



**Anusha Learning**  
Online IAS Academy

- PRELIMS  
2014  
SERIES- A

1/A2014

- What are the significances of a practical approach to sugarcane production known as ‘Sustainable Sugarcane Initiative’?
  1. Seed cost is very low in this compared to the conventional method of cultivation.
  2. Drip irrigation can be practiced very effectively in this
  3. There is no application of chemical/inorganic fertilizers at all in this
  4. The scope for intercropping is more in this compared to the conventional method of cultivation

Select the correct answer using the code given below

- A) 1 and 3 only                      B) 1,2 and 4 only  
C) 2,3 and 4 only                      D) 1,2,3 and 4

## Sustainable Sugarcane Initiative (SSI)

- SSI is a practical approach to sugarcane production based on principles of 'more with less'
- SSI improves the productivity of water, land and labour, all at the same time, while reducing the overall pressure on water resources.
- By practicing SSI, this seed cost can be reduced up to 75%
- Reduction in the plant mortality rate
- Increases in the length and weight of each cane
- It is easy to transport the young seedlings for longer distance
- Intercultural operations can be carried out easily due to wider spacing

- If a wetland of international importance is brought under the “Montreux Record’, what does it imply?
  - A) Changes in ecological character have occurred, are occurring or are likely to occur in the wetland as a result of human interference
  - B) The country in which the wetland is located should enact a law to prohibit any human activity within five kilometers from the edge of the wetland
  - C) The survival of the wetland depends on the cultural practices and traditions of certain communities living in its vicinity and therefore the cultural diversity therein should not be destroyed
  - D) It is given the status of ‘World Heritage Site’.

## Ramsar Wetlands Montreux Record

- The **Montreux Record** is a register of wetland sites on the List of Ramsar wetlands of international importance
- India has 48 sites in Montreux Record (Keoladeo National Park- Rajasthan, Loktak Lake - Manipur)
- **Ramsar Convention** has two fold objectives viz. Conservation and sustainable utilization of wetlands; and stop the encroachment and loss of wetlands. This treaty is not a **legal binding** treaty and is not a part of UN & UNESCO conventions.
- **Ramsar Treaty** : It is named after the city of **Ramsar** in Iran, where the Convention was signed in 1971.
- India signed the treaty in 1982
- UK maximum sites 175, Mexico 142

## Ramsar Sites

- The 10 new Ramsar sites of India announced by the Ministry of Environment, Forest and Climate Change (MoEFCC) includes:
- Nawabganj, Parvati Agra, Saman, Samaspur, Sandi and Sarsai Nawar (Uttar Pradesh)
- Nandur Madhameshwar (Maharashtra)
- Keshopur-Miani, Beas Conservation Reserve and Nangal (Punjab)
- India has 37 Ramsar sites with a surface area of more than 10 lakh hectares

3/A2014

- Which one of the following pairs of islands is separated from each other by the 'Ten Degree Channel'?
  - A) Andaman and Nicobar
  - B) Nicobar and Sumatra
  - C) Maldives and Lakshadweep
  - D) Sumatra and Java



## Channels separating islands

- The Ten Degree Channel is a channel that separates the **Andaman Islands** and **Nicobar Islands** from each other in the Bay of Bengal.
- Minicoy is the **Eight Degree Channel**, which separates Lakshadweep from the independent Maldivian Islands.
- The **Palk Strait** is between the Tamil Nadu state of India and the Jaffna District of the Northern Province of the island nation of Sri Lanka.
- The **Nine Degree Channel** is a channel in the Indian Ocean between the Laccadive Islands of Kalpeni and Suheli Par, and Maliku Atoll. These two subgroups of islands, together with the Amindivi Subgroup, form the Indian Union Territory (UT) of Lakshadweep.

4/A2014

- Consider the following pairs:

**PROGRAMME/PROJECT**

**MINISTRY**

1. Drought-Prone  
Area Programme

Ministry of Agriculture

2. Desert Development  
Programme

Ministry of  
Environment and Forests

3. National Watershed.  
Development Project  
for Rainfed Areas

Ministry of Rural  
Development

Which of the above pairs is/are correctly matched

A) 1 and 2 only

B) 3 only

C) 1,2 and 3

D) None

## Drought Prone Area Programme

- **Drought Prone Areas Programme (DPAP)** is the “earliest area development programme” launched by the Central Government in 1973-74 to tackle the special problems faced by those fragile areas which are constantly affected by severe drought conditions.
- The basic objective of the programme is to minimise the adverse effects of drought on production of crops and livestock and productivity of land, water and human resources ultimately leading to drought proofing of the affected areas. The programme also aims to promote overall economic development and improving the socio-economic conditions of the resource poor and disadvantaged sections inhabiting the programme areas.

5/A2014

- With reference to Bombay Natural History Society (BNHS), consider the following statements:
  1. It is an autonomous organization under the Ministry of Environment and Forests
  2. It strives to conserve nature through action-based research, education and public awareness
  3. It organizes and conducts nature trails and camps for the general public

Which of the statements given above is/are correct?

- A) 1 and 3 only                      B) 2 only  
C) 2 and 3 only                      D) 1,2 and 3

## Bombay Natural History Society

- BNHS was founded in 1883, NGO
- Engaged in conservation and biodiversity research
- Publishes the Journal of the Bombay Natural History Society and quarterly magazine, Hornbill.
- It organizes and conducts nature trails and camps for the general public

6/A2014

- With reference to 'Global Environment Facility', which of the following statements is/are correct/
  - A) It serves as financial mechanism for 'Convention on Biological Diversity' and "United Nations Framework Convention on Climate Change.'
  - B) It undertakes scientific research on environmental issues at global level
  - C) It is an agency under OECD to facilitate the transfer of technology and funds to underdeveloped countries with specific aim to protect their environment
  - D) Both A and B

## Global Environment Facility

- The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems
- GEF provides grants mobilize funds for various projects in different countries.
- GEF even supports small civil societies and community initiatives
- Their focus is cities, energy and food and even gender equality
- Main aim is safeguard the Global Environment

7/A2014

- With reference to technologies for solar power production, consider the following statements:
  1. “photovoltaic” is a technology that generates electricity by direct conversion of light into electricity, while ‘Solar Thermal’ is a technology that utilizes the Sun’s rays to generate heat which is further used in electricity generation process.
  2. Photovoltaics generates Alternating Current (AC) while Solar Thermal generates Direct Current (DC)
  3. India has manufacturing base for Solar Thermal technology, but not for Photovoltaics.

Which of the statements given above is/are correct?

- A) 1 only
- B) 2 and 3 only
- C) 1,2 and 3
- D) None



## Solar Photovoltaic

- **Solar Photovoltaic (PV)** is a **technology** that converts sunlight (solar radiation) into direct current electricity by using semiconductors.
- When the sun hits the semiconductor within the PV cell, electrons are freed and form an **electric current**.
- **Solar PV technology** is generally employed on solar panels.
- PV panels provide green energy.
- Sun in an hour radiates energy enough to cover for human consumption for a year.
- Problem of intermittency as sun shine is differ during day
- Solar energy is DC needs to be converted into AC before use.

8/A2014

- Consider the following languages:

1. Gujarati
2. Kannada
3. Telugu

Which of the above has/have been declared as 'Classical Language/Languages' by the Government?

- A) 1 and 2 only                      B) 3 only  
C) 2 and 3 only                      D) 1,2 and 3

## Classical Languages

- A classical language is a language with an independent literary tradition and a large and ancient body of written literature.
- There are just five languages that have had an overwhelming significance as carriers of culture. They are classical Chinese, Sanskrit, Arabic, Greek, and Latin.
- **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.

## Classical Languages

- Ministry of Culture decides and declare language as classic  
The guidelines for declaring a language as ‘Classical’ are:
- “(i) High antiquity of its early texts/recorded history over a period of 1500-2000 years;
- (ii) A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers;
- (iii) The literary tradition be original and not borrowed from another speech community;
- (iv) 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.”

## Classical Language

- The benefits it provides once a language is notified as a Classical Language:
- “i) Two major annual international awards for scholars of eminence in classical Indian languages
- ii) A Centre of Excellence for studies in Classical Languages is set up
- iii) The University Grants Commission is requested to create, to start with at least in the Central Universities, a certain number of Professional Chairs for the Classical Languages so declared.”

9/A2014

- Consider the following pairs:

1. Dampa Tiger Reserve :: Mizoram
2. Gumti Wildlife Sanctuary. :: Sikkim
3. Saramati Peak :: Nagaland

Which of the above pairs is/are correctly matched?

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                                D) 1,2 and 3

## Dampa Tiger Reserve

- **Dampa Tiger Reserve** or Dampha Tiger Reserve is a tiger reserve of western Mizoram, India. It covers an area of about 500 km<sup>2</sup> (190 sq mi) in the Lushai Hills.
- It was established in 1994 and has an area of 50 square km at an altitude range 2630-3600ft.
- It is the part of Project Tiger.
- It has tropical forests
- one has to walk through the forest if one wishes to sight animals
- In the tiger census of 2018, no tiger was found in this reserve

## Gumti Wildlife sanctuary

- Gumti Wildlife Sanctuary is a Wildlife Sanctuary in South Tripura.
- It covers an area of 390 Square Metres
- It provides habitat for Asian elephant, sambar, water buffalo, deer, Phayre's leaf monkey, serow, wild goat and few migratory birds.



## Saramati Peak

- Saramati is a peak rising above the surrounding peaks at the mountainous border of Nagaland state, India and the Sagaing Region, Burma.
- **Saramati Peak.** Standing at an altitude of 3841 m, Saramati is the highest peak in the state of Nagaland
- Other mountain of Nagaland are, Japfu Peak, Mount Pauna and Pfutsero

10/A2014

- With reference to a conservation organization called ‘Wetlands International’, which of the following statements is/are correct?
  1. It is an intergovernmental organization formed by the countries which are signatories to Ramsar Convention
  2. It works at the field level to develop and mobilize knowledge, and use the practical experience to advocate for better policies

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

## Wetlands International

- **Wetlands International** is a **global** organisation that works to sustain and restore **wetlands** and their resources for people and biodiversity
- It is an NGO      HQ: Netherlands
- Wetlands International's work ranges from research and community-based field projects to advocacy and engagement with governments, corporate and international policy fora and conventions.

11/A2014

- With reference to a grouping of countries known as BRICS, consider the following statements:
  1. The first Summit of BRICS was held in Rio de Janeiro in 2009
  2. South Africa was the last to join the BRICS grouping

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

## BRICS

- **BRICS** is the group composed by the five major emerging countries - Brazil, Russia, India, China and South Africa -, which together represent about 42% of the population, 23% of GDP, 30% of the territory and 18% of the global trade.
- BRICS HQ: Shanghai
- The inaugural BRIC summit took place in Yekaterinburg, Russia on June 16, 2009.
- 2020 BRICS summit 12<sup>th</sup> BRICS Summit was to be held in July 21-23 at St. Petersburg, Russia now stands postponed
- Motto: BRICS Partnership for Global Stability, Shared Security and Innovative Growth

- Consider the following diseases:

1. Diphtheria
2. Chickenpox
3. Smallpox

Which of the above diseases has/have been eradicated in India?

- A) 1 and 2 only                      B) 3 only  
C) 1,2 and 3                         D) None

## Diphtheria

- **Diphtheria** is a serious bacterial infection that affects the mucous membranes of the throat and nose. Although it spreads easily from one person to another, **diphtheria** can be prevented through the use of vaccines.
- Diphtheria is a serious **infection** caused by strains of bacteria called *Corynebacterium diphtheriae* that make toxin (poison).
- It can lead to difficulty breathing, heart failure, paralysis, and even death.
- The **diphtheria** vaccine is usually combined with vaccines for tetanus and whooping cough (pertussis).

# Chickenpox

- Chickenpox is caused by the contagious varicella virus and mainly affects children.
- The disease results in a characteristic skin rash that forms small, itchy blisters, which eventually scab over.
- It usually starts on the chest, back, and face. It then spreads to the rest of the body.↓
- Chickenpox is an airborne disease which spreads easily from one person to the next through the coughs and sneezes of an infected person.



# Smallpox

- **Smallpox** was an infectious disease caused by one of two virus variants, *Variola major* and *Variola minor*.
- The last naturally occurring case was diagnosed in October 1977, and the World Health Organization (WHO) certified the global eradication of the disease in 1980.
- Smallpox is estimated to have killed up to 300 million people in the 20th century

13/A2014

- Which of the following phenomena might have influenced the evolution of organisms?
  1. Continental drift
  2. Glacial cycles

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

## Continental Drift

- **Continental drift** is the theory that the Earth's continents have moved over geologic time relative to each other, thus appearing to have "drifted" across the ocean bed.
- The speculation that continents might have 'drifted' was first put forward by Abraham Ortelius in 1596.
- **Continental drift** also explained why look-alike animal and plant fossils, and similar rock formations, are found on different continents.
- As continents broke apart from Pangaea, species got separated by seas and oceans and speciation occurred.
- This drove evolution by creating new species. Also, as the continents drift, they move into new climates.

