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## BASIC SCIENCE AND TECHNOLOGY

1. Consider the following statement about Gaganyaan .
1. GSLV MK III will be used for launch purpose .
  2. CARE Module was tested as a precursor to the Gaganyaan mission

Which of the following statement is are correct .

- a) 1 only
- b) 2 only
- c) 1 and 2 both
- d) Neither of them .

ANS—C ---1 and 2 both

The design and development of GSLV MkIII is based on ISRO's rich experience in handling solid, liquid and cryogenic rocket propulsion technologies.

It is a three stage rocket.:-

I st stage – S-200 --The S200 strap-on motor of GSLV MkIII is an uprated version of S139 solid core motor of PSLV and GSLV MkII.

II nd Stage – L-110 Core stage --The liquid L110 core stage carrying liquid propellants.

III rd Stage –Cryogenic CE-20 and the upper upper C 25 Cryogenic upper stage .

Three successful test of GSLV MKIII has already taken place . Third test of GSLV MKIII was in the mission Chandrayaan 2.

The first experimental flight of GSLV MK III was done Decemebr 2014 .It tested the first two stage of GSLV MK III and carried a passive third stage .It carried with itself CARE module . ( Crew atmosphpheric reentry experiment ) . The weight of the CARE module was around 3700 kg .

The CARE module was released at an altitude of 126 km . It re-enterd the earth atmosphphere and finally landed in Bay of Bengal. The heat shield of the crew module could tolerate temperature over 1700 \* C .

2. Consider the following statements with respect to Formalin used which was in news regarding preserving fish product.

1. Formalin can act as preservative and therefore extend the shelf life of fish
2. Formalin can cause some types of cancer.
3. Formalin use is allowed by FSSAI.

Which of the above statements are correct.

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

ANSWER—A—1 AND 2.

Large number of fish samples collected across the states were found to be contaminated with Formalin . Formalin is a cancer-inducing chemical used illegally to preserve fish.



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Formalin causes irritation in the eyes, throat, skin and stomach. In the long run continued exposure causes harm to the kidneys, liver and can even cause cancers.

Food Safety and Standards Authority of India (FSSAI) officials have been undertaking tests at fish markets and harbours across the State to test for formalin contamination in the fish samples .

Fish industry experts said that formalin or formaldehyde is sprayed on the fish or injected into the fish or the fish is dipped into the solution. This helps keep the fish fresh for a longer time. Usually people who buy fish check the gills for freshness, if it is red it denotes freshness, when formalin is used the gills remain red for longer periods.

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3 . Consider the following statement about Chandrayaan 2 .

1. GSLV MK III was used as the launch vehicle in Chandrayaan 2.
2. Chandrayaan 2 was a composite module consisting of a orbiter and vikram lander .
3. There was hard landing of Vikram lander ,

Which of the following statement are correct .

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

ANSWER-- --- D—ALL THE ABOVE STATEMENT

Chandrayaan -2 mission is a highly complex mission , which represents a significant technological leap compared to the previous missions of ISRO . It comprises of an Orbiter , Lander and Rover to explore the unexplored south pole of the moon . The mission is designed to expand the lunar scientific knowledge through detailed study of topography , seismology , mineral identification and distribution , surface chemical composition , thermo-physical characteristics of top soil and composition of the tenuous lunar atmosphere v, leading to new understanding of the origin and evolution of Moon.

Chandrayaan 2 had GSLV MKIII as the launch vehicle . It successfully launched the Chandrayaan 2 .

The primary objectives of the Chandrayaan-2 lander were to demonstrate the ability to soft-land on the lunar surface and operate a robotic rover on the surface. Scientific goals include orbital studies of lunar topography, mineralogy, elemental abundance, the lunar exosphere, and signatures of hydroxyl and water .

Soft landing means that the Vikram lander was intended to do soft landing on the moon surface .

Chandrayaan 2 was launched in the earths orbits . It was manoeuvred to move from earths orbit towards the moons orbit . It moved finally in the moons orbit . The orbit around the moon was elliptical in the beginning and it was brought slowly near the earth .

Then the Vikram lander separated from the composite Chandrayaan 2 . Vikram lander moved toward the moon surface . Vikram lander landed on the moon surface but at



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higher velocity . Therefore there was hard landing on the moon surface in place of soft landing .

4 . Consider the following statement about RISAT 2 BR 1 Sattelite of ISRO ?

1. It is an optical satellite of ISRO
2. It can take day and night and all weather images of earth .
3. It is placed in low earth orbit by PSLV rocket .

Which of the statements are true/correct .

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

ANSWER—B--

RISAT 2 BR 1 is a radar imaging earth observation satellite .

**Optical Satellite :-**They take picture of earth using reflected light/ radiations from earth.

They become blind at night and during cloudy days. Example-cartosat ,Resoucesat, saral, Meghatropique .

**Radar satellite:-** They emit various kind of electromagnetic radiations which strikes the earth surface and are reflected back . RISAT series of satellite is example radar satellite . RISAT 2 BR 1 is the latest satellite of the RISAT series .

RISAT -2 was purchased from Israel & used for military purpose. RISAT-1 is India's first indigenous radar satellite .

It has application in agriculture monitoring particularly early paddy monitoring during kharif season . It also plays important role in management of natural disasters like flood by taking satellite images . Most of the natural disasters in India are accompanied with heavy rains and cloudy conditions .It can keep eye on the enemy movement and assets both at day and night .

