

## Answers

1) B

### Training for Augmenting Productivity and Services (TAPAS)

- It is an initiative of National Institute of Social Defence (NISD), Ministry of Social Justice and Empowerment.
- It aims to provide access to lectures by subject experts, study material and more, but in a manner that it supplements the physical classroom without compromising on the quality of teaching.
- The main objective of introducing the course modules is to impart training and enhance the knowledge and skills for the capacity building of the participants.
- It can be taken up by anyone who wishes to enhance his or her knowledge on the topics and there is no fee for joining.
- The five basic courses are on Drug (Substance) Abuse Prevention, Geriatric/Elderly Care, Care and Management of Dementia, Transgender Issues and on comprehensive course on Social Defence Issues.

2) B

### The Jajmani System

- In areas where the use of money had not been introduced, service relationships and exchanges in kind may have existed.
- It is likely that the jajmani system evolved from these service relations.
- In many parts of India the jajmani system defined most of the transactions in the craft sector.
- Jajmani System is a reciprocal arrangement between craft-producing castes and the wider village community, for the supply of goods and services.
- The caste system did not permit the upper castes to practise certain occupations.
- As a result the patrons or Jajman were dependent on purjans (cultivators, craftsmen, barbers, washermen, cobblers, sweepers, etc.) to provide essential goods and services for the village/urban economy.
- In return a fixed payment in kind was assured.
- This could be rent-free land, residence sites, credit facilities, food or even dung!

- Since most upper-caste people owned land, the jajmani system provided them with a stable supply of labour.
- Today this system still holds sway over several parts of the country, though colonialism, competition, better communications and improved civil laws have all transformed it in their own ways.

### **3) B**

#### **Jaipur Blue Pottery**

- The technique travelled from Iran and Turkey to India in the 14th century.
- It was used primarily for souvenirs or decorative tableware such as coasters, vases, trays, plates and doorknobs, its applications have remained limited since the 1850s when it was patronised by the ruling house of Jaipur.
- A century later, the dying craft was revived by the royal family and patrons of art and culture.
- In 2005, the Central Glass and Ceramic Institute of India (CGCII) introduced a new glaze finish.
- It was conferred Geographical Index Status (GIS) in 2008.

#### **Procedure**

- It is one of the few pottery techniques in the world that does not use clay.
- Locally-sourced quartz powder, recycled glass, plant-based gum (katera), and Multani Mitti are ground together and kneaded to make a dough.
- This is then moulded like a flatbread, sun dried, and finished with intricate motifs done with oxide pigments, as an underglaze.
- The glaze is applied as the last step before firing at around 800 degrees.

### **4) A**

#### **Greater Adjutant Stork**

- The greater adjutant is a member of the stork family, Ciconiidae, there are about 20 species in the family.
- Once found across South and Southeast Asia, the Greater Adjutant is one of the most threatened stork species in the world.

- There are only three known breeding grounds, one in Cambodia and two in India i.e. Assam and Bihar.
- They are protected under IUCN Red List: Endangered and Wildlife (Protection) Act 1972: Schedule IV.
- Recently, Bihar has decided to tag greater adjutant storks locally known as 'Garuda' with GPS trackers to monitor their movement as part of efforts to conserve them.

## **5) A**

### **Defence Testing Infrastructure Scheme (DTIS)**

- It aims to give a boost to domestic defence and aerospace manufacturing.
- It has an outlay of Rs 400 crore for creating state of the art testing infrastructure for defence testing sector.
- It envisages to set-up six to eight new test facilities in partnership with private industry.
- This will facilitate indigenous defence production, consequently reduce imports of military equipment and help make the country self-reliant.
- The projects under the Scheme will be provided with up to 75% government funding in the form of 'Grant-in-Aid'.
- The remaining 25% of the project cost will have to be borne by the Special Purpose Vehicle (SPV) whose constituents will be Indian private entities and State Governments.
- The SPVs under the Scheme will be registered under Companies Act 2013 and shall also operate and maintain all assets under the Scheme, in a self-sustainable manner by collecting user charges.

## **6) B**

### **Financial Inclusion Index**

- Financial Inclusion Index is released by RBI once in a year in the month of July.
- It is to capture the extent of financial inclusion across the country.
- It comprises of 3 parameters: Access (35%), Usage (45%), and Quality (20%) .
- It incorporates details of banking, investments, insurance, postal as well as the pension sector in consultation with the government and respective sectoral regulators.
- It has no base year as it reflects the cumulative efforts of various sectors towards financial inclusion in the country.
- Its value ranges from 0 to 100 in which 0 represents financial exclusion and 100 reflects complete financial inclusion.

7) C

#### **Land Use Statistics**

- Union Agricultural Minister in his recent speech in Lok Sabha revealed the land use statistics data for the year 2017-18.
- It highlights the following facts about the agricultural landholdings in the country.
- The national average of geographical area available for agriculture was 55.03 %.
- The States of Haryana (85.03%) and Punjab (84.09%) have a maximum amount of available geographical area under agriculture.
- It was as low as 4.86% in Jammu and Kashmir, 5.06% in Arunachal Pradesh, 39% in Andaman and Nicobar Islands, and 9.09% in Chandigarh.
- Total agricultural land consists of net area sown, current fallows, culturable waste and land under miscellaneous tree crops.
- 2011 census data revealed that there was a decline (7%) in the number of cultivators and an increase (26%) in the number of agricultural labourers between 2001 and 2011.