## Glacial Cycle

- A **glacial period** (alternatively **glacial** or **glaciation**) is an interval of time (thousands of years) within an ice age that is marked by colder temperatures and **glacier** advances.
- Interglacials, on the other hand, are **periods** of warmer climate between **glacial periods**.
- The **Last Glacial Period** ended about 15,000 years ago.
- An **ice age** is **triggered** when summer temperatures in the northern hemisphere fail to rise above freezing for years.
- One significant outcome of the recent **ice age** was the development of **Homo sapiens**. **Humans** adapted to the harsh climate by developing such tools as the bone needle to sew warm clothing, and used the land bridges to spread to new regions.

## Evolution of Organisms

- **Evolution** is the change in the characteristics of a species over several generations and relies on the process of natural selection.
- **Evolution** relies on there being genetic variation in a population which affects the physical characteristics (phenotype) of an **organism**.
- Both bacteria and **blue algae** are prokaryote organisms, meaning that they do not have a differentiated **nucleus**, and therefore they are more primitive.

14/A2014

- Other than poaching what are the possible reasons for the decline in the population of Ganges River Dolphins?
  1. Construction of dams and barrages on rivers
  2. Increase in the population of crocodiles in rivers
  3. Getting trapped in finishing nets accidentally
  4. Use of synthetic fertilizers and other agricultural chemicals in crop-fields in the vicinity of rivers

Select the correct answer using the CODE given below

- A) 1 and 2 only                      B) 2 and 3 only  
C) 1,3 and 4 only                      D) 1,2,3 and 4

## Declining population of dolphins of River Ganges

- The **Ganges river dolphin** was officially discovered in 1801. **Ganges river dolphins** once lived in the **Ganges-Brahmaputra-Meghna** and **Karnaphuli-Sangu river** systems of Nepal, India, and Bangladesh. The **Ganges river dolphin** can only live in freshwater and is essentially blind.
- Once present in tens of thousands of numbers, the **Ganges river dolphin** has dwindled abysmally to less than 2000 during the last century owing to direct killing, habitat fragmentation by dams and barrages and indiscriminate fishing.
- Thoroughly measure the effects of water-borne pollutants on **dolphins**, the **Brahmaputra River** ecosystem and riverside communities through water quality monitoring.

15/A2014

- The Radcliffe Committee was appointed to
  - A) solve the problem of minorities in India
  - B) give effect to the Independence Bill
  - C) delimit the boundaries between India and Pakistan
  - D) enquire into the riots in East Bengal



## Radcliffe Committee

- The Radcliffe Line was the boundary demarcation line between the Indian and Pakistani portions of the Punjab and Bengal provinces of British India.
- It was named after its architect, Sir Cyril Radcliffe, who, as the joint chairman of the two boundary commissions for the two provinces, received the responsibility to equitably divide 175,000 square miles (450,000 km<sup>2</sup>) of territory with 88 million people
- The demarcation line was published on 17 August 1947 upon the Partition of India.
- Today its western side still serves as the Indo-Pakistani border and the eastern side serves as the India-Bangladesh border.

16/A2014

- Brominated flame retardants are used in many household products like mattresses and upholstery. Why is there some concern about their use?
  1. They are highly resistant to degradation in the environment
  2. They are able to accumulate in humans and animals

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

## Brominated flame retarders

- **Brominated flame retardants (BFRs)** are mixtures of man-made chemicals that are added to a wide variety of products, including for industrial use, to make them less flammable. They are used commonly in plastics, textiles and electrical/electronic equipment.
- **Brominated flame retardant chemicals, banned in the U.S. since 2004.**
- BFRs are **found** in quantifiable levels in wildlife, as well as in humans
- The **critical effects** are on neuro behavioural and kidney and liver are also affected. It has carcinogenic effects too.

- Consider the following:

1. Bats
2. Bears
3. Rodents

The phenomenon of hibernation can be observed in which of the above kinds of animals?

- A) 1 and 2 only                      B) 2 only  
C) 1,2 and 3                         D) Hibernation cannot be observed in any of the above

## Hibernation

- **Hibernation** is a deep sleep that helps them to save energy and survive the winter without eating much. During **hibernation** the animal's body temperature drops, and its heartbeat and its breathing slow down so that it does not use much energy.
- There are several animals that hibernate- **skunks, bees, snakes,** and **groundhogs** to name a few- but **bears** and **bats** are the most well-known. **Bears** enter their dens for hibernation based on changes in the weather.
- **Hibernation** may last days, weeks, or months - depending on the species, ambient temperature, time of year, and the individual's body-condition. Before entering **hibernation**, **animals** need to store enough energy to last through the duration of their dormant period, possibly as **long** as an entire winter.

- Which one of the following is the largest Committee of the Parliament?
  - A) The Committee on Public Accounts
  - B) The Committee on Estimates
  - C) The Committee on Public Undertakings
  - D) The Committee on Petitions

## Parliamentary Committees

- The **Estimates Committee** is the largest parliamentary committee, consisting of 30 members who are elected by the Lok Sabha every year from amongst its members.
- There are 24 department-related **standing committees (DRSCs)**. Each of these committees have 31 members - 21 from Lok Sabha and 10 from Rajya Sabha. These members are to be nominated by the Speaker of Lok Sabha or the Chairman of Rajya Sabha respectively. The term of office of these committees does not exceed one year.
- The **Speaker, Lok Sabha** appoints the **Chairman of the Committee** from amongst the Members of the Committee. The term of office of Members of the Committee is one year; it can, however, be extended in a special case by a motion adopted by the Houses.

19/A2014

- Which of the following adds/add carbon dioxide to the carbon cycle on the planet Earth?
  1. Volcanic action
  2. Respiration
  3. Photosynthesis
  4. Decay of organic matter

Select the correct answer using the code given below.

- A) 1 and 3 only                      B) 2 only  
C) 1,2 and 4 only                      D) 1,2,3 and 4



## Carbon Cycle

- The carbon cycle is nature's way of reusing carbon atoms, which travel from the atmosphere into organisms in the Earth and then back into the atmosphere over and over again.
- Most carbon is stored in rocks and sediments, while the rest is stored in the ocean, atmosphere, and living organisms.
- Carbon Cycle consist 4 steps: Photosynthesis, Decomposition, Respiration and Combustion.
- In the natural carbon cycle, there are two main processes which occur: photosynthesis and metabolism. During photosynthesis, plants use carbon dioxide and produce oxygen. During metabolism oxygen is used and carbon dioxide is a product.

- If you walk through countryside, you are likely to see some birds stalking alongside the cattle to seize the insects disturbed by their movement through grasses. Which of the following is/are such bird/birds?

1. Painted Stork
2. Common Myna
3. Black-necked Crane

Select the correct answer using the code given below:

- |            |           |
|------------|-----------|
| A) 1 and 2 | B) 2 only |
| C) 2 and 3 | D) 3 only |

## Painted Stork

- The painted stork (*Mycteria leucocephala*) is a large wader in the stork family.
- It is found in the wetlands of the plains of tropical Asia south of the Himalayas in the Indian Subcontinent and extending into Southeast Asia.
- Their distinctive pink tertial feathers of the adults give them their name.
- As they wade along they also stir the water with their feet to flush hiding fish. They nest colonially in trees, often along with other water birds.
- They are not migratory.



## Common Myna

- The common Myna is native of Asia.
- An omnivorous open woodland bird with a strong territorial instinct, the common myna has adapted extremely well to urban environments.
- IUCN declared it one of the world's most invasive species
- It poses a threat to biodiversity, agriculture and human interests.



## Black-necked Crane

- The **black-necked crane** (*Grus nigricollis*) is a medium-sized crane in Asia that breeds on the Tibetan Plateau and remote parts of India and Bhutan.
- It is 55 in long with a 7.8 ft wingspan, and it weighs 5.5 kg.
- These birds are legally protected in China, India and Bhutan
- Loss and degradation of habitat are the main threats facing the **black-necked cranes**.



- In medieval India, the designations 'Mahattara' and 'Pattakila' were used for
  - A) military officers
  - B) Village headman
  - C) specialists in Vedic rituals
  - D) Chiefs of craft guilds

## ‘Mahattara’ and ‘Pattakila’

- In medieval India the designations ‘Mahattara’ and ‘Pattakila’ were used for village headmen.
- Patel were also the village headmen.

- Lichens, which are capable of initiating ecological succession even on a bare rock, are actually a symbiotic association of
  - A) algae and bacteria
  - B) algae and fungi
  - C) bacteria and fungi
  - D) fungi and mosses



# Lichens

- A Lichen is a composite organism
- It is a symbiotic relationship of algae and a fungi
- Lichens come in many colors, sizes, and forms and are sometimes plant-like, but lichens are not plants.
- Lichens do not have roots that absorb water and nutrients as plants do,
- But they produce their own nutrition by photosynthesis.
- Common names of Lichens reindeer moss, Iceland moss BUT LICHENS ARE NOT MOSSES
- Lichens occur from sea level to alpine elevation and can grow on almost any surface.



- If you travel through the Himalayas, you are likely to see which of the following plants naturally growing there?

1. Oak
2. Rhododendron
3. Sandalwood

Select the correct answer using the code given below.

- |                 |              |
|-----------------|--------------|
| A) 1 and 2 only | B) 3 only    |
| C) 1 and 3 only | D) 1,2 and 3 |

## Flora of Himalaya

- In the lower forested zone, birch, juniper, blue pines, firs, bamboo and rhododendron grow. Above this zone all **vegetation** are found to be dwarf or shrubs. As the altitude increases, **plant life** is restricted to lichens and mosses.
- Sandalwood plant is a tropical tree. It is native to southern India and Southeast Asia.

- Which of the following are some important pollutants released by steel industry in India?
  1. Oxides of Sulphur
  2. Oxides of Nitrogen
  3. Carbon monoxide
  4. Carbon dioxide

Select the correct answer using the code given below:

A) 1,3 and 4 only  
C) 1, and 4 only

B) 2 and 3 only  
D) 1,2,3 and 4

## Pollutants of Steel Industry

- Producing steel requires the use of large quantities of energy and minerals, as well as vast mining and waste disposal areas. As a result, steel production generates significant amount of air pollutants, solid by-products and residues, as well as waste water sludge
- Steel production has a number of impacts on the environment, including air emissions (CO, SO<sub>x</sub>, NO<sub>x</sub>, PM<sub>2</sub>), wastewater contaminants, hazardous wastes, and solid wastes. The major environmental impacts from integrated steel mills are from coking and iron-making.
- Steel industry is highly raw material intensive industry for making 1 ton of steel it requires 3.5 to 5 tons of raw material.

25/A2014

- Which of the following Kingdoms were associated with the life of the Buddha?

1. Avanti
2. Gandhara
3. Kosala
4. Magadha

Select the correct answer using the code given below:

A) 1,2 and 3

B) 2 and 4

C) 3 and 4 only

D) 1,3 and 4

## Kingdoms Associated with Buddha

- Both the kingdoms of **Gandhara** and **Kosala** were related to Gautama Buddha's life. His mother was a princess from the Kosalan dynasty.
- But the kingdoms of **Avanti** and **Magadha** were not directly related to the life of Buddha.
- Instead **Magadha** is closely related with Mahavira.

- Every year, a monthlong ecologically important campaign/festival is held during which certain communities/tribes plant saplings of fruit-bearing trees. Which of the following are such communities/tribes?
  - A) Bhutia and Lepcha
  - B) Gond and Korku
  - C) Irula and Toda
  - D) Sahariya and Agariya



## Tribes

- Every monsoon, the Gond and Korku tribes of Madhya Pradesh's Betul and Harda districts celebrate Hari Jiroti.
- It is a month-long festival of greenery, during which the tribals plant saplings of fruit-bearing trees
- hari jiroti – the Gond and Korku festival celebrating the beginning of the rains and the new sowing season.
- To combat the twin problems of malnutrition and environmental degradation, adivasis of Harda and Betul districts of Madhya Pradesh have decided to launch 'Operation Guerrilla Green' – a movement to plant large numbers of fruit bearing trees on vacant land, wherever it is available.