Earth observation satellite could be optical satellite or radar satellite . Generally the earth observation satellites are placed in low earth orbit. Low earth orbit extend upto 2000 km from the earths surface .

5 . The purpose of Indian data relay satellite system proposed by ISRO is

- a) Imaging of the earth surface
- b) Data transmission from Chandrayaan 2 and Mangalyaan
- c) Provide GPS services
- d) Provide continuous communication with low earth orbit satellite



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ANSWER—D

ISRO is planning to launch a new satellite series called Indian Data Relay Satellite System . This satellite system can tracks various Indian satellites in the low earth orbit at all times. There is problem on communication with the satellites in low earth orbits .

Satellite in low earth orbit complete multiple orbit the earth in a day . Therefore it is difficult to continuously monitor and keep contact with these low earth orbit satellites .This satellite system will also be utilized for keeping contact with the Gaganyaan mission .

**Indian Data Relay Satellite System** or **IDRSS** is a planned Indian satellite constellation, similar to Russian Luch satellites, American Tracking and Data Relay Satellite System and European Data Relay System. Planned to initially comprise two satellites in GEO, it is to facilitate relay of information between various Indian spacecrafts, in-flight launch vehicle monitoring and assist Indian Human Spaceflight Programme

## CURRENT AFFAIRS

Q1. With reference to International Criminal Court, consider the following statements:

1. It is the first permanent, treaty based, international criminal court.
2. It has been set up under the Rome statute.
3. It is located in Geneva, Switzerland.

Which of the above statements is / are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer-A

Explanation-The International Criminal Court (ICC), located in Hague, Netherlands is the court of last resort for prosecution of genocide, war crimes, and crimes against humanity. It is the first permanent, treaty based, international criminal court established to help end impunity for the perpetrators of the most serious crimes of concern to the international community. Its founding treaty, the Rome Statute, entered into force on July 1, 2002. The ICC has the jurisdiction to prosecute individuals for the international crimes of genocide, crimes against humanity, and war crimes.

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Q2. Which of the following statements is incorrect about Indian Ocean Commission?

- (a) India is a member of Indian Ocean Commission
- (b) It is an intergovernmental organization institutionalized by the Victorian Agreement
- (c) Its secretariat is located in Mauritius
- (d) None of the above

Answer-A

Explanation-India was recently accepted as an observer in the Indian Ocean Commission (IOC). It is an intergovernmental organization created in 1982. It was institutionalized in 1984 by the Victoria Agreement in Seychelles.

The IOC is composed of five African Indian Ocean nations: Comoros, Madagascar, Mauritius, Réunion (an overseas region of France), and Seychelles.

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Q3. With reference to OPEC +, consider the following statements:



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1. The non-OPEC countries which export crude oil are termed as OPEC plus countries.
2. India is a member of OPEC +.

Which of the above statements is / are correct?

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

Answer-A

Explanation- OPEC + refers to the alliance of crude producers which are not part of OPEC.

OPEC plus countries include Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.

The Organization of the Petroleum Exporting Countries (OPEC) was founded in Baghdad, Iraq, with the signing of an agreement in September 1960 by five countries namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.

It is a permanent, intergovernmental organization.

OPEC's objective is to coordinate and unify petroleum policies among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry.

Q4. Consider the following statements about Additional Tier-1 bonds:

1. They are a type of unsecured, perpetual bonds that banks issue to shore up their core capital base to meet the Basel-III norms.
2. They have lower rates than other bonds.
3. These bonds have no maturity date.

Which of the above statements is / are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer-B

Explanation- Additional Tier-1 bonds are a type of unsecured, perpetual bonds that banks issue to shore up their core capital base to meet the Basel-III norms. These have higher rates than other bonds. These bonds have no maturity date. These bonds are also listed and traded on the exchanges. AT-1 bonds are regulated by RBI.

Q5. Consider the following statements about North East Venture Fund( NEVF):

1. It has been set up by the Ministry of Development of North Eastern Region (M-DoNER).
2. It is the first dedicated venture capital fund for the North Eastern Region

Which of the above statements is/are correct?

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

Answer- C

North East Venture Fund (NEVF) has been set up by North Eastern Development Finance Corporation Limited (NEDFi) in association with the Ministry of Development of North Eastern Region (M-DoNER). It is the first dedicated venture capital fund for the North Eastern Region.



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Its objective is to contribute to the entrepreneurship development of the NER and achieve attractive risk-adjusted returns through long term capital appreciation by way of investments in privately negotiated equity/ equity related investments.

The investment under this scheme ranges from Rs. 25 lakh to Rs.10 crore per venture, which is long term in nature with an investment horizon of 4-5 years.

## ECONOMY

**Q.1.** With respect to Employees Provident Fund (EPF), consider the following statements:

1. The EPF is compulsory to all the organizations which employ more than 20 people.
2. The EPF contribution is compulsory for all the employees irrespective of their monthly salary.

