.

•

• 77 ) .The function of Deuterium Oxide in a nuclear reactor is to

- a . Absorb the fast moving neutrons

- b . Slow down the speed of neutrons
- c . To stop the nuclear fission reaction
- d . Regulate the rate of fission reaction

- 1 mins 27 s
- Explanation
- Status

- Heavy water (D<sub>2</sub>O), also called deuterium oxide, water composed of deuterium, the hydrogen isotope with a mass double that of ordinary hydrogen, and oxygen. The heavy water produced is used as a moderator of neutrons in nuclear power plants. A moderator is a material used in a nuclear reactor to slow down the speed of neutrons produced from fission. By slowing the neutrons down the probability of a neutron interacting with Uranium-235 nuclei is greatly increased thereby maintaining the chain reaction.

•

- 78 ) .Consider the following statements with respect to Neutrinos:

1. It is charge less elementary particles.
  2. It exists in three different flavours.
  3. Neutrinos are almost massless.
  4. Most frequent particle in the universe.
- Which of the statements given above is/are **not** correct?

- a . 1 and 3 only
- b . 2 and 4 only
- c . 1, 3 and 4 only
- d . None of the above

- 0 mins 13 s
- Explanation
- Status

- Neutrinos were the most frequent particle in the universe. Neutrinos possess trace amount of masses and they are not affected by electromagnetic forces but are affected by gravitational forces. It is an elementary particle and not the sub atomic particle. It exists in three different flavours such as Muon Neutrino, Tau Neutrino and Electron Neutrino.

•

- 79 ) .Consider the following statements with respect to U-235 and U-238:

1. Both were chemically identical but they differ in their physical properties.
2. Isotope separation from non-fissile to fissile is known as enrichment.

3. Enrichment is done by the centripetal process.

Which of the statements given above is/are correct?

- a . 3 only
- b . 1 and 2 only
- c . 2 and 3 only
- d . 1, 2 and 3

- 1 mins 40 s
- Explanation
- Status

- U-235 and U-238 were chemically identical but they differ in their physical properties and the separation of non fissile material from the fissile is known as enrichment of fuel, which can be carried out by using the centrifugal process.

•

• 80 ) .In the context to the Kudankulam Nuclear power plant, the term “Criticality” is sometimes seen in the news, refers to

- a . Balance of neutrons in the system
- b . Uncontrolled chain reaction
- c . Radioactive hazards from the reactor
- d . Reactor functions without Uranium

- 0 mins 10 s
- Explanation
- Status

- Nuclear reactors use uranium fuel rods -- long, slender, zirconium metal tubes containing pellets of fissionable material -- to create energy through fission. Fission is the process of splitting the nuclei of uranium atoms to release neutrons that in turn split more atoms, releasing more neutrons. Criticality means that a reactor is controlling a sustained fission chain reaction, where each fission event releases a sufficient number of neutrons to maintain an ongoing series of reactions.

• 81 ) .Radiation sterilization is another important application of radioisotopes towards health care offered on a commercial basis to the Indian Medical industry. In this context, consider the following statements with respect to Radiation Sterilization:

- 1. It is a heat process which uses Gamma rays for sterilization.
- 2. Pharmaceutical and Bio-medical products can be sterilized.
- 3. Sterility is retained infinitely.
- 4. Flexibility in packing is achieved.

Which of the statements given above is/are correct?

- a . 1 and 2 only

- b . 1, 2 and 4 only
- c . 2, 3 and 4 only
- d . 1, 2, 3 and 4

- 0 mins 12 s
- Explanation
- Status

- There are several chemical and physical methods of sterilization. In the case of radiation sterilization, it is a cold process in which inactivation of microorganisms occurs either through direct ionization of a vital cellular molecule (DNA, key enzyme, etc.) or indirectly through the reaction of the free radicals produced in the cellular fluid. For radiation sterilization one applied ionizing radiation from:

Radioactive isotopes (gamma rays from Co-60 or rarely, from Cs-137).

Particles accelerators (high-energy electrons).

The choice of radiation source for a particular application depends on such requirements as product configuration, minimum dose, max/min dose ratio, economical factors, etc.

•

- 82 ) .The term “Indigenous Gyrotron” is often in news, is related to which one among the following nuclear reactor?

- a . Nuclear Fusion Reactor
- b . Pressurized heavy water reactor
- c . Thorium powered reactor
- d . Light Water reactor

- 0 mins 49 s
- Explanation
- Status

- In order to promote nuclear fusion reactors, India would need Gyrotrons. It is a crucial device used in fusion reactions. Gyrotrons produce very high-energy, high-frequency microwaves which are used for generating the plasma.