- The sales tax you pay while purchasing a toothpaste is a
  - A) tax imposed by the Central Government
  - B) tax imposed by the Central Government but collected by the State Government
  - C) tax imposed by the State Government but collected by the Central Government
  - D) tax imposed and collected by the State Government

## Sales Tax

- **Sales Tax** is a levy on purchase and sale of goods in India and is levied under the authority of both Central Legislation (Central Sales Tax) and State Governments Legislations (**Sales Tax**).
- The government levies **Sales Tax** principally on intra-state sale of goods.
- **GST** is replacement of most of indirect taxes like **sale tax**, excise duty etc

- What does venture capital mean?
  - A) A short-term capital provided to industries
  - B) A long -term startup capital provided to new entrepreneurs
  - C) Funds provided to industries at times of incurring losses
  - D) Funds provided for replacement and renovation of industries

## Venture Capital

- **Venture Capital** is money, technical, or managerial expertise provided by investors to startup firms with long-term growth potential.
- **Venture capital (VC)** is a form of private equity financing that is provided by **venture capital** firms or funds to startups, early-stage, and emerging companies
- Someone with an idea or a new technology often has no other institution to turn to.
- Venture capital fills the void between sources of funds for innovation (chiefly corporations, government bodies, and the entrepreneur's friends and family) and traditional, lower-cost sources of capital available to ongoing concerns.

- The main objective of the 12<sup>th</sup> Five-Year Plan is
  - A) inclusive growth and poverty reduction
  - B) inclusive and sustainable growth
  - C) sustainable and inclusive growth to reduce unemployment
  - D) faster, sustainable and more inclusive growth

## Five Year Plans

- The first five-year plan in India was launched in 1951. India had launched 12th five-year plans in 2012-17.
- The present NDA government has stopped the formation of five-year plans. So the 12th five-year plan would be called the last five-year plan of India. The decades-old Five-Year Plans will make way for a three-year action plan, which will be part of a seven-year strategy paper and a 15-year vision document. The Niti Aayog ,which has replaced the Planning Commission, is launching a three-year action plan from April 1, 2017.
- 12<sup>th</sup> Five Year Plan theme was “Faster, More inclusive and Sustainable Growth”
- The three-year action plan documents only provide a broad roadmap to the government.

- With reference to Balance of Payments, which of the following constitutes/constitute the Current Account?
  1. Balance of Trade
  2. Foreign assets
  3. Balance of invisibles
  4. Special Drawing Rights

Select the correct answer using the code given below.

- A) 1 only                      B) 2 and 3  
C) 1 and 3                     D) 1,2 and 4



## Balance of Payment

- The **balance of payments (BOP)** is a statement of all transactions made between entities in one country and the rest of the world over a defined period of time, such as a year.
- The **balance of payments** tracks international transactions. When funds go into a country, a credit is added to the **balance of payments** (“BOP”). When funds leave a country, a deduction is made.
- For **example**, when a country exports 100 motorcycles worth 5 Cr to another country, a credit is made in the **balance of payments**.

## Current Account

- The **current account** records a nation's transactions with the rest of the world—specifically its net trade in goods and services, its net earnings on cross-border investments, and its net transfer payments—over a defined period of time, such as a year
- The **current account of the balance of payments** comprises the **balance** of trade in goods and services plus net investment incomes from overseas assets and net transfers.
- A **current account surplus** indicates that the value of a country's net foreign assets (i.e. assets less liabilities) grew over the period in question, and a **current account deficit** indicates that it shrank.

## Invisible Receipts

- **Invisibles** refer to payments and receipts resulting from international trade in 'invisible' services rather than 'visible' goods.
- It comprises services, primary income and secondary income.
- **Invisible items** of BOP account are those which are not seen crossing the borders. These are not recorded at ports. All types of services like services of shipping, banking, tourism, investment services and unilateral transfers are **invisible items**.
- Examples of **invisible trade** include consulting, income from foreign investments, shipping services, insurance, banking and **tourism**.

31/A2014

- The terms 'Marginal Standing Facility Rate' and 'Net Demand and Time Liabilities' sometimes appearing in news, are used in relation to
  - A) banking operation
  - B) communication networking
  - C) military strategies
  - D) supply and demand of agricultural products

## ‘Marginal Standing Facility Rate’ and ‘Net Demand and Time Liabilities

- Marginal Standing Facility (MSF) rate refers to the rate at which the scheduled banks can borrow funds overnight from RBI against government securities.
- MSF is a very short term borrowing scheme for scheduled commercial banks. Banks may borrow funds through MSF during severe cash shortage or acute shortage of liquidity.
- Banks often face liquidity shortfalls due to mismatch in their deposit and loan portfolios.
- MSF had been introduced by RBI to reduce volatility in the overnight lending rates in the inter-bank market and to enable smooth monetary transmission in the financial system.

32/A2014

- What is/are the facility/facilities the beneficiaries can get from the services of Business Correspondent (Bank Saathi) in branchless areas?
  1. It enables the beneficiaries to draw their subsidies and social security benefits in their villages
  2. It enables the beneficiaries in the rural areas to make deposits and withdrawals

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

## Bank Saathi

- Banks provide basic services like deposits, withdrawals, and remittances using the services of Business Correspondents (BCs) also known as **Bank Saathi**.
- **Business Correspondents** are retail agents who represent banks and are responsible for delivering banking services at locations other than a bank branch/ATM. BCs support banks in providing its limited range of banking services at affordable cost. Thus, they are pivotal in promoting financial inclusion.
- They help villagers to open bank accounts. The Business Correspondent carries a mobile device and helps villagers in banking transactions. (Deposit money, take money out of savings account, loans etc.).

- In the context of Indian economy, which of the following is/are the purpose/purposes of ‘Statutory Reserve Requirements’?
  1. To enable the Central Bank to control the amount of advances the banks can create
  2. To make the people’s deposits with banks safe and liquid
  3. To prevent the commercial banks from making excessive profits
  4. To force the banks to have sufficient vault cash to meet their day-to-day requirementsSelect the correct answer using the code given below.

A) 1 only

B) 1 and 2 only

C) 2 and 3 only D) 1,2,3 and 4



## Statutory Reserve Requirements

- The **Statutory Reserve Requirement (SRR)** is an instrument to manage liquidity.
- Banking institutions are required to maintain balances in their **Statutory Reserve Accounts (SRA)** equivalent to a certain proportion of their eligible liabilities (EL), this proportion being the SRR rate.
- **Statutory reserves** are state-mandated reserve requirements for insurance companies. By law, insurers must hold a portion of their assets as either cash or readily marketable securities so that they will be able to make good on their claims promptly.
- **Reserve requirements** are a tool used by the central bank to increase or decrease money supply in the economy and influence interest rates.

34/A2014

- Recently, a series of uprisings of people referred to as “Arab Spring” originally started from
  - A) Egypt
  - B) Lebanon
  - C) Syria
  - D) Tunisia

## Arab Spring

- The **Arab Spring** was a series of anti-government protests, **uprisings**, and armed rebellions that spread across much of the **Arab world** in the early 2010s.
- It began in response to oppressive regimes and a low standard of living, starting with protests in Tunisia.
- Protesters demand the release of political prisoners, socio-economic reforms, full access to Yerevan's Freedom Square, and that perpetrators of violence against opposition supporters in the wake of the 2008 presidential election be brought to justice.
- The demonstrations were caused by high unemployment, food inflation, corruption, a lack of political freedoms (such as freedom of speech) and poor living conditions. ... The protests inspired similar actions throughout the **Arab world**, in a chain reaction which became known as the **Arab Spring** movement.
- Arab spring ended December, 2012.

- Consider the following countries:
  1. Denmark
  2. Japan
  3. Russian Federation
  4. United Kingdom
  5. United States of America

Which of the above are the members of the 'Arctic Council'?

- A) 1,2 and 3                      B) 2,3 and 4  
C) 1,4 and 5                      D) 1,3 and 5

## Arctic Council

- The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.
- The Arctic Council is formed of Russia, the United States, Canada, Norway, Denmark, Sweden, Iceland and Finland.
- The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic states, Arctic Indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.

## Arctic Council

- The 1996 Ottawa Declaration established the Arctic Council as a forum for promoting cooperation, coordination, and interaction among the Arctic states, with the involvement of the Arctic Indigenous communities and other Arctic inhabitants on issues such as sustainable development and environmental protection.
- The U.S. is one of eight nations surrounding the Arctic – along with Canada, Denmark, Finland, Iceland, Norway, Russia and Sweden – that are all currently jostling for ownership of the region's frozen seas.
- Norway, Sweden, Finland, Russia, the United States (Alaska), Canada, Denmark (Greenland), and Iceland are the 8 countries containing land in the Arctic Circle.

36/A2014

- Consider the following pairs:

REGION OFTEN IN NEWS

1. Chechnya

2. Darfur

3. Swat Valley

COUNTRY

Russian Federation

Mali

Iraq

Which of the above pairs is/are correctly matched?

- A) 1 only                      B) 2 and 3 only  
C) 1 and 3 only              D) 1,2 and 3

## Chechnya

- Chechnya officially the Chechen Republic is a federal subject (a republic) of the Russian Federation. It is located in the North Caucasus.
- After the dissolution of the Soviet Union in 1991, the Chechen-Ingush ASSR was split into two parts: the Republic of Ingushetia and the Chechen Republic. ... Following the First Chechen War with Russia, Chechnya gained de facto independence as the Chechen Republic of Ichkeria.
- Chechnya is predominantly Muslim. Chechens are overwhelmingly adherents to the Shafi'i Madhhab of Sunni Islam, the republic having converted to Islam between the 16th and the 19th centuries. Most of the population follows either the Shafi'i or the Hanafi, schools of jurisprudence, fiqh.



## Darfur

- The War in Darfur, also nicknamed the Land Cruiser War, is a major armed conflict in the Darfur region of Sudan that began in February 2003
- This started when Sudan Liberation Movement (SLM) and the Justice and Equality Movement (JEM) rebel groups began fighting the government of Sudan.
- Environmental degradation and competition over resources can be understood as principal causes of communal conflict in Darfur, but the ongoing carnage is also a product of a long history of ethnic marginalization and manipulation by Sudan's ruling elites.
- The violence in Darfur is considered a genocide because it is racially based. The Arab Sudanese displaced and murdered the Black Sudanese.

## Swat Valley

- **Swat District** is a district in Malakand Division of Khyber Pakhtunkhwa province in **Pakistan**. **Swat** is renowned for its outstanding natural beauty.
- **Swat Valley** is known as the “mini Switzerland”. Its landscapes are a proof of natural beauty and it was one of the most visited areas and had a major tourism industry. There were events which led to the downfall of the tourism which was one of the major sources of income of the Swats economy.
- The **First Battle of Swat**, also known as **Operation Rah-e-Haq**, was fought between **Pakistan** and the **Tehrik-i-Taliban** in late 2007 over control of the **Swat District of Pakistan**. The battle began on October 25, 2007 and involved the Pakistani Army and TTP-led forces in a fight for control of the **Swat district of Pakistan**.

37/A2014

- With reference to Agni-IV Missile, which of the following statements is/are correct?
  1. It is a surface-to-surface missile
  2. It is fueled by liquid propellant only
  3. It can deliver one-ton nuclear warheads about 7500 km away

Select the correct answer using the code given below.

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                                D) 1,2 and 3

## Agni-IV Missile

- India in 2018 successfully test-fired its nuclear-capable strategic ballistic missile Agni-IV with a strike range of 4000 km as part of a user trial from a test range off Odisha coast
- Supported by a mobile launcher, the surface-to-surface missile was flight tested from launch complex-4 of the Integrated Test Range (ITR) at Dr Abdul Kalam Island, formerly known as Wheeler Island, at about 11.55 hours,

- With reference to two non-conventional energy sources called ‘coalbed methane’ and ‘shale gas’ consider the following statements:
  1. Coalbed methane is the pure methane gas extracted from coal seams, while shale gas is a mixture of propane and butane only that can be extracted from fine -grained sedimentary rocks.
  2. In India, abundant coalbed methane sources exist, but so far no shale gas sources have been found.

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

## Coal bed Methane

- **Coal bed methane (CBM)** is a form of natural gas which can be recovered from coal deposits or coal seams (a coal deposit is a geographical location containing mineable accumulations of coal while a coal seam is entrapment of coal in underlying rock).
- **CBM is formed** during the process of coalification by transformation of plant material into coal. It is generated by either a microbiological or thermal process as a result of increasing heat at greater depth during coal formation.
- The coal seams are often saturated with groundwater at high pressure.
- **Where is coalbed methane found?** Coalbed methane is associated with coal deposits, and is found in coal seams. In the past, the gas was the cause of numerous explosions in underground mines.

## Shale Gas

- Shale gas is occurring within shale.
- **Shale gas** is natural gas trapped within tiny pore spaces in shale formations. It is a hydrocarbon gas mixture. It consists mainly of methane. Other hydrocarbons are natural gas liquids like ethane, propane, and butane, and it also contains carbon dioxide, nitrogen, and hydrogen sulphide.
- **Shale gas**, also known as parent rock gas or schist gas, it is trapped in rocks and schist. The different methods have to be used to extract it. The most well-known of these methods is hydraulic fracturing.
- **India** has identified six basins as areas for shale gas exploration: Cambay (Gujarat), Assam-Arakan (North East), Gondwana (Central India), Krishna Godavari onshore (East Coast), Cauvery onshore, and Indo-Gangetic basins.