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

**Ans. a.**

**Explanation;**

EPF is a social security scheme aimed at salaried individuals and is run by EPFO, which comes under the labour ministry. Organizations that employ 20 people or more need to offer EPF benefits to their employees. The EPF is not compulsory for all employees. Only those who earn up to Rs 15,000 a month have to contribute 12% of their basic salary plus dearness allowance to EPF. The employer contributes an equal percentage (12%) to the corpus out of which 3.67% goes to the EPF and the rest 8.33% goes towards employees' pension scheme (EPS). For those who earn above the threshold of Rs 15,000, contribution to EPF is optional. The EPF falls under the exempt-exempt and exempt tax (EET) regime. This implies that the annual contribution made by the employee is tax deductible up to Rs 1.5 lakh under Section 80C. The interest earned on it is also exempt. Further, there is no tax on the accumulated amount when it is withdrawn. Under Pradhan Mantri Rozgar Protsahan Yojana scheme, the Government is paying 12 per cent of employer contribution to EPFO in respect of the new employees drawing salary up to Rs 15,000 per month for the first three years of their employment. The scheme has ended on 31st March 2019.

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**Q.2.** With respect to Regional Rural Banks (RRBs), consider the following statements:

1. The RRBs are owned by the Central Government, State Government and Sponsored Bank.
2. There is no obligation of Priority Sector Lending on the RRBs.

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

**Ans. a.**

**Explanation;**

The Regional Rural Banks were set up on the basis of the recommendations of the Narasimham Working Group (1975). The RRBs have been established under the provisions of Regional Rural Banks Act, 1976.

The RRBs are scheduled banks which have been set up to cater to credit and banking requirements of agriculture sector and rural areas with focus on small and marginal farmers, micro & small enterprises, rural artisans and weaker sections of the society. In addition, RRBs also provide lending to micro/small enterprises and small entrepreneurs in rural areas.

The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.

The RRBs are required to follow CRR and SLR norms mandated by RBI. They are also required to maintain Capital to Risk Weighted Assets Ratio (CRAR) of 9%. They provide 75% of the loans to the priority sector.





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Govt. has decided to infuse capital into those RRBs through a scheme, which are unable to maintain the mandatory CRAR of 9%. This scheme was extended to 2019-20 in a phased manner.

The Union Cabinet has decided to extend this scheme by another one more year till 2020-21.

**Q 3. Consider** following statements regarding the various components of Pradhan Mantri GaribKalyan Yojana,

1. Insurance scheme for healthcare workers
2. Cash transfers to poor and vulnerable sections
3. Benefits for the workers employed in organised sector
4. Centre-state coordination in utilisation of existing funds.

Which of the statements given above is/are correct?

- a. only 1 & 2      b. only 2 & 3  
c. only 3 & 4      d. all the above

**Ans. d.**

**Explanation;**

The Union Finance Minister has announced Rs 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Corona Virus. The package uses the existing government welfare channels to provide relief in kind and cash to more than half of India's population. The package is so designed that it benefits the people who are most affected - urban poor and vulnerable rural families. Let us look into the various components of Pradhan Mantri Garib Kalyan Yojana. 1. PM Garib Kalyan Ann Yojana 2. Insurance scheme for healthcare workers 3. Cash transfers to poor and vulnerable sections 4. Benefits for the workers employed in organised sector 5. Centre-state coordination in utilisation of existing funds.

**Q.4. Consider** the following statements regarding Payment Aggregators and Payment Gateway,

1. Payment Aggregators are entities that facilitate e-commerce sites and merchants to accept payment from the customers without the need for merchants to create a separate payment integration system of their own
2. Payment Gateways are entities that provide technology infrastructure to route and facilitate the processing of an online payment transaction without any involvement in the handling of funds

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

**Ans. c**

**Explanation;**

Payments in the online space are facilitated by a number of intermediaries like the payment gateways and payment aggregators. These intermediaries act as the bridge between merchants and customers. Payment Aggregators are entities that facilitate e-commerce sites and merchants to accept payment from the customers without the need for merchants to create a separate payment integration system of their own. They allow payment acceptance via credit/debit cards, netbanking, e-wallets, UPI etc. Example: Paytm, Phonepe, GooglePay etc.

Payment Gateways are entities that provide technology infrastructure to route and facilitate the processing of an online payment transaction without any involvement in the handling of funds Example: Billdesk, CCAvenue, Firstdata etc.



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**Q.5.** With respect to the outbreak of COVID-19, consider the following measures taken by RBI to combat the impact of emerging pandemic,

1. Rescheduling of Payments regarding Term Loans and Working Capital Loans
2. Reduction in Repo rate and widening of Monetary Policy Corridor
3. Measures to enhance liquidity by around Rs 3.74 lakh crores.

Which of the statements given above is/are correct?

- (a) 1 only                      (b) 2 only  
(c) Both 1, 2 and 3      (d) None of these

**Ans. c**

**Explanation;**

The outbreak of COVID-19 has put economic activity and financial markets in India under severe stress. Finance is considered as lifeline of the economy and hence keeping it flowing is of utmost importance. Hence, the RBI has unleashed a form of economic bazooka to mitigate the impact of COVID19. These measures have been announced to revive economic growth and preserve financial stability. The action taken by RBI can be delineated under four categories: 1. Rescheduling of Payments – Term Loans and Working Capital Loans 2.Reduction in Repo rate and widening of Monetary Policy Corridor 3. Measures to enhance liquidity by around Rs 3.74 lakh crores. 4. Deferment of last tranche of Capital Conservation Buffer (CCB) Since the last MPC meeting in February 2020, the RBI has injected liquidity of Rs 2.8 lakh crore (1.4% of GDP) through various instruments. After the recent announcement, RBI's total injection since Feb 2020 works out to be 3.2% of GDP, which is considered to be hugely significant.