•

- 83 ) .Which among the following is considered to be the main goals of Large Hadron Collider (LHC):

1. It is the world’s largest and most powerful particle accelerator which aims to discover the origin of mass.
2. LHC tries to reveal the hidden secret behind composition of Dark matter and Dark energy
3. The underground detectors in LHC is employed to detect the presence of Gravitational waves

4. It also tries to solve the mystery behind the origin of cosmic rays

Which of the statements given above is/are correct?

- a . 1 and 2 only
- b . 1, 2 and 3 only
- c . 2, 3 and 4 only
- d . 1, 2 and 4 only

- 0 mins 6 s
- Explanation
- Status

- The Large Hadron Collider (LHC) is the most powerful particle accelerator ever built. The accelerator sits in a tunnel 100 metres underground at CERN, the European Organization for Nuclear Research, on the Franco-Swiss border near Geneva, Switzerland. The main goals of LHC involves to identify the origin of mass, discover the evidence for supersymmetry, composition of dark matter and dark energy, presence of antimatters to be dominant in the universe rather than having the matters, relation between quark-gluon plasma. It never promotes any underground research activity to detect gravitational waves and to detect the cosmic rays.

•

• 84 ).Consider the following statements regarding G-7

1. All the G7 members are the members of G20
2. The European Union (EU) is also represented within G7
3. All the 7 members are advanced economies as reported by the International Monetary Fund

Which of the statements given above is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 23 s
- Explanation
- Status

• G7

The Group of 7 (G7) is a group consisting of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. The European Union is also represented within the G7. The European Union is also represented within the G7. These countries are the seven major advanced economies as reported by the International Monetary Fund: the G7 countries represent more than 64% of the net global wealth (\$263 trillion). The G7 countries also represent 46% of the global GDP evaluated at market exchange rates and 32% of the global purchasing power parity GDP. The 42nd G7 summit was held in Japan

in May 2016.

Both the G8 and G20 originated from the G7, a seven-nation strong coalition which includes Britain, United States, France, Canada, Japan, Italy, and Germany. The G7 was formed in order to counter the oil embargo imposed by the Arab Nations due to the intervention of the United States and United Kingdom in the Yom Kippur War. The G7 influenced international economic and political decision-making. In 1997, Russia joined the ranks of G7, and the coalition was renamed as the G8. In 1999, the G8 added sixteen other nations, and the coalition was renamed as the G20.

•

- 85 ) .Consider the following statements regarding Chabahar port agreement, which is recently in news

1. It is a trilateral transit agreement signed by India, Iran and Afghanistan
2. It will allow Indian goods to reach Afghanistan through Iran.
3. It is a part of International North South Transport Corridor (INSTC)

Which of the statements given above is/are correct?

- a . 1 and 2 only
- b . 2 and 3 only
- c . 1 and 3 only
- d . 1, 2 and 3

- 0 mins 12 s
- Explanation
- Status

- **Chabahar Port agreement**

In May 2016, India signed a series of twelve memorandums of understanding which centered upon the Port of Chabahar. The trilateral transit agreement signed by India, Iran and Afghanistan allows Indian goods to reach Afghanistan through Iran. It links ports in the western coast of India to the Chabahar port and covers the road and rail links between Chabahar and the Afghan border

The International North–South Transport Corridor is the ship, rail, and road route for moving freight between India, Russia, Iran, Europe and Central Asia. The route primarily involves moving freight from India, Iran, Azerbaijan and Russia via ship, rail and road. The objective of the corridor is to increase trade connectivity between major cities such as Mumbai, Moscow, Tehran, Baku, Bandar Abbas, Astrakhan, Bandar Anzali, etc.

•

- 86 ) .Which one among the following best describes about the “Nisarga-Runa” Technology developed by BARC?

- a . It makes the reactor to operate with the help of plutonium.
- b . It will be used in the nuclear fusion reactor under ITER
- c . Converts Biodegradable solid waste into useful manure and methane.



d . Food irradiation technology to overcome the post harvest losses.

- 0 mins 28 s
- Explanation
- Status

- Nisargaruna plant can process biodegradable waste such as kitchen waste, paper, grass, gobar and dry leaves. It offers Zero garbage and Zero effluent and provides high quality manure and methane gas. Weedfree manure obtained from such waste has high nitrogen contents and acts as an excellent soil conditioner. This plant could be set up for ecofriendly disposal of wet-waste generated in kitchens/canteens of big Hospitals/Hotels/Factories/residential complexes and can avoid health hazards due to dump sites. This technology of biphasic biomethanation has high potential of solving the solid waste management problems of the urban areas and provides organic manure and bio-gas as a fuel.

•

• 87 ) .Which one among the following organizations is **not** administered under Department of Science and Technology?