39/A2014

- With reference to 'Changpa' community of India, consider the following statements:
  1. They live mainly in the State of Uttarakhand
  2. They rear the Pashmina goats that yield a fine wool
  3. They are kept in the category of Scheduled Tribes.

Which of the statements given above is/are correct?

- A) 1 only  
B) 2 and 3 only  
C) 3 only  
D) 1,2 and 3



## Changpa Community

- The **Changpa** or **Champa** are a semi-nomadic Tibetan people found mainly in the **Changtang** in **Ladakh** and in **Jammu and Kashmir**.
- They reside in inhospitable conditions
- The primary **occupation** for the tribe is rearing of yaks, horses and sheep.
- They rear pashmina sheep. The **Changpa graze their goats at higher and colder places** so that the goats have more and softer hair (fur).
- Changpas live in a big cone shaped tent called **Rebo**. **Lekha** is a place where Changpas keep their goat and sheep.

40/A2014

- In India, cluster bean (Gaur) is traditionally used as a vegetable or animal feed, but recently the cultivation of this has assumed significance. Which one of the following statements is correct in this context?
  - A) The oil extracted from seeds is used in the manufacture of biodegradable plastics
  - B) The gum made from its seeds is used in the extraction of shale gas
  - C) The leaf extract of this plant has the properties of antihistamines
  - D) It is a source of high quality biodiesel

## Gaur Role in Exploration of Oil

- The guar or Lond bean, with the botanical name *Cyamopsis tetragonoloba*, is an annual legume and the source of guar gum
- Guar is a vegetable with absolute low calorie count. By offering just 16 calories in a cup, this vegetable should be on top of the list for those on low carb diet and weight loss diet.
- Guar is an annual legume that grows mainly in arid and semi-arid regions.
- High viscosity Guar Gum products are used as drilling aids in oil well drilling, geological drilling and water drilling. Guar gum is used as a stabilizing, thickening and suspending agent in drilling fluids. As a viscosity enhancer, guar gum helps to balance the viscosity levels of the drilling mud and enable drilling fluids to remove drill waste from deep holes.

- Which of the following have coral reefs?
  1. Andaman and Nicobar Islands
  2. Gulf of Kachchh
  3. Gulf of Mannar
  4. Sunderbans

Select the correct answer using the code given below.

A) 1,2 and 3 only

B) 2 and 4 only

C) 1 and 3 only

D) 1,2,3 and 4

## Coral Reef in India

- Coral reef in India found at
  - Lakshadweep island,
  - Gulf of Kutch,
  - Gulf of Mannar and
  - Andaman Islands,
- Marine species and creatures like Dolphins, Sea-horse, Sea-cucumber, Sea-anemone, Dugong and sea turtle are the few wild animals of coral reefs found in India.
- Pirotan island near Jamnagar along with other 42 islands in Arabian Sea are declared Marine Sanctuary. The core area of 110 km in the Devbhumi Dwarka District of Gujarat is declared as Marine National Park

## Coral Reefs in India

- The Gulf of Mannar is a beautiful place and has high diversity of marine plants and animals. Tuticorin coast and Dhanushkodi near Rameswaram are part of the Gulf of Mannar Biosphere Reserve and famous as coral reef coast of Tamil Nadu. Gulf of Mannar Marine National Park in the Indian Ocean is an important habitat for the Dugong, Green turtle, Clownfish and endemic plant species.
- Andaman Islands are one of the top 4 major coral reefs regions of India, occur around the islands of Havelock, coral island and North Bay. Most of the Andaman and Nicobar Islands are surrounded by fringing reefs and known for their rich marine biodiversity.

- In India, the problem of soil erosion is associated with which of the following?
  1. Terrace cultivation
  2. Deforestation
  3. Tropical climate

Select the correct answer using the code given below

- A) 1 and 2 only                      B) 2 only  
C) 1 and 3 only                      D) 1,2 and 3

## Soil Erosion in India

- The human induced causes of soil erosion include land clearing, improper agricultural practices, deforestation, improper disposal of industrial effluents, over grazing, surface mining, urban sprawl etc.
- Rain, rivers, floods, lakes, and the ocean carry away bits of soil and sand and slowly wash away the sediment. Rainfall produces four types of soil erosion: splash erosion, sheet erosion, rill erosion, and gully erosion.



- The seasonal reversal of winds is the typical characteristic of
  - A) Equatorial climate
  - B) Mediterranean climate
  - C) Monsoon climate
  - D) All of the above climates

## Seasonal Reversal of Wind

- **Seasonal Reversal of wind direction** take place over the Indian subcontinent because in winter there is a high pressure area in north of the Himalayas & there is a low pressure area over the ocean to the south.
- This causes a complete reversal of the **direction of wind** during summer and rise of Southwest monsoon.
- A monsoon is a **seasonal reversal** in wind patterns over a region. The word “monsoon” comes from the Arabic word ‘mausim’, meaning “**season.**” The **seasonal wind shift** is usually accompanied by a dramatic change in precipitation.

44/A2014

- With reference to cultural history of India, the term 'Panchayatan' refers to
  - A) an assembly of village elders
  - B) a religious sect
  - C) a style of temple construction
  - D) an administrative functionary

## ‘Panchayatana’

- Hindu temples are built in the Panchayatana layout: the main shrine is surrounded by four subsidiary shrines.
- The origin of the name are the Sanskrit words ‘Pancha’ (five) and *ayatana* (containing).
- Generally, Hindu temples are built along a west-east axis. So the four subsidiary shrines are at the north-east, south-east, south-west, north-west.

- Consider the following rivers:

1. Barak
2. Lohit
3. Subansiri

Which of the above flows/flow through Arunachal Pradesh?

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                                D) 1, 2 and 3

## Barak

- The **Barak River** is a 900-kilometre-long (560 mi) river flowing through the states of Manipur, Nagaland, Mizoram and Assam in India and into the Bay of Bengal via Bangladesh
- Of the 900 km, 524 km is in India, 31 km on Indo - Bangladesh border and the rest is in Bangladesh.
- The 121 km stretch between Lakhipur and Bhangra has been declared as National Waterway 6 (NW6), in the year 2016
- The Tributaries of Barak: Sonai, the Jiri, Tlawng, the Longai

## Lohit

- The Lohit river is in India and China
- It is tributary to the Brahmaputra River
- This tributary meets Brahmaputra at Sadia

## Subansiri

- The **Subansiri River** is a tributary of the Brahmaputra River in the Indian states of Assam and Arunachal Pradesh, and the Tibet Autonomous Region of China.
- One dam is under construction on Subansiri River
- Subansiri or Gold River is the biggest tributary of the Upper Brahmaputra
- Suansiri river at Daporijo is best for white water Rafting
- Recently Daporijo Bridge over Subansiri river was completed by the Border Roads Organisation (BRO), so as to open up this strategic line of communication in Arunachal Pradesh.



46/A2014

- Consider the following pairs:

WETLANDS

1. Harike wetlands
2. Keladeo Ghana
3. Kolleru Lake

CONFLUENCE OF RIVERS

- Beas and Satluj
- Banas and Chambal
- Musi and Krishna

Which of the above pairs is/are correctly matched

- A) 1 only                      B) 2 and 3 only  
C) 1 and 3 only              D) 1,2 and 3

## Harirke wetlands

- Harirke Wetland also known as "Hari-ke-Pattan", with the Harirke Lake in the deeper part of it, is the largest wetland in northern India in the border of Tarn Taran Sahib district and Ferozepur district of Punjab.
- It is formed at the confluence of the Beas and Sutlej rivers
- The wetland and the lake were formed by constructing the headworks across the Sutlej river in 1953.
- The biodiversity is rich. The wetland helps in hydrological balance in the catchment area.
- There is migratory fauna of waterfowls and many globally threatened species.
- Since 1990 a Ramsar Site

## Keladeo Ghana Wetland

- It was declared a protected sanctuary in 1971.
- It is named after a **Keoladeo**(Shiva) temple within its boundaries.
- It is also a World Heritage Site.
- **Keoladeo Ghana National Park** is a man-made and man-managed **wetland** and one of the national parks of India.
- The 29 km<sup>2</sup> reserve is locally known as Ghana, and is a mosaic of dry grasslands, woodlands, woodland swamps and **wetlands**
- **keoladeo ghana national park**. Situated at the confluence of the **Gambhir** and **Banganga** rivers in the **Bharatpur** district of **Rajasthan**

## Kolleru Lake Wetland

- **Kolleru Lake** is one of the largest freshwater lakes in India located in state of Andhra Pradesh and forms the largest shallow freshwater lake in Asia, 15 kms away from the Eluru and 65 km from Rajamahendravaram
- Kolleru is located between Krishna and Godavari deltas.
- Many birds migrate here in winter, such as Siberian crane , ibis, and painted storks. The lake was an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot billed pelican (*Pelecanus philippensis*). The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972, and designated a wetland of international importance in November 2002 under the international Ramsar Convention The wildlife sanctuary covers an area of 308 km<sup>2</sup>.

- Which one of the following pairs does not form part of the six systems of Indian Philosophy?
  - A) Mimamsa and Vedanta
  - B) Nyaya and Vaisheshiksha
  - C) lokayata and Kapalika
  - D) Sankhya and Yoga

## Six Systems of Hindu Philosophy

- Hindu philosophy refers to philosophies, world views and teachings that emerged in ancient India.
- These include six systems (shad-darśana) -  
Sankhya,  
Yoga,  
Nyaya,  
Vaisheshika,  
Mimamsa and  
Vedanta
- In Indian tradition, the word used for philosophy is Darshana.
- **Hindus** believe in the doctrines of samsara (the continuous cycle of life, death, and reincarnation) and karma (the universal law of cause and effect). One of the key thoughts of **Hinduism** is “atman,” or the belief in soul. This **philosophy** holds that living creatures have a soul, and they're all part of the supreme soul.

- Consider the following pairs:

HILLS

REGION

1. Cardamom Hills

:: Coromandel Coast

2. Kaimur Hills

:: Konkan Coast

3. Mahadeo Hills

:: Central India

4. Mikir Hills

:: North-East India

Which of the above pairs are correctly matched?

A) 1 and 2

B) 2 and 3

C) 3 and 4

D) 2 and 4

## Cardamom Hills

- The **Cardamom Hills** or Yela Mala are mountain range of southern India and part of the southern Western Ghats located in southeast Kerala and southwest Tamil Nadu.
- Cardamom grown extensively on the hill. Pepper and coffee are also grown
- Cardamom Hills are UNESCO World Heritage Sites.



## Kaimur Hills

- **Kaimur Range** is the eastern portion of the Vindhya Range, about 483 kilometres long, extending from around Katangi in Jabalpur to Sasaram in Rohtas district of Bihar.
- The range never rises more than a few hundred metres above the surrounding plains and has a maximum width of around 80 km.
- This forms the watershed or divide for two of the major rivers of peninsular India, the Son on the south and Tamsa on the north.
- Many waterfalls are there
- Prehistoric rock paintings have been discovered in the kaimur hills.

## Mahadeo Hills

- The **Mahadeo Hills** are a range of hills in Madhya Pradesh state of central India. The hills are situated in the northern section of the Satpura Range.
- Mahadeo Hills, sandstone hills located in the northern part of the **Satpura Range**, in southern **Madhya Pradesh** state, central India.
- Dhupgarh is the highest peak of Mahadeo

## Mikir Hills

- Mikir Hills are a group of hills located to the south of the Kaziranga National , Park Assam.
- Mikir hills are oldest landform in Assam.
- It is pear shaped and has an area of about 7000 sq.km.
- It's highest peak is Dambuchko.
- It is part of Karbi-Plateau

- Which one of the following Schedules of the Constitution of India contains provisions regarding anti-defection?
  - A) Second Schedule
  - B) Fifth Schedule
  - C) Eighth Schedule
  - D) Tenth Schedule

# Schedules of the Constitution

Schedules		Schedules	
ONE	Lists states and territories	SEVEN	Union List, State List
TWO	Salaries of President C&AG	EIGHT	The Languages
THREE	Oaths	NINE	Validation of Acts Regulations
FOUR	Allocation of seats in Rajya Sabha	TEN	Anti-defection Laws for MPs and MLAs
FIVE	Scheduled Areas &ST	ELEVAN	Pnchayat Raj
SIX	Tribal Areas in Assam, Meghalaya, Tripura and Mizoram	TWELVE	Municipalities

50/A2014

- The most important strategy for the conservation of biodiversity together with traditional human life is the establishment of
  - A) biosphere reserves
  - B) botanical gardens
  - C) national parks
  - D) wildlife sanctuaries

51/A2014

- Turkey is located between
  - A) Black Sea and Caspian Sea
  - B) Black Sea and Mediterranean Sea
  - C) Gulf of Suez and Mediterranean Sea
  - D) Gulf of Aqaba and Dead Sea

## Turkey

- Turkey is located between Black sea and Mediterranean Sea.
- Turkey occupies a unique geographic position, lying partly in Asia and partly in Europe.
- Turkey is surrounded by sea on three sides. The Mediterranean in the south, the Aegean in the west, and the Black Sea in the north. The Marmara Sea, in the northwest, includes the Istanbul and Dardanelles Straits and is a territorial water of Turkey.
- It's neighbour to the northwest is Bulgaria; Greece to the west; Armenia, Azerbaijan and Iran to the east; Georgia to the northeast; Syria to the south; and Iraq to the southeast.