## POLITY

1. Consider the following statements about the National Population Register.
  1. The entire NPR exercise will be conducted by the Office of the Registrar General of India (RGI) under the Union Ministry of Statistics.
  2. The first NPR was prepared in 2010 and updation of this data was done (except in Assam and Nagaland) during 2015 by conducting door to door survey.
  3. Fifteen identity particulars of the individual members of the household are sought in the 2010 format.

Which of these statements is correct?

- a. 3 only  
b. 1 & 3 only  
c. 1 & 2 only  
d. All of the above

**Answer – A**

The entire NPR exercise will be conducted by the Office of the Registrar General of India (RGI) under the Union Home Ministry. The first NPR was prepared in 2010 and updation of this data was done (except in Assam and Meghalaya) during 2015 by conducting door to door survey. Fifteen identity particulars of the individual members of the household are sought in the 2010 format. Bihar Assembly passed a unanimous resolution stating that there is no need for a National Register of Citizens in the State and that the implementation of the NPR would be done strictly according to the 2010 format.

**What is NPR?**





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NPR is a register of usual residents of the country. It includes both Indian citizens as well as a foreign citizen. • According to the Citizenship Rules, 2003, a usual resident is a person who has resided (or intends to reside) in a local area for the past 6 months. NPR is considered to be the mother database for “identity purposes”. • The Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003 mandates that particulars of “every family and individual” in the NPR would be used for verification in the National Register of Citizens (NRC)

### What does the updated NPR manual of 2020 say?

Certain new information will be collected like Aadhaar, mobile, voter ID, passport and driving licence, if available with the residents on a voluntarily basis. New format also requires residents to disclose their mother tongue and the places & dates of birth of their parents even if they are not living in the same household at the time or not alive.

2. Which of the following is incorrect about India's present status with regards to the Sustainable Development Goals of the United Nations?
  - a. The World Bank's estimates of extreme poverty — measured as \$1.9/per capita/per day at purchasing power parity of 2011 — show a secular decline in India from 45.9% to 13.4% between 1993 and 2015.
  - b. National Food Security Act (NFSA) that subsidises grains to the tune of more than 90% of its cost to 67% of the population can help India attain the goal of zero hunger before 2030.
  - c. The decadal decline in underweight children from 42.5% in 2005-06 to 35.8% in 2015-16 amounts to less than 1 per cent decline per year.
  - d. None of the above

### Answer – D

US President Donald Trump applauded India's achievements during his speech in Motera stadium in Ahmedabad. The top three Sustainable Development Goals (SDGs) of the United Nations are namely poverty elimination (SDG-1), zero hunger (SDG-2), and good health & well-being (SDG-3) to be attained by 2030.

- The World Bank's estimates of extreme poverty — measured as \$1.9/per capita/per day at purchasing power parity of 2011 — show a secular decline in India from 45.9% to 13.4% between 1993 and 2015.
- If the overall growth process continues as has been the case since, say, 2000 onwards, India may succeed in eliminating extreme poverty by 2030.
- National Food Security Act (NFSA) that subsidises grains to the tune of more than 90% of its cost to 67% of the population can help India attain the goal of zero hunger before 2030
- The real challenge for India, however, is to achieve the third goal of good health and wellbeing by 2030 Poor Health condition in India (as per NFHS- In 2015-16)

3. Consider the following statements about the office of the Chief Information Commissioner.
  1. The Chief Information Commissioner (CIC) shall be appointed by the President on the recommendation of a committee consisting of Prime Minister, Leader of Opposition in the Lok Sabha and the Home Minister.
  2. CIC shall hold office for a term of five years from the date on which he enters upon his office and shall not be eligible for reappointment.



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3. Also, CIC/IC shall not be a MP or MLA, or hold any other office of profit or connected with any political party or carrying on any business or pursuing any profession.

Which of these statements is/are correct?

- a. 1 only
- b. 3 only
- c. 2 & 3 only
- d. All of the above

Answer – C

President appoints Information Commissioner Bimal Julka as CIC. Central Information Commission is presently at a reduced strength of six information commissioners, against the sanctioned strength of 11 (including the CIC)

- The Chief Information Commissioner(CIC) and Information Commissioners(CI) shall be appointed by the President on the recommendation of a committee consisting of the Prime Minister, who shall be the Chairperson of the committee, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister to be nominated by the Prime Minister.
- Section 12(5) of the RTI Act 2005 provides that the CIC and IC shall be persons of eminence in public life with wide knowledge and experience in law, science and technology, social service, management, journalism, mass media or administration and governance.
- Also, CIC/IC shall not be a MP or MLA, or hold any other office of profit or connected with any political party or carrying on any business or pursuing any profession
- Information Commissioner(IC) shall also hold office for a term of five years from the date on which he enters upon his office and shall not be eligible for reappointment of IC. However, IC is eligible for appointment as CIC

4. Which of the following is not true about Central Adoption Resource Authority?
  - a. It is a statutory body of Ministry of Women & Child Development
  - b. It deals with inter-country adoptions according to Hague Convention on Inter-country Adoption, 1993 ratified by India in 2003.
  - c. It is established under Juvenile Justice Act, 2015.
  - d. None of the above

Answer – D

Supreme Court has held that a Hindu adoption is not valid unless the man takes prior consent from his wife and that there is actual ceremony of adoption. These two conditions were mandated in the Hindu Adoptions and Maintenance Act of 1956 .