- a . Survey of India.
- b . Wadia Institute of Himalayan geology
- c . Indian Meteorological Department
- d . National Museum and Natural History

- 1 mins 23 s
- Explanation
- Status

- National Museum and Natural History is an organization that is being administered under Ministry of Environment, Forest and Climate change

•

• 88 ) .Regarding to “KIRAN” scheme, sometimes seen in the news, which one among the following statement is/are **not** correct?

- a . Attaining gender equality in the field of Science and Technology
- b . Promoting scientific temper among the girl children during their school days.
- c . Scholarship for women scientists involved in basic scientific research.
- d . Increasing the number of women researchers in the country.

- 2 mins 2 s
- Explanation
- Status

- Indian's Union Ministry of Science and Technology has announced a very important scheme KIRAN (Knowledge, Involvement, Research, Advancement through Nurturing) for helping lady scientists to have a brighter future in the field. This scheme aims at bring gender equality to the field of science and technology. The objectives of the scheme are as follows. The first goal is to increase the number of lady researchers in the country. Another objective is to provide research grants, especially to those who are female researchers and technologists taking a break in their career due to household or domestic compulsions. The scheme also aims to bring about as far as possible, gender parity in the field of science and technology. Under the scheme, the Union Ministry of Science & Technology will build leadership positions for women.

•

- 89 ) .Consider the following statements with regarding to International Treaty Plant Genetic Resources for Food and Agriculture

1. International Treaty Plant Genetic Resources for Food and Agriculture will work harmony with convention on biological diversity.
2. It establishes the multilateral system of access and benefit sharing to facilitate plant germplasm exchanges and benefit sharing through standard material transfer agreement.

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

- 0 mins 18 s
- Explanation
- Status

- Self explanatory

•

- 90 ) .The World Forestry Congress (WFC) is the largest and most significant gathering of the World's forestry sector and it has been held every six years since 1926 under the auspices of the Food and Agriculture Organization of the United Nations (FAO), organized by government of the host country. Next world forestry congress in 2021 will be conducted in?

- a . India
- b . Italy
- c . Mexico
- d . South Korea

- 0 mins 16 s
- Explanation
- Status

- The World Forestry Congress (WFC) is the largest and most significant gathering of the world's forestry sector and it has been held every six years since 1926 under the auspices of the Food and Agriculture Organization of the United Nations (FAO), organized by the government of the host country. It is a forum for the sharing of knowledge and experience regarding the conservation, management and use of the world's forests, and covers such issues as international dialogue, socio-economic and institutional aspects, and forest policies.

• 91 ) .Which one among the following features of virus makes it to be very difficult to carry out sterilization process against them?

- a . Lack of cell structure
- b . Ultramicroscopic in nature
- c . Contains tough protein coat
- d . Persistence inside the host cells

- 1 mins 32 s
- Explanation
- Status

- There is no explanation for this question.

•

• 92 ) .Which one among the following is an example for contact force?

- 1. Gravitational force
- 2. Frictional force
- 3. Push force
- 4. Strain force

Select the correct answer by using the codes given below:

- a . 1 only
- b . 2 and 4 only
- c . 1, 2 and 3 only
- d . 2, 3 and 4 only

- 0 mins 43 s
- Explanation
- Status

- Gravitational waves were too weak in nature and thus they will not interact with any types of matters in the universe and thus it is not included under the contact forces category.

•

• 93 ).What is Raman Effect?

- a . Change in the direction of light that occurs when a light beam is deflected by an obstacle.
- b . Change in the wavelength of light that occurs when a light beam is deflected by molecules.
- c . Refraction of Light when a light beam is obstructed by a sharp edged opaque body
- d . Reflection of light by a transparent body without changing its wavelength.

- 0 mins 32 s
- Explanation
- Status

- Raman Effect indicates for the change in wavelength exhibited by some of the radiation scattered in a medium. The effect is specific to the molecules which cause it, and so can be used in spectroscopic analysis.

•

• 94 ).Consider the following statements regarding World Health Statistics – 2016 of World Health Organization

1. Switzerland has longest lifespan and Congo has lowest lifespan in the world.
2. Globally, life expectancy increased by 5 years between 2000 and 2015, the fastest increase since the 1960s.
3. African countries have greatest increase in lifespan from 2000 to 2015.
4. World Health Statistics is released in every alternate year for all members of World Health Organization.

Which of the statements given above is/are correct?

- a . 1, 2 and 3 only
- b . 2, 3 and 4 only
- c . 2 and 3 only
- d . 1, 2, 3 and 4

- 0 mins 14 s
- Explanation
- Status

• **WHO**

The World Health Organisation on 19 May 2016 released the World Health Statistics 2016: Monitoring Health for the SDGs.