52/A2014

- What is the correct sequence of occurrence of the following cities in South-East Asia as one proceeds from south to north?

1. Bangkok
2. Hanoi
3. Jakarta
4. Singapore

Select the correct answer using the code given below.

- |            |            |
|------------|------------|
| A) 4-2-1-3 | B) 3-2-4-1 |
| C) 3-4-1-2 | D) 4-3-2-1 |

## South East Asia

- **Southeast Asia** is composed of eleven countries of impressive diversity in religion, culture and history: Brunei, Burma (Myanmar), Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

- The scientific view is that the increase in global temperature should not exceed 2 degree Centigrade above pre-industrial level. If the global temperature increases beyond 3 degree centigrade above the pre-industrial level, what can be its possible impact/impacts on the world?
  1. Terrestrial biosphere tends toward a net carbon source
  2. Widespread coral mortality will occur
  3. All the global wetlands will permanently disappear
  4. Cultivation of cereals will not be possible anywhere in the world

Select the correct answer using the code given below

- A) 1 only                      B) 1 and 2 only  
C) 2,3 and 4 only            D) 1,2,3 and 4

## Global Warming Effects

- Ongoing effects include rising sea levels due to thermal expansion and melting of glaciers and ice sheets, and warming of the ocean surface, leading to increased temperature stratification. Other possible effects include large-scale changes in ocean circulation.
- Changes in food webs
- With increase in temperature will led to the emergence of large-scale environmental hazards to human health, such as extreme weather, ozone depletion, increased danger of wildland fires, loss of biodiversity, stresses to food-producing systems and the **global** spread of infectious diseases.

54/A2014

- The national motto of India, 'Satyameva Jayate' inscribed below the Emblem of India is taken from
  - A) Katha Upanishad
  - B) Chandogya Upanishad
  - C) Aitareya Upanishad
  - D) Mundaka Upanishad

## 'Satyameva Jayate'

- Satyamev Jayate means Truth alone triumphs. It is a mantra from the ancient Indian scripture **Mundaka Upanishad**. Upon independence of India, it was adopted as the national motto of India. It is inscribed in script at the base of the national emblem.
- The slogan Satyamev Jayate was popularised and brought into the national lexicon by **Pandit Madan Mohan Malaviya** in 1918 when serving his second of four terms as President of the Indian National Congress.
- “**Truth alone triumphs**” is the literal meaning of the above slogan. It has not only been adopted as the national motto of India but is also inscribed in script at the base of our national emblem. This slogan awakened the feeling of patriotism in the youth of India during those days.

55/A2014

- In the Constitution of India, promotion of international peace and security is included in
  - A) Preamble to the Constitution
  - B) Directive Principles of State Policy
  - C) Fundamental Duties
  - D) Ninth Schedule

## Directive Principles of India

- Directive Principles are classified under the following categories: Gandhian, economic and socialistic, political and administrative, justice and legal, environmental, protection of monuments and peace and security.
- Directive principles of the State Policy indicate the path
- Article 51  
Promote international peace and security and maintain just and honourable relations between nations  
Foster respect for international law and treaty obligations



56/A2014

- What are the benefits of implementing the ‘Integrated Watershed Development Programme’?
  1. Prevention of soil runoff
  2. Linking the country’s perennial rivers with seasonal rivers
  3. Rainwater harvesting and recharge of groundwater table
  4. Regeneration of natural vegetation

Select the correct answer using the code given below.

A) 1 and 2 only

B) 2,3 and 4 only

C) 1,3 and 4 only

D) 1,2 and 3 and 4

## ‘Integrated Watershed Development Programme’

- **Integrated Watershed Management Programme (IWMP)** is implemented by Department of Land Resources of Ministry of Rural Development. The main objective of IWMP is to restore ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water.
- **Watershed** is a geo-hydrological unit of an area draining to a common outlet point. ... By capturing the Water Resources Management and improving the management of soil and vegetation, **Watershed Development** aims to create conditions conducive to higher agricultural productivity while conserving natural resources.

## Watershed Management

- **Watershed management** serves to integrate planning for land and water; it takes into account both ground and surface water flow, recognizing and planning for the interaction of water, plants, animals and human land use found within the physical boundaries of a **watershed**.
- **Core principles of Watershed management** is continuous and needs a multi disciplinary approach.
- A **watershed management framework** supports partnering, using sound science, taking well-planned actions and aliening results.

57/A2014

- Which of the following are associated with 'Planning in India?'
  1. The Finance Commission
  2. The National Development Council
  3. The Union Ministry of Rural Development
  4. The Union Ministry of Urban Development
  5. The Parliament

Select the correct answer using the code given below

A) 1,2 and 5 only  
C) 2, and 5 only

B) 1,3 and 4 only  
D) 1,2,3,4 and 5

## The National Development Council

- **National Development Council (NDC)** is an executive body established by the Government of India in August 1952, which is neither a constitutional nor a statutory body. It is the apex body to take decisions on matters related to approval of five year plans of the country.
- The **National Development Council (NDC)** or Rashtriya Vikas Parishad is the apex body for decision creating and deliberations on development matters in India,
- The first meeting was chaired by Prime Minister, **Jawaharlal Nehru** on 8-9 November 1952.
- Prime minister is the ex-officio chairman of the NDC. The **secretary** of the Planning Commission is also the **secretary** of the NDC.

58/A2014

- Which of the following is/are the function/functions of the Cabinet Secretariat?
  1. Preparation of agenda for Cabinet Meetings
  2. Secretarial assistance to Cabinet Committees
  3. Allocation of Financial resources to the Ministries

Select the correct answer using the code given below

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 2 only                              D) 1,2 and 3

## Cabinet Secretariat

- The **Cabinet Secretariat** is responsible for the administration of the Government of India (Transaction of Business) Rules, 1961 and the Government of India (Allocation of Business) Rules 1961, facilitating smooth transaction of business in Ministries/ Departments of the Government.
- The **Cabinet Secretariat** functions directly under the Prime Minister.
- The administrative head of the **Secretariat** is the **Cabinet Secretary** who is also the ex-officio Chairman of the Civil Services Board.
- The **Cabinet Secretary** is the senior-most cadre post of the **Indian Administrative Service**, ranking eleventh on the **Indian** order of precedence.

59/A2014

- Consider the following statements:

A Constitutional Government is one which

1. places effective restrictions on individual liberty in the interest of State Authority
2. places effective restrictions on the Authority of the State in the interest of individual liberty

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



60/A2014

- Which of the following are the discretionary powers given to the Governor of a State?

1. Sending a report to the President of India for imposing the President's Rule
2. Appointing the Ministers
3. Reserving certain bills passed by the State Legislature for consideration of the President of India
4. Making the rules to conduct the business of the State Government

Select the correct answer using the code given below.

- A) 1 and 2 only                      B) 1 and 3 only  
C) 2,3 and 4 only                      D) 1,2,3 and 4

## Discretionary powers given to the Governor of a State

- Governor has some discretionary powers.
- When no party gets a clear majority, the **governor** has **discretion** to choose a candidate for chief minister who will put together a majority coalition as soon as possible.
- He can impose president's rule.
- He submits reports on his own to the president or on the direction of the president regarding the affairs of the state.
- He can withhold his assent to a bill and send it to the president for his approval.
- During emergency rule as per Article 353 , he can override the advice of the council of ministers if specifically permitted by the president.

61/A2014

- If the interest rate is decreased in an economy, it will
  - A) decrease the consumption expenditure in the economy
  - B) increase the tax collection of the Government
  - C) increase the investment expenditure in the economy
  - D) increase the total savings in the economy

## Interest Rate effect on Economy

- Higher interest rates increase the cost of borrowing.
- Reduces disposable income
- Therefore reduces consumer spending
- Less consumer spending will effect on demand which will also be reduced
- Less demand will force producers to reduce production therefore reduction in investments
- Less production means less GDP
- Less GDP means slower economic growth
- Lowering of interest rates will have opposite sequence of events.

62/A2014

- Consider the following statements:
  1. The President shall make rules for the more convenient transaction of the business of the Government of India, and for the allocation among Ministers of the said business
  2. All executive actions of the Government of India shall be expressed to be taken in the name of the Prime Minister

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

## Powers of President of India

- The primary duty of the president is to preserve, protect and defend the constitution and the law of India per Article 60. The president appoints the Chief Justice of India and other judges on the advice of the chief justice.
- Under the Constitution of India, the head of the Executive is the President. All executive power is vested in him and all executive actions are taken in his name.
- The president of India is the head of state and the commander-in-chief of the Indian Armed Forces whilst the elected prime minister acts as the head of the executive, and is responsible for running the Union government.

63/A2014

- Consider the following statements regarding a No-Confidence Motion in India:
  1. There is no mention of a No-Confidence Motion in the Constitution of India
  2. A Motion of NO-Confidence can be introduced in the Lok Sabha only

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

## No Confidence Motion

- It can be moved only in the Lok Sabha.
- If the government has to demonstrate its strength on the floor of the House, it can have a motion of confidence .
- However, the opposition parties (or any member) can move a motion expressing want of confidence (no confidence) in the Council of Ministers.
- The procedure is laid down under Rule 198 of the rules of procedure and conduct of business of the LS.
- A no-confidence motion need not set out any grounds on which it is based.



## No Confidence Motion

- The Speaker's permission is required first; and the motion has to be supported by at least 50 MPs.
- The Speaker can refuse to admit the motion
- Voting:
  1. Voice vote: In a voice vote, the legislators respond orally.
  2. Division vote: In case of a division vote, voting is done using electronic gadgets, slips or in a ballot box.
- Following the vote, the person who has the majority will be allowed to form the government. In case there is a tie, the speaker can cast his vote.
- So far, 27 no-confidence motions have been moved in Lok Sabha since Independence.

64/A2014

- With reference to Neem tree, consider the following statements:
  1. Neem oil can be used as a pesticide to control the proliferation of some species of insects and mites
  2. Neem seeds are used in the manufacture of biofuels and hospital detergents
  3. Neem oil has applications in pharmaceutical industry.

Which of the statements given above is/are correct?

- A) 1 and 2 only                      B) 3 only  
C) 1 and 3 only                      D) 1,2 and 3

## Neem Tree

- **Neem oil** acts as both a pesticide and a fungicide.
- It works on arthropod pests, including tomato hornworms, corn earworm, aphids and whiteflies.
- In addition, **neem oil** also controls common fungi that grow on vegetable plants, including: Mildews.
- Neem oil kills or repels many harmful insects and mites, including **aphids**, **whiteflies**, snails, nematodes, **mealybugs**, cabbage worms, gnats, moths, cockroaches, flies, termites, mosquitoes, and scale.
- It works as insect repellent.
- **Biodiesel** produced using **neem oil** could reduce smoke and Carbon monoxide emissions
- It has anti-fungal properties and can be used to get rid of **hair** and **skin** disorders as well as **dandruff** and **head lice**.

65/A2014

- Which one of the following is the process involved in photosynthesis?
  - A) Potential energy is released to form free energy
  - B) Free energy is converted into potential energy and stored
  - C) Food is oxidized to release carbon dioxide and water
  - D) Oxygen is taken, and carbon dioxide and water vapour are given out

# Photosynthesis

- **Photosynthesis**, the process by which green plants and certain other organisms transform light energy into chemical energy.
- During **photosynthesis** in green plants, light energy is captured and used to convert water, carbon dioxide, and minerals into oxygen and energy-rich organic compounds.
- It is an endothermic (takes in heat) chemical process that uses sunlight to turn carbon dioxide into sugars that the cell can use as energy.

66/A2014

- In addition to fingerprint scanning, which of the following can be used in the biometric identification of a person?
  1. Iris scanning
  2. Retinal scanning
  3. Voice recognition

Select the correct answer using the code given below.