- Central Adoption Resource Authority (CARA) is statutory body of Ministry of Women & Child Development • It is established under Juvenile Justice Act, 2015.
- It is a nodal body for adoption of Indian children.
- It is mandated to monitor and regulate in-country and inter-country adoptions.
- It deals in orphan, abandoned or surrendered children.
- It deals with inter-country adoptions according to Hague Convention on Inter-country Adoption, 1993 ratified by India in 2003.



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5. **Epidemic Diseases Act, 1897 was introduced by the British to tackle the epidemic of bubonic plague that broke out in the then state of \_\_\_\_\_**
- Bengal
  - Awadh
  - Bombay
  - Travancore

## Answer – C

In a cabinet secretary meeting, it was decided that states and Union Territories should invoke provisions of **Section 2 of the Epidemic Diseases Act, 1897. Health is a State subject**, but by invoking Section 2 of the Epidemic Diseases Act, advisories and directions of the Ministry of Health & Family Welfare will be enforceable.

Epidemic Diseases Act, 1897

- The Epidemic Diseases Act was **introduced by the British** to tackle the epidemic of bubonic plague that broke out in the then state of Bombay.
  - This law aims to provide for the better prevention of the spread of dangerous epidemic diseases. Under the act, temporary provisions or regulations can be made to be observed by the public to tackle or prevent the outbreak of a disease.
  - **Section 2A of the Act** empowers the central government to take steps to prevent the spread of an epidemic. It allows the government to inspect any ship arriving or leaving any port and the power to detain any person intending to sail or arriving in the country.
  - **Section 3** provides penalties for disobeying any regulation or order made under the Act. These are according to section 188 of the Indian Penal Code (Disobedience to order duly promulgated by public servant).
  - **Section 4** gives legal protection to the implementing officers acting under the Act.
  - The Epidemics Diseases Act is routinely enforced across the country for dealing with outbreaks of diseases such as Swine Flu, Dengue.
  - **For Example** in 2009, to tackle the swine flu outbreak in Pune, Section 2 powers were used to open screening centres in civic hospitals across the city, and swine flu was declared a notifiable disease.
6. In the context of the Essential Commodities Act, consider the following statements.
- The list of items under the Act include** drugs, fertilisers, pulses and edible oils, and petroleum and petroleum products.
  - The state government can include new commodities** as and when the need arises, **and take them off the list** once the situation improves.
  - In September 2019, the Centre invoked the ECA Act's provisions to impose stock limits on onions after heavy rains wiped out a quarter of the kharif crop and led to a sustained spike in prices.

Which of these statements is correct?

- 1 only
- 1 & 3 only
- 2 & 3 only



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- d. All of the above

## Answer – B

**The UNION government can include new commodities** as and when the need arises, **and takes them off the list** once the situation improves. Govt has brought masks and hand sanitizers under the Essential Commodities Act during the Covid19 crisis. Under the EC Act, powers of the Central Government have already been delegated to the States by way of orders during 1972 to 1978. The States/UTs, therefore may take action against the offenders.

### What is Essential Commodities Act?

The ECA was enacted way back in 1955.

It has since been used by the Government to regulate the production, supply and distribution of a whole host of commodities it declares 'essential' in order to make them available to consumers at fair prices.

The list of items under the Act include drugs, fertilisers, pulses and edible oils, and petroleum and petroleum products.

The Centre can include new commodities as and when the need arises, and take them off the list once the situation improves.

Under the Act, the government can also fix the maximum retail price (MRP) of any packaged product that it declares an "essential commodity".

### Why the recent Economic Survey said that this act is outdated and must go?

1. In September 2019, the Centre invoked the ECA Act's provisions to impose stock limits on onions after heavy rains wiped out a quarter of the kharif crop and led to a sustained spike in prices.
  2. Although the restrictions on both retail and wholesale traders were meant to prevent hoarding and enhance supply in the market, the Survey showed that there was actually an increase in price volatility and a widening wedge between wholesale and retail prices.
  3. This is due to the fact that ECA act fails to differentiate between hoarding and Storage.
  4. Thus in the long term, the Act disincentivises development of storage infrastructure, thereby leading to increased volatility in prices following production/ consumption shocks — the opposite of what it is intended for.
  5. The report finds that the ECA has been enacted in the year 1955, when the economy was ravaged by famine and food shortages. The government should note that today's scenario is much more different.
- 
7. Consider the following statements regarding the guidelines for declaring a language as a 'Classical language' in the country.
    1. High antiquity of its early texts/recorded history over a period of 1500-2000 years
    2. A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers;



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- 
- 
3. The literary tradition be original and not borrowed from another speech community

Which of these statements are correct?

- 1 & 3 only
- 2 only
- 1 & 2 only
- All of the above

**Answer – D**

Rajya Sabha passes bill to grant the status of Central universities to three deemed Sanskrit universities:

- Rashtriya Sanskrit Sansthan in Delhi
- Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeeth in Delhi
- Rashtriya Sanskrit Vidyapeeth in Tirupati.

Currently there are six languages that enjoy the 'Classical' status in India: Tamil (declared in 2004), Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014). All the Classical Languages are listed in the Eighth Schedule of the Constitution.