As per the statistics, life expectancy increased by 5 years since 2000, but major inequalities persist within and among countries.

Global life expectancy for children born in 2015 was 71.4 years (73.8 years for females and 69.1 years for males), while in India it was 68.3 (66.9 for males and 69.9 for females).

**Highlights of World Health Statistics 2016**

With an average lifespan of 86.8 years, women in Japan can expect to live the longest.

Switzerland enjoys the longest average survival for men, at 81.3 years. People in Sierra Leone have the world's lowest life-expectancy for both sexes: 50.8 years for women and 49.3 years for men.

Globally, life expectancy increased by 5 years between 2000 and 2015, the fastest increase since the 1960s.

Those gains reverse declines during the 1990s, when life expectancy fell in Africa because of the AIDS epidemic and in Eastern Europe following the collapse of the Soviet Union.

The increase was greatest in the African Region of WHO where life expectancy increased by 9.4 years to 60 years.

The increase was driven mainly by improvements in child survival, progress in malaria control and expanded access to antiretroviral for treatment of HIV.

The report shows that newborns in 29 countries – all of them high-income -- have an average life expectancy of 80 years or more, while newborns in 22 others – all of them in sub-Saharan Africa -- have life expectancy of less than 60 years.

Healthy life expectancy, a measure of the number of years of good health that a newborn in 2015 can expect, stands at 63.1 years globally (64.6 years for females and 61.5 years for males).

#### **About World Health Statistics**

The World Health Statistics series is WHO's annual compilation of health statistics for its 194 Member States.

The 2016 Statistics focuses on the proposed health and health-related Sustainable Development Goals (SDGs) and associated targets.

They provide a comprehensive overview of the latest annual data in relation to the health related targets in the Sustainable Development Goals (SDGs), illustrating the scale of the challenge.

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- 95 ). Consider the following statements about India's participation in recent ASEAN Summit
  1. In this summit India strongly advocate freedom of navigation in South China Sea.
  2. India has proposed extension of India – Myanmar – Thailand Trilateral High Way to Cambodia, Laos and Vietnam.

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

- 0 mins 14 s
- Explanation
- Status

- Self explanatory.

- 

- 96 ).What is the main reason for adding a sulphur containing compound to the LPG gas?

- a . Facilitates easy detection of leakage
- b . Assists in liquefying hydrocarbons
- c . Reduces the pollutant emission
- d . Minimizes the cost of production

- 0 mins 51 s
- Explanation
- Status

- Methanethiol, which is otherwise known as Methyl Mercaptan. It is an organ sulphur compound. It is a colourless gas with distinctive putrid smell. It facilitates the easy detection of leakage of LPG.

- 

- 97 ).The United Kingdom European Union membership referendum, took place on 23 June, 2016 in the United Kingdom (UK) and Gibraltar to gauge support for the country either remaining a member of, or leaving, the European Union (EU). The referendum resulted in 51.9% of voters voting in favour of leaving the European Union. For the UK to leave the EU it has to invoke an agreement under which of the following treaty?

- a . Maastricht treaty
- b . Rome treaty
- c . Paris treaty
- d . Lisbon treaty

- 1 mins 14 s
- Explanation
- Status

- Triggering Article 50 of the Lisbon Treaty will formally begin the UK's withdrawal from the European Union – but it has never before been used and is completely untested. Article 50 of the Treaty of Lisbon sets out the processes and deadlines that would govern a country leaving the EU – and the UK will be the first member state to use it. Any country wishing to exit the block must enter into negotiations with the rest of the EU about the terms of its departure. This can take up to two years, with the possibility of an extension if the withdrawing state and the European Council mutually consent to a longer negotiation period.

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- 98 ) .Consider the following statements regarding Shanghai Cooperation Organization
  1. The official working languages of the Shanghai Cooperation Organization are Chinese, Russian and Arabic.
  2. The SCO is an observer in the United Nations General Assembly, the European Union, Association of Southeast Asian Nations (ASEAN), the Commonwealth of Independent States and the Organisation of Islamic Cooperation.

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

- 0 mins 19 s
- Explanation
- Status

- Only Chinese and Russian are official languages of SCO.

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- 99 ) .Which one of the following country was suspended from Mercosur membership recently?

- a . Argentina
- b . Brazil
- c . Uruguay
- d . Venezuela

- 0 mins 49 s
- Explanation
- Status

- There is no explanation for this question.

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- 100 ) .Which of the following organ of United Nations got Nobel Peace Prize in 1988?

- a . Security Council
- b . International Court of Justice
- c . Trusteeship Council
- d . Economic and Social Council

- 5 mins 57 s
- Explanation
- Status

- There is no explanation for this question.