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                                D) 1, 2 and 3

## Biometric Identification

- **Biometric identification** consists of determining the **identity** of a person.
- The aim is to capture an item of **biometric** data from this person.
- It can be a photo of their face, a record of their voice, or an image of their fingerprint.
- **Iris recognition** is an automated method of biometric identification that uses mathematical pattern-recognition techniques on video images of one or both of the eyes.
- Biometric **iris recognition scanners** work by illuminating the **iris** with invisible infrared light to pick up unique patterns that are not visible to the naked eye.

67/A2014

- Which of the following statements is/are correct regarding vegetative propagation of plants?
  1. Vegetative propagation produces clonal population
  2. Vegetative propagation helps in eliminating the virus
  3. Vegetative propagation can be practiced most of the year

Select the correct answer using the code given below.

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                              D) 1,2 and 3



## Vegetative Propagation in Plants

- A form of ASEXUAL reproduction in plants, in which multicellular structures become detached from the parent plant and develop into new individuals that are genetically identical to the parent plant.
- The most common modified stems, leaves and roots that allow for vegetative propagation are:
  - Runners.
  - Tubers.
  - Suckers.
  - Cutting
  - Bulbs.
  - Corms.
  - Plantlets

- Which of the following pairs is/are correctly matched?

## SPACECRAFT

1. Cassini-Huygens

Earth

2. Messenger.

Mercury

3. Voyager 1 and 2.

## PURPOSE

:: Orbiting the Venus and transmitting data to the

:: Mapping and investigating the

:: Exploring the outer solar system

Select the correct answer using the code given below

A) 1 only

B) 2 and 3 only

C) 1 and 3 only

D) 1,2 and 3

## Cassini-Huygens

- A joint endeavor of NASA, the European Space Agency, or ESA, and the Italian Space Agency, Cassini launched in 1997 along with ESA's Huygens probe.
- The spacecraft contributed to studies of Jupiter for six months in 2000 before reaching its destination, Saturn, in 2004 and starting a string of flybys of Saturn's moons.
- Among its prime **objectives** were to look for more moons, to figure out what caused Saturn's rings and the colours in the rings, and understanding more about the planet's moons.
- Cassini's long mission enabled us to observe weather and seasonal changes on another planet

## Messenger.

- **MESSENGER** (Mercury Surface, Space Environment, Geochemistry and Ranging) was the seventh Discovery-class mission, and the first spacecraft to orbit Mercury. Its primary goal was to study the geology, magnetic field, and chemical composition of the planet.
- Mission completed April 30, 2015

## Voyager 1 and 2

- The twin Voyager 1 and 2 spacecraft are exploring Continuing on their more-than-40-year journey since their 1977 launches,
- In August 2012, Voyager 1 made the historic entry into interstellar space, the region between stars, filled with material ejected by the death of nearby stars millions of years ago.
- Voyager 2 entered interstellar space on November 5, 2018
- Both spacecraft are still sending scientific information about their surroundings through the Deep Space Network, or DSN.

69/A2014

- Consider the following pairs:

REGION	WELL KNOWN FOR THE PRODUCTION OF
1. Kinnaur	Areca nut
2. Mewat	Mango
3. Coromandel	Soya bean

Which of the above pairs is/are correctly matched?

- A) 1 and 2 only                      B) 3 only  
C) 1,2 and 3                         D) None

## Kinnaur

- Kinnaur is a district of Himachal Pradesh
- Kinnaur is surrounded by the Tibet to the east, in the northeast corner of Himachal Pradesh
- Have three high mountain ranges: Zaskar, Greater Himalayas and Dhauladhar, enclosing valleys of Sutlej, Spiti, Baspa and their tributaries.
- The apples, chilgoza and other dry fruits are grown here are world famous

## Mewat

- **Mewat** is a historical region of Haryana and Rajasthan states in north-western India.
- **Mewat** possesses several hill ranges of Aravali Mountain. It was for many centuries famous for the predatory character of its inhabitants
- **Mewat** district was renamed Nuh in 2016



## Coromandel

- **Coromandel Coast**, broad coastal plain in eastern Tamil Nadu state, southern India. Extending over an area of about 22,800 square km,
- It is bounded by the Utkal Plains to the north, the Bay of Bengal to the east, the Kaveri delta to the south, and the Eastern Ghats to the west.
- The **Coromandel Peninsula** was named after HMS **Coromandel** (originally named HMS Malabar), a ship of the British Royal Navy that stopped at **Coromandel Harbour** in 1820 to purchase kauri spars.
- **Malabar Coast**, name long applied to the southern part of India's Western coast of India's , approximately from the state of Goa southward, which is bordered on the east by the Western Ghats range. The name has sometimes encompassed the entire western coast of peninsular India.

- Which of the following is/are the example/examples of chemical change?
  1. Crystallization of sodium chloride
  2. Melting of ice
  3. Souring of milk

Select the correct answer using the code given below

A) 1 and 2 only

B) 3 only

C) 1,2 and 3

D) None

## Chemical Change

- A **chemical change** happens when one **chemical** substance is transformed into one or more different substances, such as when iron becomes rust.
- **Chemical changes** occur through the process of **chemical reactions**, and the resulting substances have different properties
- Properties are different because their atoms and molecules are arranged differently as compared to reactants
- Chemical reactions are irreversible

- The power of the Supreme Court of India to decide disputes between the Centre and the States falls under its
  - A) advisory jurisdiction
  - B) appellate jurisdiction
  - C) original jurisdiction
  - D) writ jurisdiction

## Supreme Court Jurisdiction

- The Supreme Court has jurisdiction over - the authority to hear - a wide range of cases. Its jurisdiction is generally classified into original, appellate and advisory. Under its **original jurisdiction**, the Court enforces fundamental rights, hears federal disputes and can transfer cases.
- Its exclusive **original jurisdiction** extends to all cases between the Government of India and the States of India or between Government of India and states on one side and one or more states on other side or cases between different states.
- **Article 131** confers exclusive jurisdiction on the Supreme Court

- Consider the following techniques/phenomena:
  1. Budding and grafting in fruit plants
  2. Cytoplasmic male sterility
  3. Gene silencing

Which of the above is/are used to create transgenic crops?

- A) 1 only                      B) 2 and 3  
C) 1 and 3                     D) None

## Transgenic crops

- A **transgenic crop** is a **genetically modified organism (GMO)**.
- **Transgenic** indicates that a transfer of genes has occurred using recombinant DNA technology.
- Generally a **transgenic crop** contains one or more genes that have been inserted artificially either from an unrelated plant or from different species altogether.
- **Transgenic plants** are developed that are resistant to a specific pest.
- **Transgenic organisms** are all **GMOs** because they have been **modified** at the genomic level by using DNA from a **different organism** (like the GloFish), but not all **GMOs** are **transgenic**

## GMO and Transgenic Crop

- The **first genetically modified crop**, an antibiotic-resistant tobacco plant, was produced in 1982. China was the first country to commercialize transgenic plants, introducing a virus-resistant tobacco in 1992.
- In GMO the manipulation of genes are done but new genes from other organism are not added. The genes of the original organism is modified as for example some genes can be turned off from depicting some characters which are undesirable
- Example When we cut apple browning happens due to release of Polyphenol oxidase. The gene is responsible for release of this chemical. This particular gene is suppressed. Now apple when cut doesn't turn brown.



## Golden Rice

- Golden Rice is the most well known GM crop that is aimed at increasing nutrient value. It has been engineered with three genes that biosynthesise beta- carotene, a precursor of Vitamin A in the edible parts of rice.
- It is intended to produce a fortified food to be grown and consumed in areas with a shortage of dietary Vitamin A, a deficiency which each year is estimated to kill 670,000 children under the age of 5 and cause an additional 500,000 cases of irreversible childhood blindness.
- The original golden rice produced 1.6µg/g of the carotenoids with further development increasing this 23 times. In 2018 it gained its first approvals for use as food.

73/A2014

- Consider the following statements:
  1. Maize can be used for the production of starch
  2. Oil extracted from maize can be a feedstock for biodiesel
  3. Alcoholic beverages can be produced by using maize

Which of the statements given above is/are correct?

- A) 1 only                                      B) 1 and 2 only  
C) 2 and 3 only                                D) 1,2 and 3

## Maize

- **Maize**, a member of the grass family Poaceae.
- It is a cereal grain which was first grown by people in ancient Central America. It is now the third most important cereal crop in the world.
- **Maize** grows quickly and produces almost double the yield of wheat.
- **Corn** grain makes a good **biofuel** feedstock due to its starch content and its comparatively easy conversion to ethanol.
- In India, **maize** is the third most important food crops after rice and wheat.
- **Corn** can be used for food as **corn flour**. It can be used as animal feed. And it can be turned into ethanol, high-fructose **corn syrup** or even bio-based plastics.

- Among the following organisms, which one does not belong to the class of other three?
  - A) Crab
  - B) Mite
  - C) Scorpion
  - D) Spider

## Animal Classification

- Animals are classified as Invertebrates and Vertebrates.
- Vertebrates are further classified as
  - Fishes
  - Amphibians
  - Reptiles
  - Birds
  - Mammals
- Invertebrates are further classified as
  - Sponges
  - Coelenterates
  - Worms
  - Arthropods
  - Mollusks
  - Echinoderms

75/A2014

- The power to increase the number of judges in the Supreme Court of India is vested in
  - A) the President of India
  - B) the Parliament
  - C) the Chief Justice of India
  - D) the Law Commission

## Number of Judges in Supreme Court

- Parliament has the powers to increase the number of Judges in Supreme Court
- In 2019 The number was increased to 33 plus Chief Justice of India, from earlier 30 plus Chief Justice of India.
- As on 1<sup>st</sup> June 2019, **43.55** lakh cases were pending in the high court and out of these, 18.75 lakh relate to civil matters and 12.15 lakh are criminal cases.
- As on June 1, **58,669** cases were pending in the Supreme Court.

- Consider the following towns of India:

1. Bhadrachalam
2. Chanderi
3. Kancheepuram
4. Karnal

Which of the above are famous for the production of traditional sarees/fabric?

- A) 1 and 2 only                      B) 2 and 3 only  
C) 1, 2 and 3                        D) 1, 3 and 4



## Bhadrachalam

- Bhadrachalam is a town in Telangana.
- There is Sri Sita Ramachandrandraswamy temple dedicated to Rama, the seventh incarnation of the god Vishnu.
- The mandir is located on the shores of the Godavari River

## Chanderi

- Chanderi is a town of historical importance in Ashoknagar District of Madhya Pradesh
- The Chanderi produces three kinds of fabrics: Pure Silk, Chanderi Cotton and Silk Cotton.
- The Chanderi is famous for its centuries old weaving specialty of producing finely textured fabrics of silk and cotton embellished with zari woven work,
- The Chanderi fabrics are known for their sheer texture, light weight and a glossy transparency that sets them apart from textiles

## Kancheepuram

- Kancheepuram district is situated on the northern East Coast of Tamil Nadu and is adjacent by Bay of Bengal and Chennai city
- Kanchipuram is famous for its temples. It is called as the temple city of Tamil nadu. There are about a thousand temples both big and small mostly ancient. Famous are the Kanchi Kamakshi temple., Kailasnath Temple, Ekambareshwar temple, Ulaganaatha Perumal Temple.
- Kanchipuram is famous for silk Saris. It has GI given in 2005-6. The saris are woven from pure mulberry silk thread. The border colour and design are usually quite different from the body.
- Kanchi silk weavers are the descendants of Sage Markanda, the master weaver of gods

## Banarasi Sari Vs Kanjivaram Sari

- While **Kanjivaram sarees** belong to South India, Kancheepuram specifically in Tamil Nadu, **Banarasi sarees** find their origin in Varanasi or Banaras in North India. While in a **Kanjivaram saree** golden thread is used for weaving designs, **Banarasi sarees** have intricate gold and silver work on them using zari.

## Karnal

- Karnal is a city part of the National Capital Region (NCR) and is located in Haryana.
- The city and the district are **famous** for their tourist monuments and attractions. The city is believed to have been founded during ancient times of Mahabharata by King Karna, a mythological hero in the epic tale.
- It is also called the Paris of Haryana.
- Panipat city of Haryana is known as City of weavers and Textile City. It is also known as the “cast-off capital” due to being “the global centre for recycling textiles”. Wool and cotton milling, saltpetre refining, and the manufacture of glass, electrical appliances, and bricks are the city’s chief industries.

- Consider the following pairs:

## NATIONAL HIGHWAYS

## CITIES CONNECTED

- NH 4
- NH 6
- NH 15

Chennai and Hyderabad  
Mumbai and Kolkata  
Ahmedabad and Jodhpur

Which of the above pairs is/are correctly matched?

- A) 1 and 2 only                      B) 3 only  
C) 1,2 and 3                         D) None

- Consider the following international agreements:
  1. The International Treaty on Plant Genetic Resources for Food and Agriculture
  2. The United Nations Convention to Combat Desertification
  3. The World heritage Convention

Which of the above has/have a bearing on the biodiversity?