The guidelines for declaring a language as 'Classical' are:

- High antiquity of its early texts/recorded history over a period of 1500-2000 years
- A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers;
- The literary tradition be original and not borrowed from another speech community.
- The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

## INTERNATIONAL RELATIONS

- 1 Millennium Dam, recently seen in the news, is in which of the following nations?
  - a. Ghana
  - b. Nigeria
  - c. Ethiopia
  - d. Egypt

**Answer – C**

It was formerly known as the Millennium Dam and sometimes referred to as Hidase Dam. It will be Africa's biggest hydropower project (6.45 GW) when completed as well as the seventh largest in the world. The hydroelectric dam is being built on the world's longest river Nile (north-flowing river in Africa), in the lowlands of Ethiopia. GERD's storage capacity of 74 billion cubic meters of water (Bhakra Dam in India on Sutlej river has maximum capacity of 9 billion cubic meters of water). Ethiopia began construction in 2011 at a cost of \$4 billion and is approximately 70% complete as of Nov 2019. Ethiopia wants to fill up the gigantic reservoir in 6 years. However, the mega dam has caused a row between Egypt and Ethiopia, with Sudan caught in between, which some fear could lead to war, and the US is now helping to mediate.



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2. The British government recently apologized to the 'Windrush generation' in the country. Which of the following is the Windrush generation?
- migrants from the Caribbean Commonwealth who had come to the U.K.
  - soldiers who came back home to UK after the World War 2
  - African slaves working in the UK
  - British who were forced to leave the US after American independence

### Answer – A

The British government apologised for Windrush scandal i.e. its treatment of Britons of Caribbean origin, who were wrongly detained or deported for being illegal immigrants • Windrush generation refers to migrants from the Caribbean Commonwealth who had come to the U.K. at a time when they had the right to remain indefinitely in Britain, but had had their rights questioned under a toughened immigration regime.

The Windrush generation is named after one of the many vessels that ferried some half a million people from the Caribbean islands to the U.K. in the late 1940s.

3. The recent G20 summit was held virtually due to the Covid19 crisis. Which of the following member nations of the G20 hosted this summit?
- Mexico
  - Saudi Arabia
  - Indonesia
  - Argentina

### Answer – B

#### Context –

Saudi Arabia, the current president of the forum, declared that it would convene a virtual summit on the extraordinary threat posed by the virus that has killed thousands across the world. Important value additions: G20. The G20 (or Group of Twenty) is an international forum for the governments and central bank governors from 19 countries and the European Union (EU). It was founded in 1999. Its aim is to discuss policy pertaining to the promotion of international financial stability. The G20 members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Republic of Korea, Turkey, the United Kingdom, the United States and the European Union (EU).

#### PT - HISTORY

1. Which among the following is not a great epic of the Sangam Literature ?
- Silappadikaram
  - Manimekalai
  - Jivaka Cintamani
  - Ettutoggai

Ans: d





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This issue is important in the context of telecast of two major epics of India – Ramayana and Mahabharata on Doordarshan under COVID 19 lockdown. So UPSC can ask you about other epics of India especially from South India.

Explanation:

- The **Eight Anthologies**, known as **Ettuthogai** or "**Eight Collections**" in the literature, is a classical **Tamil** poetic work that forms part of the **Eighteen Greater Texts** (*Pathinenmaelkanakku*) anthology series of the **Sangam Literature**.
- Silapatikaram or Silapaddikaram is the earliest Tamil epic. It is a poem of 5,730 lines, WRITTEN BY Ilango Adigal. It is set in **Poompuhar** a seaport city of the **early Chola** kingdom.
- Manimekalai is a Tamil epic composed by Satanar probably around the 6th century. It is a Buddhist "anti-love" sequel to the ***Silappadikaram***.
- Jivaka Cintamani is an epic of the 10th century CE was written by Thiruthakka Thevar, a **Jain** monk.

## 2. Sardar Vallabh Bhai Patel is often compared with-

- a. Mazzini b. Lenin
- c. Bismarck d. Cavour.

Ans. c.

Recently **Sardar Vallabhbhai Patel's statue**, known as **the Statue of Unity**, was inaugurated in the Narmada district of Gujarat.

Explanation: Bismarck was a German statesman who unified 36 states and established unified Germany. Sardar Patel also unified the 565 princely states to make India a federation by his diplomacy and political intelligency. That is why Sardar Vallabh Bhai Patel is known as Bismarck of India.

## 3. Why did the Quit India Movement fail ?

- a. People did not follow the advice of their leaders.
- b. it was disowned by the Congress.
- c. all the prominent leaders of Congress were arrested and put behind the bar.
- d. it was not possible for the people to follow the directions of the leaders in the face of brutal repression by the government

Ans. C.

Explanation: Any political movement is likely to fail without leadership, and the Quit India movement was no exception. The British moved quickly to imprison the Indian National Congress's leaders. The **Quit India Movement failed** because its leaders did not present a clear plan of action and some supporters began to enact violence against buildings owned by the British government.

Last but not the least, the movement also failed because many political parties like Communists, Muslim League, etc did not participate.

## 4. Mahatma Gandhi was profoundly influenced by-



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- Bernard Shaw.
- Karl Marx.
- Lenin.
- Leo Tolstoy.