8) C

#### **Receptor Binding Domain (RBD)**

- It is a short immunogenic fragment from a virus that binds to a specific endogenous receptor sequence to gain entry into host cells.
- RBD is a critical component of the viral spike glycoprotein that is found on corona viruses including SARS-CoV-2, the virus that causes COVID-19.
- The binding of the RBD on the spike domain is a critical step that allows corona viruses to bind to target body receptors (such as ACE2 on respiratory epithelial cells) and enter cells to cause infection.
- The RBD is therefore an important target for neutralizing antibodies, either through engineered vaccination or convalescent plasma of recovered patients.

9) D

#### **EEHV-1 Herpesvirus**

- (EEHV-1) is a type of herpesvirus, which can cause a highly fatal haemorrhagic disease when transmitted to young Asian elephants.
- It has a very high mortality rate in Asian elephants, which kills up to 80% of severely affected individuals.

- The disease can be treated with the rapid application of antiviral drugs, but this has only been effective in around a third of cases.
- It is one of the most deadly viral infections in elephants worldwide but is most commonly found in Asian elephants. EEHV can strike without warning.
- When infected with the virus, elephants usually show symptoms of sudden illness which include reduced appetite, swollen glands on both sides of the face and nasal discharge.
- Unlike the common herpes-simplex viruses, which attacks the skin and lies latent in nerve cells, the elephant virus attacks endothelial cells the cells that line blood vessels, the heart and other organs.

**10) B**

### **National Automobile Scrapage Policy**

It aims to reduce the population of old and defective vehicles, bringing down vehicular air pollutants, improving road and vehicular safety.

#### **Highlights of the policy**

- Old vehicles will have to pass a fitness test before re-registration and as per the policy government commercial vehicles more than 15 years old and private vehicles which are over 20 years old will be scrapped.
- Old vehicles will be tested at authorized Automated Fitness Center and will not be scrapped merely on the basis of age.
- Emission test, braking system, safety components will be tested and the vehicles which fail in the fitness test will be scrapped.
- If the old vehicle passes the test, the owner can continue to use it, but the charges for re-registration will be much steeper.
- The state governments may be advised to offer a road-tax rebate of up to 25% for personal vehicles and up to 15% for commercial vehicles to provide incentive to owners of old vehicles to scrap old and unfit vehicles.
- Vehicle manufacturers will also give a discount of 5% to people who will produce the 'Scrapping Certificate' and registration fees will be waived off on the purchase of a new vehicle.

**11) A**

**UNITE Aware**

- India is currently presiding over UNSC. In its capacity, it has rolled out an initiative in partnership with UN called “UNITE Aware”.
- It is a technological platform to enhance the security of UN Peacekeeping forces.
- It is to ensure that entire peacekeeping operation can be visualized, coordinated and monitored on a real time basis in order to prevent any attack or respond to an attack immediately.
- It is rolled out in four UN Peacekeeping Missions – UNMISS (Sudan), UNFICYP (Cyprus), MINUSMA (Mali) and AMISOM (Somalia)

**12) A**

### **Mines and Minerals (Development and Regulation) Amendment Act, 2021**

- At present, only government agencies are involved in exploration and the pace of exploration is limited by their capacity.
- The amendment acts empower the Central government to notify entities, including private entities, to undertake prospecting operations.
- The Mines and Minerals (Development and Regulation) Act, 1957 empowers the central government to reserve any mine other than coal, lignite, and atomic minerals to be leased through an auction for a particular end-use.
- Particular end-use involves reserving mined ore for a purpose such as iron ore mine for a steel plant. Such mines are called as captive mines.
- The amendment act provides that no mine will be reserved for particular end-use.

**13) A**

### **Water plus cities**

- Under the Swachh Bharat Mission (Urban), the cities of the country are tested on the basis of various cleanliness parameters.
- It has categories of ODF+, ODF++ and Water+.
- The Water Plus certificate is awarded to cities that have met all the ODF Double Plus standards.
- Also, the residual sewage from residential and commercial establishments is released into the environment only after treatment. Reuse of treated wastewater should also be ensured.
- Indore, which has been ranked number one in cleanliness four times in the country, has been declared as the country's first 'water plus city' in the results of Swachh Survekshan, 2021.

**14) C**

**Phagocytic cells**

- Phagocytosis is the process by which a cell uses its plasma membrane to engulf a large particle, giving rise to an internal compartment called the phagosome.
- It is one type of endocytosis, a cell that performs phagocytosis is called a phagocyte.
- Newly discovered phagocytic cells were identified in cauliflower coral and starlet sea anemone.
- In a multicellular organism's immune system, phagocytosis is a major mechanism used to remove pathogens and cell debris. The ingested material is then digested in the phagosome.
- Bacteria, dead tissue cells, and small mineral particles are all examples of objects that may be phagocytized.
- Some protozoa use phagocytosis as means to obtain nutrients.

**15) B**

**Highlights of the IPCC 6th Assessment Report**

- Human's role in climate crisis - Human activity is the cause of climate change and this is an unequivocal fact.
- Global temperatures have already risen by 1.1 degrees Celsius since the 19th century.
- Average global temperatures will continue to rise and could increase by 5.7°C by the end of this century as compared to 1850-1900.
- No region on Earth has escaped the impacts of the climate crisis.
- Extreme Weather Events - Every additional 0.5°C rise in temperature amplifies the intensity and frequency of heat waves, heavy precipitation and droughts.
- The land surface will continue to warm more than the ocean surface.
- Ice free Arctic - The Arctic will continue to warm more than global surface temperature.
- The temperature on the coldest days will increase by three times in the Arctic.
- As a result, the frequency of marine heat waves will continue to increase in the tropical ocean and the Arctic.