- A) 1 and 2 only                      B) 3 only  
C) 1 and 3 only                      D) 1,2 and 3

# The International Treaty on Plant Genetic Resources for Food and Agriculture

- The objectives of the International Treaty on Plant Genetic Resources for Food and Agriculture are
  - the conservation and sustainable use of all plant genetic resources for food and agriculture and
  - the fair and equitable sharing of the benefits arising out of their use,
  - in harmony with the Convention on Biological Diversity,

**for sustainable agriculture and food security.**



## The United Nations Convention to Combat Desertification

- **UNCCD** is the sole legally binding international agreement linking environment and development to sustainable land management. It was established in 1994
- The objectives of the UNCCD seeks to improve land productivity, to restore (or preserve) land, to establish more efficient water usage and to introduce **sustainable** development in the affected areas and more generally, improve the living conditions of those populations affected by drought and desertification.
- Preventive actions include: Integrating land and water management to protect soils from erosion, salinization, and other forms of degradation. Protecting the vegetative cover, which can be a major instrument for soil conservation against wind and water erosion.

## The World heritage Convention

- The **World Heritage Convention** aims to promote cooperation among nations to protect **heritage** around the world that is of such outstanding universal value that its conservation is important for current and future generations.
- **World Heritage** is the designation for places on Earth that are of outstanding universal value to humanity and as such, have been inscribed on the **World Heritage List** to be protected for future generations to appreciate and enjoy.
- These places or buildings are thought to: have special importance for everyone.
- The first World Heritage Site in the list is the **Galápagos Islands**, while the countries with the largest number of sites (including sites shared with other countries) are China and Italy, both with 55 entries.

79/A2014

- Consider the following statements regarding 'Earth Hour':
  1. It is an initiative of UNEP and UNESCO
  2. It is a movement in which the participants switch off the lights for one hour on a certain day every year.
  3. It is a movement to raise the awareness about the climate change and the need to save the planet

Which of the statements given above is/are correct?

- A) 1 and 3 only                      B) 2 only  
C) 2 and 3 only                      D) 1,2 and 3

## Earth Hour

- Earth Hour is a worldwide movement organized by the World Wide Fund for Nature (WWF)
- The event is held annually encouraging individuals, communities, and businesses to turn off non-essential electric lights, for one hour, from 8:30 to 9:30 p.m. on a specific day towards the end of March, as a symbol of commitment to the planet.
- It was started as a lights-off event in Sydney, Australia, in 2007. Since then, it has grown to engage more than 7,000 cities and towns across 187 countries and territories to raise awareness for energy consumption and effects on the environment

80/A2014

- Which one of the following is the correct sequence of a food chain?
  - A) Diatoms-Crustaceans-Herrings
  - B) Crustaceans-Diatoms-Herrings
  - C) Diatoms-Herrings-Crustaceans
  - D) Crustaceans-Herring-Diatoms

## Food Chain

- **Diatoms-** **Diatoms** are algae that live in houses made of glass. They are the only organism on the planet with cell walls composed of transparent, opaline silica. They are found very widely almost anywhere moist.  
Diatoms are classified as eukaryotes, organisms with a membrane-bound cell nucleus  
They play a key role in the global carbon cycle.
- **Crustaceous-** The **Crustacea** are a subphylum of arthropods  
**Crustaceans** include crabs, lobsters, crayfish, shrimp, krill and barnacles
- **Herrings-** **Herring** are forage fish, It is good to eat herring as it is most nutritional benefits, has Omega 3 and antioxidants.

81/A2014

- The Partition of Bengal made by Lord Curzon in 1905 lasted until
  - A) the First World War when Indian troops were needed by the British and the partition was ended
  - B) King George V abrogated Curzon's Act at the Royal Durbar in Delhi in 1911
  - C) Gandhiji launched his Civil Disobedience Movement
  - D) the Partition of India in 1947 when East Bengal became East Pakistan

## Partition of Bengal

- **Partition of Bengal, (1905)**, division of Bengal carried out by the British viceroy in India, Lord Curzon, despite strong Indian nationalist opposition. It began a transformation of the Indian National Congress from a middle-class pressure group into a nationwide mass movement.
- Curzon decided to divide Bengal into two parts to divide nationalist feeling in Bengal , to divide Hindus and Muslims
- On the occasion of the visiting His Majesty George V to Indo-Pakistan and holding of Darbar at Delhi on 12<sup>th</sup> December 1911 the partition of Bengal was cancelled.
- The united Bengal was placed under a Governor and Assam was placed under a Chief Commissioner.
- This decision was shattering blow to Muslims.



## 82/A2014

- The 1929 Session of Indian National Congress is of significance in the history of the Freedom Movement because the
  - A) attainment of self-Government was declared as the objective of the Congress
  - B) attainment of Poorna Swaraj was adopted as the goal of the Congress
  - C) Non-Cooperation Movement was launched
  - D) decision to participate in the Round Table Conference in London was taken

## 1929 Session of Indian National Congress

- **Lahore Session of the Congress (1929 December)** The annual session of the Congress was held at **Lahore 1929** where **Jawaharlal Nehru** was elected the president.
- The flag of India was hoisted by **Jawaharlal Nehru** on **31 December 1929** on the banks of **Ravi river, in Lahore,**
- The **Purna Swaraj** resolution passed
- Congress leader and famous poet **Hasrat Mohani** was the first activist to demand complete independence (**Purna Swaraj**) from the British in 1921 from an All-India Congress Forum.
- The **Purna Swaraj** resolution—proclaimed on **January 26, 1930**

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- With reference to the famous Sattriya dance, consider the following statements:
  1. Sattriya is a combination of music, dance and drama
  2. It is a centuries-old living tradition of Vaishnavites of Assam
  3. It is based on classical Ragas and Talas of devotional songs composed by Tulsidas, Kabir and Mirabai

Which of the statements given above is/are correct?

- A) 1 only
- B) 1 and 2 only
- C) 2 and 3 only
- D) 1,2 and 3

## Sattriya dance

- Sattriya Nritya, originated in the eastern state of Assam. It is a dance-drama performance art with origins in the Krishna-centered Vaishnavism monasteries of Assam,
- The dance is attributed to the 15th century Bhakti movement scholar and saint Mahapurush Srimanta Sankardev.
- The Sangeet Natak Academy recognizes eight Classical dances- Bharatanatyam, Kathak, Kuchipudi, Odissi, Kathakali, Sattriya, Manipuri and Mohiniyattam.

84/A2014

- Chaitra 1 of the national calendar based on the Saka Era corresponds to which one the following dates of the Gregorian calendar in a normal year of 365 days?
  - A) 22<sup>nd</sup> March (or 21<sup>st</sup> March)
  - B) 15<sup>th</sup> May (or 16<sup>th</sup> May)
  - C) 31<sup>st</sup> March (or 30<sup>th</sup> March)
  - D) 21<sup>st</sup> April (or 20<sup>th</sup> April)

## Saka Era

- The Shaka era is the vernal equinox of the year AD 78. The year of the official Shaka Calendar is tied to the Gregorian date of 22 March every year, except in Gregorian leap years when it starts on 21 March.
- The Saka Era was founded by **Kanishka**, the emperor of **Kushana** empire from the year 78 A.D.
- An era based on A.D. 78 has come to be called the **Saka Era** supposedly started by the Shakas. **Kanishka** adopted the **Saka Era**, a calendar system still used by the Indian government.
- The national calendar based on the Saka Era, with **Chaitra** as its first month and a normal year of 365 days was adopted from 22 March 1957 along with the Gregorian calendar by GOI

- With reference to the Indian history of art and culture, consider the following pairs:

**FAMOUS WORK OF SCULPTURE****SITE**

1. A grand image of Buddha's Mahaparinirvana with numerous celestial musicians above and the sorrowful figures of his followers below

Ajanta

2. A huge image of Varaha Avatar (boar incarnation) of Vishnu, as he rescues Goddess Earth from the deep and chaotic waters, sculpted on rock

Mount Abu

3. "Arjuna's Penance/ "Descent of Ganga".  
Sculpted on the surface of huge boulders

Mamallapuram

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

- A) 1 and 2 only                      B) 3 only  
C) 1 and 3 only                      D) 1,2 and 3

## FAMOUS WORK OF SCULPTURE

- **5 Famous Sculptures in India**
- **The Ashoka Pillars.** The Pillars of Ashoka, also known as the Ashoka Pillars, are a series of columns scattered across India. ...
- Sanchi Stupa. ...
- Ajanta Caves. ...
- Kailasa Temple. ...
- **Dancing Girl of Mohenjo-Daro.**
- Bronze sculptures have been discovered from all parts of India; from **Kashmir** in the north to **Kerala** in the South and from **Gujarat** in the west to **Odisha** in the east. This bronze image of Nataraja is in the chatura-tandava pose.



## Mamallapuram

- Mahabalipuram, also known as Mamallapuram, is a town in Chengalpattu district in the southeastern Indian state of Tamil Nadu, best known for the UNESCO World Heritage Site of 7<sup>th</sup>-and 8<sup>th</sup> century.
- Mahabalipuram was one of two major port cities by the 7th century within the Pallava Kingdom
- There are depiction of Rathes, mandapas, the giant open air rock relief, the Descent of the Ganges.
- The shore temple dedicated to Shiva, Durga, Vishnu, Krishna, and others

- The Ghadr (Ghadar) was a
  - A) revolutionary association of Indians with headquarters at San Francisco
  - B) nationalist organization operating from Singapore
  - C) militant organization with headquarters at Berlin
  - D) communist movement for India's freedom with head-quarters at Tashkent

## Ghaddar

- The Ghadar Movement was an international political movement to overthrow British Rule in India.
- It was founded by expatriate Indians
- The early membership was composed mostly of Punjabi Indians who lived and worked on the West Coast of the United States and Canada, but the movement later spread to India and Indian diasporic communities around the world.
- in 1914, some Ghadar party members returned to Punjab to incite armed revolution for Indian Independence. Ghadarites smuggled arms into India and incited Indian troops to mutiny against the British.
- The Ghadar Mutiny, was unsuccessful, and 42 mutineers were executed following the Lahore Conspiracy Case trial.

- With reference to India's culture and tradition, what is 'Kalaripayattu'?
- A) It is an ancient Bhakti cult of Shaivism still prevalent in some parts of South India
- B) It is an ancient style bronze and brasswork still found in southern part of Coromandel area
- C) It is an ancient form of dance-drama and a living tradition in the northern part of Malabar
- D) It is an ancient martial art and a living tradition in some parts of South India

## ‘Kalaripayattu’

- kalaripayattu is a practical martial art. it is one of the oldest form of martial art.
- Kalaripayattu is the mother of all martial art forms. It's gaining in popularity because it uniquely combines defence techniques, dance, yoga and healing systems.

- Consider the following pairs:

1. Garba :: Gujarat

2. Mohiniattam :: Odisha

3. Yakshagana :: Karnataka

- A) 1 only                      B) 2 and 3 only  
C) 1 and 3 only              D) 1,2 and 3

## Garba

- **Garba** is a dance that honors, worships, and celebrates the feminine form of divinity.
- The word "**garba**" comes from the Sanskrit word **garbha**, meaning "womb."
- " Traditionally, the dance is performed by women in a circle around a clay lantern with a light inside, called a **garbha deep** ("womb lamp").
- **Garba** is a dance form originated in Gujarat, performed during Navratri - a 9-day festival.
- This dance form worships the divinity and power of Goddess Durga or Amba.