Ans. d.

Explanation:

Gandhi ji was influenced by many intellectuals and philosophers like Buddha, Socrates and Mohammed. **Tolstoy's book 'The Kingdom of God is within you'** overwhelmed Gandhi. Ruskin's book 'Unto this Last' had cast a magic spell on Gandhi so much so that he paraphrased the book as 'Sarvodaya' and decided to teach from it.

Similarly, Raychandbhai and Gopal Krishna Gokhale were seen by Gandhi as his teachers.

## 5. Which among the following statements about Jyotiba Phule are correct?

- He belonged to a low caste family from Maharashtra.
- He waged a lifelong crusade against Brahmanical supremacy.
- He pioneered the widow remarriage movement in Maharashtra.
- He worked for the women education.

Code:

- 1 and 3 only.
- 3 and 4 only
- 2 and 3 only.
- All the above.

Ans. d.

*Government of Telangana in an order here on 10 April, 2020, advised people to celebrate **Mahatma Jyotiba Phule Jayanthi on April 11** staying at home due to COVID 19.*

Explanation:

- Jyotirao Govindrao Phule was born in Satara district of Maharashtra in 1827. Jyotirao's family belonged to 'mali' caste and their original title was 'Gorhay'. Malis were considered as an inferior caste by the Brahmins and were shunned socially. Jyotirao's father and uncles served as florists, so the family came to be known as 'Phule'.
- After reading **Thomas Paine's famous book 'The Rights of Man'**, Jyotirao was greatly influenced by his ideas. He believed that enlightenment of the women and lower caste people was the only solution to combat the social evils.
- In 1851, Jyotiba established a girls' school and asked his wife- Savitri bai to teach the girls in the school. Later, he opened two more schools for the girls and an indigenous school for the lower castes, especially for the Mahars and Mangs.
- Jyotiba realised the pathetic conditions of widows and established an ashram for young widows and eventually became advocate of the idea of Widow Remarriage.
  
- He founded the Prarthana Samaj opposing the caste system. Its chiefs were Govind Ranade and RG Bhandarkar.
  
- He established Satyashodhak Samaj on 24 September 1873.



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- He also wrote several books, **including Ghulamgiri**, Tirtha Ratna, Chhatrapati Shivaji, Pakhda of Raja Bhosla and Koda of Kisan.

## GEOGRAPHY

1 Consider the following statements about Dallol Geothermal Field :-

- (i) A place on Earth where there is absolutely no life - not even microbial life.
- (ii) Dallol is a terrestrial hydrothermal system located in the east-African country of Ethiopia.
- (iii) It is known for hot springs.

Choose the correct alternative :-

- (a) only i
- (b) i and ii
- (c) ii and iii
- (d) all are correct

**Answer d**

**Explanation :-**

Scientists recently discovered a place on earth where there is no life - not even microbial forms of life! The hot, hyperacid ponds of Dallol Geothermal Field in Ethiopia are devoid of any form of life, and this finding could help us understand the limits of habitability of life on Earth despite the presence of liquid water. This most inhabitable place in the world with extreme conditions is so hot, dry, and lifeless that the study authors even proposed it as a terrestrial analogue of early Mars. The conditions here are so extreme that even microbes cannot adapt to surviving them over the years. The study carried out on the hot and saline hyperacid ponds of Dallol Geothermal Field was published in the Nature Ecology and Evolution journal.

### **Interesting facts on the Dallol Geothermal Field**

1. Dallol is a terrestrial hydrothermal system located in the east-African country of Ethiopia.
2. The wider Dallol area is one of the hottest and driest places on Earth. Daily temperatures soar over 45 degrees Celsius even in winters.
3. The Dallol area is so acidic that pH scale measurements even reach negative readings at times (a pH scale goes from 0, which means highly acidic, to 14, which means highly alkaline).
4. The Dallol Geothermal Field is known for its weird colours and mineral patterns.
5. The Dallol area spreads over a super-salty, volcanic crater and is constantly releasing toxic gases.
6. Acidic fluid discharges from the Dallol Geothermal Field's hot, saline and hyperacidic springs.
7. The springs in the world's uninhabitable place are constantly boiling with intense hydrothermal activity.
8. Dallol is also one of the lowest land points on Earth. It lies 410 feet below the mean sea level.



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## Why Dallol Geothermal Field has no signs of life

In the recent study, researchers found that the hot and salty acid pools of the Dallol Geothermal Field and the nearby magnesium-filled salt pools have no life whatsoever. This is despite the rich microbial dispersion in the area present due to wind and many human visitors. Earlier studies had shown that certain microorganisms can survive in this kind of an extreme environment caused by multiple factors, but now, scientists have discovered new limits to habitation as per the conditions presented by the Dallol area. However, we should note that earlier findings did show that primitive salt-loving microorganisms can survive in deserts and the saline canyons around hydrothermal sites but not in hyper acid pools or hyper saline pools. They also showed microorganisms cannot survive in the magnesium-rich Black and Yellow lakes of Dallos.

2 What is Kappaphycus alvarezii :-

- (a) It is an invasive species which kills coral.
- (b) It is a variety of coral.
- (c) It is a microscopic organism found in deep oceans of tropical areas.
- (d) It is a submarine flora found in deep oceans of tropical areas.