## Mohiniattam

- This dance is of Kerala.
- Mohiniyattam as seen today has evolved through a long process of evolution. It traces its origin to the temples of Kerala.
- This dance form of Kerala was structured into the present day classical format by the Travancore Kings, Maharaja Kartika Tirunal and his successor Maharaja Swati Tirunal
- The costume is always white or cream white comprising a sari with gold border and a matching blouse. The other adornments include various ornaments and ankle bells and a spray of jasmine flowers in the hair tied into a bun behind the head.
- Smitha Rajan (born 1969) is a Mohiniyattam performer from Kerala



- With reference to Buddhist history, tradition and culture in India, consider the following pairs:

## FAMOUS SHRINE

## LOCATION

- |                                      |    |               |
|--------------------------------------|----|---------------|
| 1. Tabo monastery and temple complex | :: | Spiti Valley  |
| 2. Lhotsava Lhakhang                 | :: | Zaskar Valley |
| 3. Alchi temple complex              | :: | Ladakh        |

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

- A) 1 only                                      B) 2 and 3 only  
C) 1 and 3 only                                D) 1,2 and 3

## Buddhist Famous Shrines

- Mahabodhi Temple, Bodh Gaya  
Mahaparinirvana Temple, Kushinagar  
Ramabhar Stupa Temple, Kushinagar  
Wat Thai Temple Kushinagar  
Thikse Monastery, Leh  
Mindrolling Monastery, Dehradun  
Ghum Monastery, Darjeeling  
Namdroling Monastery & Golden Temple, Mysore  
Tsuglagkhang Temple Complex, Dharamsala  
Dhamekh Stupa, Sarnath  
Vishwa Shanti Stupa, Rajgir  
Tabo Monastery, Spiti Valley, HP  
Lhotsava Lhakhang, Nako Kinnaur HP  
Alchi Monastery, Leh Ladakh

- Consider the following statements:

1. “Bijak” is a composition of the teachings of Saint Dadu Dayal
2. The Philosophy of Pushti Marg was propounded by Madhvacharya

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

## DauDayal

- Dadu Dayal 1544-1603 was a poet sant from Gujarat
- He was against formalism and priestcraft
- Dadu Dayal later moved to Naraina, near Jaipur formed a sect known as Dadupanth
- Dadupanthis are one of the 7 martial akharas of Vaisnavite Sampradaya of Hindus
- Dadu's compositions in Braj Language were recorded by his disciple Rajjab and are known as the Dadu Anubhav Vani, a compilation of 5000 verses.
- Another disciple Janagopal wrote the earliest biography of Dadu

## Madhvacharya

- Madhva Acharya was a Hindu philosopher and chief proponent of the Davita school of Vedanta
- Madhva called his philosophy Tattvavada meaning ‘arguments from a realist viewpoint
- Madhva was born in Karnataka in 13<sup>th</sup> century and he became Sanyasi as a teenager
- He is credited with 37 works in Sanskrit
- His greatest work is considered to be the Anuvyakhyana, a philosophical supplement to his bhasya on Brahma Sutras composed with a poetic structure
- He proclaimed himself to be an avatar of Vayu., the son of god Vishnu.

91/A2014

- A community of people called Manganiyars is well known for their
  - A) martial arts in North-East India
  - B) musical tradition in North-West India
  - C) classical vocal music in South India
  - D) pietra dura tradition in Central India

## Manganiyars

- The Manganiar and related Langha are Muslim communities in the desert of Rajasthan
- They are Rajasthani folk musicians
- The bowed instrument they played is called Kamaicha that is synonymous with the **Manganiyar** community.
- Heard more in the Jaisalmer-Barmer region, it accompanies solo or group performances of singing and dancing.
- During the time of the Maharajas, the **Manganiyars** were the musicians of the Rajput courts

92/A2014

- What was/were the object/objects of Queen Victoria's Proclamation (1858)
  1. To disclaim any intention to annex Indian States
  2. To place the Indian administration under the British Crown
  3. To regulate East India Company's trade with India

Select the correct answer using the code given below.

A) 1 and 2 only  
C) 1 and 3 only

B) 2 only  
D) 1,2 and 3



## Queen Victoria's Proclamation (1858)

- On November 1, 1858, a grand Darbar was held at Allahabad. Here Lord Canning sent forth the royal **proclamation** which announced that the **queen** had assumed the government of India. This **proclamation** declared the future policy of the British Rule in India.
- The document was called “Magnacarta of the People of India” and was declared in eloquent words the principles of justice and religious toleration as the guiding policy of the queen’s rule.
- The Indian public was given an assurance that there would be no extension of the current territorial possessions.
- Now onwards the Indian Sepoys were enlisted in the regular service in the British Army

93/A2014

- Ibadat Khana at Fatehpur Sikri was
  - A) the mosque for the use of Royal Family
  - B) Akbar's private prayer chamber
  - C) the hall in which Akbar held discussions with scholars of various religions
  - D) the room in which the nobles belonging to different religions gathered to discuss religious affairs

## Ibadat Khana at Fatehpur Sikri

- The Ibādat Khāna (House of Worship) was a meeting house built in 1575 CE by the Mughal Emperor Akbar (r. 1556-1605) at Fatehpur Sikri to gather spiritual leaders of different religious grounds so as to conduct a discussion on the teachings of the respective religious leaders.
- At this place, he invited selected mystics, intellectuals and theologians, and held discussions on religious and spiritual themes. He invited scholars belonging to various religion such as Hinduism, Islam , Zoroastrianism , Christianity and even atheists. He conducted religious debates with these people. They visited Ibadat Khana and discussed their religious belief with Akbar. The result of these discussions at the Hall of Prayer led them to the conclusion that all religions lead to the same goal.

94/A2014

- In the context of food and nutritional security of India, enhancing the 'Seed Replacement Rates' of various crops helps in achieving the food production targets of the future. But what is/are the constraint/constraints in its wider/greater implementation?

1. There is no National Seeds Policy in place
2. There is no participation of private sector seed companies in the supply of quality seeds of vegetables and planting materials of horticultural crops
3. There is a demand-supply gap regarding quality seeds in case of low value and high volume crops.

Select the correct answer using the code given below.

- |            |           |
|------------|-----------|
| A) 1 and 2 | B) 3 only |
| C) 2 and 3 | D) None   |

## Seed Replacement Rate

- **Seed Replacement Rate (SSR)** is a measure of how much of the total cropped area was sown with certified seeds in comparison to farm saved seeds.
- Thus, **Seed Replacement Ratio** also denotes actual quality seed distributed to farmers vis-a-vis actual seed required for cultivation of crops.
- **Characteristics/attributes of quality seed;**
- It must be genetically pure: Breeder/nucleus: 100 % Foundation seeds: 99.5% Certified seeds varieties: 98% Certified hybrid seeds:95% Certified hybrid cotton: 90%
- It should have required level of physical purity: All crops: 98% Carrot: 95% Ragi: 97%

## Seed Replacement Rate

- The reason for slow SRR
- The importance attached to traditional varieties: Due to various reasons, farmers preferred traditional varieties.
- Since these are not certified seeds, so farmers always retained, such seed for future used.
- **badrinarayan barwale** is the father of seed technology in the world. According to the Crop Science Society of America, Dr. **Badrinarayan Barwale**, an Indian is known as the father of seed technology.

95/A2014

- With reference to 'Eco-Sensitive Zones' which of the following statements is/are correct?

1. Eco-Sensitive Zones are the areas that are declared under the Wildlife (Protection) Act, 1972
2. The purpose of the declaration of Eco-Sensitive Zones is to prohibit all kinds of human activities in those zones except agriculture

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 |

## Eco-Sensitive Zone

- **Eco-Sensitive Zone.** Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas in India notified by the Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India around Protected Areas, National Parks and Wildlife Sanctuaries.
- **Eco-Sensitive Zones** or Ecologically Fragile Areas are areas within 10 kms around Protected Areas, National Parks and Wildlife Sanctuaries.
- **Permitted activities in the Eco Sensitive Zones:** Ongoing **agricultural** or horticultural practices, rainwater harvesting, **organic farming**, use of renewable energy sources, adoption of green technology for all activities.



96/A2014

- Consider the following statements:
  1. Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.
  2. National Tiger Conservation Authority is a statutory body
  3. National Ganga River Basin Authority is chaired by the Prime Minister.

Which of the statements given above is/are correct?

- A) 1 only                      B) 2 and 3 only  
C) 2 only                      D) 1,2 and 3

## Animal Welfare Board

- The **Animal Welfare Board of India (AWBI)**, headquartered at Ballabgarh in Haryana state, is a statutory advisory body advising the Government of India's Ministry of Fisheries, Animal Husbandry and Dairying (**Department of Animal Husbandry and Dairying**). It was previously based at Chennai.
- The **Animal Welfare Board (AWBI)** was established in 1962 under Section 4 of the **Prevention of Cruelty to Animals Act, 1960**.
- Mandate of Animal Welfare Board is to prevent cruelty, suffering and pain to all creatures.
- 5 Welfare need identified are Health, Proper behaviour, Companionship

- Consider the following pairs:

## VITAMIN

## DEFICIENCY DISEASE

- |              |    |                 |
|--------------|----|-----------------|
| 1. Vitamin C | :: | Scurvy          |
| 2. Vitamin D | :: | Rickets         |
| 3. Vitamin E | :: | Night blindness |

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

- |                 |           |
|-----------------|-----------|
| A) 1 and 2 only | B) 3 only |
| C) 1,2 and 3    | D) None   |

# Vitamins

Vitamin	Source	Disease/Function
A	Milk, egg, butter	Vision, skin
C. ASCORBIC ACID	Fruits and vegetables	Immune system, metabolism
D	Eggs, Fish, Milk	Absorption of calcium
E	Leafy vegetables, nuts	Antioxidant
K	Leafy Vegetables, broccoli	Blood clotting
VITAMIN B		
THIAMINE B1	Legumes, cereals, nuts	Energy Metabolism
RIBOFLAVIN. B2	Milk	Energy Metabolism
NIACIN. B3	Meat fish, peanut butter	Energy metabolism
PANTOTHENIC ACID B4	Widespread in foods	Energy Metabolism
BIOTIN. B5	Widespread in foods	Energy Metabolism
B6	Fruits, meat	Blood cells
B12	Meat, fish, egg, milk	
FOLATE Folic Acid	Making DNA	Leafy vegetables, legumes, orange juice

98/A2014

- There is some concern regarding the nanoparticles of some chemical elements that are used by the industry in the manufacture of various products. Why?
  1. They can accumulate in the environment, and contaminate water and soil.
  2. They can enter the food chains.
  3. They can trigger the production of free radicals

Select the correct answer using the code given below

- |                 |              |
|-----------------|--------------|
| A) 1 and 2 only | B) 3 only    |
| C) 1 and 3 only | D) 1,2 and 3 |

## Nanoparticles

- A nanoparticle or ultrafine particle is usually defined as a particle of matter that is between 1 and 100 nanometres (nm) in diameter.
- They are an important component of atmospheric pollution.
- Nanoparticles present possible dangers, both medically and environmentally
- They are also able to pass through cell membranes in organisms
- Concern has also been raised over the health effects of respirable nanoparticles from certain combustion processes

99/A2014

- Which of the following organizations brings out the publication known as 'World Economic Outlook'?
- A) The International Monetary Fund
  - B) The United Nations Development Programme
  - C) The World Economic Forum
  - D) The World Bank

## World Economic Outlook

- World Economic Outlook is brought out by IMF
- The prediction is GDP will contract by 5.7 percent for 2020 on the whole.
- Chief economist IMF : Gita Gopinath
- IMF membership: 189 countries
- Objective: to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth



- With reference to Union Budget, which of the following is/are covered under Non-Plan Expenditure?
  1. Defence expenditure
  2. Interest payments
  3. Salaries and pensions
  4. Subsidies

Select the correct answer using the code given below.

- A) 1 only                                      B) 2 and 3 only  
C) 1,2,3 and 4      D) None

## Non-Plan Expenditure

- **Non-plan expenditure** is what the government spends on the so-called non-productive areas, such as salaries, subsidies, loans and interest, defence
- A major part of the **Non-Plan Expenditure** is obligatory in nature, like interest payments, pensions, statutory transfers to States and Union Territories governments.
- **Plan expenditure** pertains to the money to be set aside for productive purposes, like various projects of ministries.
- Any **expenditure** that is incurred on programmes which are detailed under the current (Five Year) **Plan** of the centre or centre's advances to state for their plans is called **plan expenditure**. Provision of such **expenditure** in the budget is called **Plan Expenditure**.

## Plan & non-Planned expenditure

- A high-level committee headed by C Rangarajan has recommended that the distinction between Planned and Non-planned expenditure should not be done.
- This will make linking budgetary outlays to outcomes easier and a more comprehensive multi-year budgeting framework possible.
- Around 30% of the spending by the Union government is Plan expenditure.
- A common head will allow allocation of resources according to need and will therefore be more flexible.

## ANSWERS

1	B	11	B	21	B	31	A	41	A
2	A	12	B	22	B	32	C	42	B
3	A	13	C	23	A	33	A	43	C
4	D	14	C	24	D	34	D	44	C
5	C	15	C	25	C	35	D	45	B
6	A	16	C	26	B	36	A	46	A
7	A	17	C	27	D	37	A	47	C
8	C	18	B	28	B	38	D	48	C
9	C	19	C	29	D	39	B	49	D
10	B	20	B	30	C	40	B	50	A

## ANSWERS

51	B	61	C	71	C	81	B	91	B
52	C	62	A	72	B	82	B	92	A
53	B	63	C	73	D	83	B	93	C
54	D	64	C	74	A	84	A	94	B
55	B	65	B	75	B	85	C	95	D
56	C	66	D	76	B	86	A	96	B
57	C	67	C	77	D	87	D	97	A
58	C	68	B	78	D	88	C	98	D
59	B	69	D	79	C	89	C	99	A
60	B	70	B	80	A	90	D	100	C

- Thank You