**Answer a**

**Explanation :-**

Kappaphycus alvarezii is an invasive, which smothers and kills coral reefs. It has spread its wings to coral reef areas in Valai island in the Gulf of Mannar (GoM) and set to invade new coral colonies in the marine national park. It has already invaded Shingle, Kurusadai and Mulli islands in Mandapam cluster of the GoM, the red algae invaded Valai island along Kilakarai coast following its cultivation in south Palk Bay.

3 The last four Wastelands Atlases of India were published in 2000, 2005, 2010 & 2011. The latest atlas was published in 2019. Consider the following statements on that :-

- (i) It was published by the Department of Land Resources and National Remote Sensing Centre. Department of Land Resources in collaboration with the National Remote Sensing Centre (NRSC).
- (ii) The changes in wastelands since 2011-12 up till 2019 have been presented in the Atlas.
- (iii) An overall reduction in the % of wasteland has been observed..

Choose the correct alternative :-

- (a) i and ii



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- (b) i and iii
- (c) ii and iii
- (d) i, ii and iii

**Answer b**

**Explanation :-**

**Wastelands Atlas 2019** is the fifth edition of Wastelands Atlas. It provides a complete geospatial information on wastelands of India that can help in planning various land development programs and schemes. It includes mapping of about 12.08 Mha (Million-hectare meter) so far, in the unmapped area of Jammu & Kashmir. India with 2.4% of total land area of the World is supporting 18% of the World's population. The last four Wastelands Atlases of India 2000, 2005, 2010 & 2011 editions were jointly published by The Department of Land Resources with National Remote Sensing Centre (NRSC), Department of Space .

Agriculture Minister Narendra Singh Tomar recently released the 5th edition of Wastelands Atlas-2019. It was published by the Department of Land Resources and National Remote Sensing Centre. Department of Land Resources in collaboration with the National Remote Sensing Centre (NRSC) prepared the Atlas. The changes in wastelands between 2008-09 and 2015-16 have been presented in the Atlas. The Wastelands Atlas-2019 provides district and state wise distribution of different categories of wastelands area including mapping of about 12.08 Mha hitherto unmapped area of Jammu & Kashmir. The majority of wastelands have been changed into categories of croplands, plantation and industrial areas. A reduction in the wasteland area was observed in the categories of land with dense scrub, marshy land, sandy areas, and degraded pastures. The wastelands have undergone a positive change in the states of Rajasthan, Bihar, Uttar Pradesh, Andhra Pradesh, Mizoram, Madhya Pradesh, Jammu & Kashmir, and West Bengal.

**Wastelands** are a barren and uncultivated land lying unproductive or which is not being utilized to its potential. It includes degraded forests, overgrazed pastures, drought-struck pastures, eroded valleys, hilly slopes, waterlogged marshy lands, barren land, etc.

- 4 Consider the following statements on Ganga Utsav celebrated on 4<sup>th</sup> November, 2019 :-
- (i) It was the 6<sup>th</sup> time to be celebrated which started from November, 2014.
  - (ii) It was organized in all major districts on the bank of river Ganga.
  - (iii) It is celebrated because on this day river Ganga was declared as the national river.

Choose the correct alternative :-

- (a) only i
- (b) only ii



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(c) only iii

(d) all are correct

**Answer c**

**Explanation :-**

**Ganga Utsav:** It is an event celebrated annually on the 4th of November because India's most holy river Ganga was declared as the country's national river on this day in 2008. River Ganga has significant economic, environmental and cultural value in India. It is organised in a bid to create awareness and gather public participation in efforts to clean River Ganga and its tributaries.

Ganga Utsav was organized by The National Mission for Clean Ganga (NMCG) in coordination with Union Jal Shakti Ministry in Major Dhyanchand stadium in New Delhi to mark the 11th anniversary of Ganga being declared as national river. The Director General of NMCG, Rajiv Ranjan Mishra also graced the occasion along with esteemed dignitaries like Gajendra Singh Shekhawat, Indian union minister of Jal Shakti, Rattan Lal Kataria union minister of state in ministry of Jal Shakti, social justice and empowerment.

5 Consider the following statements on **Red Atlas Action Plan Map** :-

- (i) It is related to those species which are highly endangered.
- (ii) It focuses to plan conservation of endangered species in their habitat.
- (iii) It marks out the areas related to such species world over.

Choose the correct alternative :-

(a) i and ii

(b) i and iii

(c) i, ii and iii

(d) none

**Answer d**

**Explanation :-**

**Red Atlas Action Plan Map:** It is a first of its kind ready reckoner map, prepared by Union Ministry of Earth Sciences to aid state government of Tamil Nadu in effective flood mitigation in Chennai which witnessed the worst deluge in 2015.

The over 200-page atlas was prepared by the India Meteorological Department (IMD), National Centre for Coastal Research (NCCR) and National Centre for Medium-Range Weather Forecasting (NCMRWF) in association with TN State Disaster Management Authority (SDMA) and Greater Chennai Corporation. The office of the Principal Scientific Advisor (PSA) to Centre government, IIT-Bombay, IIT Madras and Institute of Remote Sensing of Anna University also participated from the academia.

The atlas is aimed at flood mitigation, preparedness, operations and management aspects. The manual besides showcasing the probable scenarios for different rainfall periods also provides information on corporation wards that are likely to be affected due to flooding, and the areas that may need evacuation in Chennai by taking into account all historical datasets.