Ans :KSCSAPT 510

1. All are correct , In addition to above , The Policy mandates for Transfer of Technology or enhanced Foreign Direct Investment (FDI) for domestic production in the event of non-availability of manufacturing capabilities in the country.

2. D.In addition, forest rights of tribals and others traditional forest dwellers are safeguarded under a separate Act, namely, "The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006" (Forest Rights Act, 2006) which recognizes and vests the forest rights of the Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be vested".

3. C

4. B

In order to promote ease of doing business in the country and achieve the vision of the Government for generation of employment and promotion of exports through "Make in India" and of Zero effect and Zero defect manufacturing, it has been decided that the existing provisions of the Revised Restructured Technology Upgradation Fund Scheme (RRTUFS) be modified in terms of the benefits under the scheme and the procedure for claiming the benefits under the scheme. A new scheme, **"Amended Technology Upgradation Fund Scheme (ATUFS)"** has been approved by the Government for implementation which will provide one time capital subsidy for investments in the employment and technology intensive segments of the textile value chain, keeping in view promotion of exports and imports substitution. The scheme will be credit linked and projects for technology upgradation covered by a prescribed limit of term loans sanctioned by the lending agencies will only be eligible for grant of benefits under it.

5. C

NITI Aayog has launched "Pitch to MOVE" - a mobility pitch competition that aims to provide budding entrepreneurs of India a unique opportunity to pitch their business ideas to a distinguished jury. Startups working in the various fields of mobility can pitch their ideas to industry leaders and Venture Capitalists for raising investments. Winners of the event will be felicitated by Hon'ble PM during the Global Mobility Summit.

"Pitch to MOVE aims to identify and incentivise the startups, which will help the Government realize its vision of Shared, Connected, Intermodal and Environment Friendly Mobility for India. The objective is to harness the latest disruption for generating employment and growth in our country. We look forward to working together with these startups", said Dr. Rajiv Kumar, Vice Chairman, NITI Aayog.

The importance of mobility as the potential driver of innovation, job creation, economic growth and social change for the 21st century is highlighted time and again. With rapidly evolving technologies and business models for delivering mobility services, our goal of cleaner and more efficient mobility systems will be achieved with the help of the dynamic entrepreneurial class of India.

Commenting on the launch, Mr. Amitabh Kant, CEO NITI Aayog noted that "Pitch to MOVE" provides a golden opportunity for early and late startups to push their ideas to reality.

Ans :KSCSAPT 510

About “Pitch to MOVE”

“Pitch to MOVE” is organised by NITI Aayog in collaboration with Invest India and Society of Indian Automobile Manufacturers (SIAM) as a part of a series of engaging featured events in the run up to the main event. The Summit is scheduled to be held on 7th and 8th Sep 2018 at Vigyan Bhawan, in New Delhi and is being inaugurated by the Hon’ble Prime Minister of India.

The competition aims to identify and reward the start-ups offering innovative solutions for shared, connected, and environment friendly mobility. The Startups can be from the domain of Public Mobility, Electric Vehicles, Shared Transport, Last Mile Connectivity, Passenger Transportation, Battery Technology, Automotive IoT, Freight & Logistics, Powertrain/Drivetrain, Experiential, Travel, Mobility Infrastructure and Automotive Electronics etc. The Mobility Pitch Competition is open to primarily startups from various parts of India who are interested in showcasing their business ideas to jury members.

6. A
7. D
8. C

It was Vishnu Digambar Paluskar and Vishnu Narayan Bhatkhande who spread Hindustani classical music to masses by starting schools, teaching music in classroom and devising a standardized grading and testing system. Bhatkhande standardized and unversaliszed the notation system making it easier to spread music.

Dhrupad is an old style of Hindustani singing, traditionally performed by male singers. The great Indian musician Tansen sang in the Dhrupad style. Dhrupad was the main form of northern Indian classical music but has now given way to Khyal.
Khyal is a form of vocal music in Hindustani music. It was adopted from medieval Persian music It is special as it is based on improvising and expressing emotion.
Another vocal form Tarana are medium to fast pa ced songs that ar e usual ly per formed towards the end of the concert. They consist of a few lines of poetry with rhythmic syllables.
Tappa is a from of Indian semi- classical vocal music. It originated from the folk songs of the camel riders of Punjab and was developed as a form of classical music by Mian Ghulam Nabi Shori.
Thumri is a semi classical vocal form said to have begun in Uttar Pradesh. The lyrics are typically in Brij Bhasha and are usually romantic.
Ghazal is an originally Persian form of Poetry. In India, Ghazal became the most common form of poetry in the Urdu language.
Although Hindustani music clearly is focused on t he vocal per forma nce, recently instrumental Hindustani music is very popular than vocal music especially outside South Asia.
Carnatic music is a system of music commonly associated with the southern part of India especially. Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. Carnatic music is completely melodic with improvised variations. Purandara Dasa is credited with having founded today’s Carnatic music.He is credited with having elevated Carnatic music from religious

and devotional music into the realm of a performing art. Carnatic music is usually performed by a small ensemble of musicia ns consi s t ing of a principa l per former (vocalist) a viol in, mridanga ,and a tamburu. Today carnatic music is presented by musicians in concerts or recordings either vocally or through instruments.
M.L.Vasantha kumari was a carnatic musician and playback singer for film songs. M.L. Vasanthakumari popularised unfamiliar ragas. She popularised the compositions of Purandara Dasa. She had received many awards including the Padma Bhushan.

Types of Carnatic Music and its meaning Ragam

Tanam- Pallavi - Elaborate r hythmic a nd melodic variat ion in unmeasured sense.
Kriti-Kirthanai - Most popular type which refers to devotional music laced with poetic beauty.
Varnam - Performed at the beginning of a concert ; a completely composed piece.
Padam - Slower tempoed love songs referring to the human yearning for the adored god head.
Javalis - Faster tempoed love songs with direct description of human love.
Tillana - Meaningful phrases are interspersed with variety of meaningless syllables
9. B

Mallikarj un Mansur was an Indian Hindustani classical singer of the Khyal style in the Jaipur-Atrauligharana. He had received many awards including Padmabhushan, Kalidas Summan etc.

10. D
Push factor:these cause people to leave their place of residence or origin
Pull factor:which attract the people from different places
In India people migrate from rural to urban areas mainly due to poverty,high population pressure on the land,lack of basic infrastructure.apart from these factors,natural disasters such as,flood,drought,cyclonic storms,earthquake,tsunami,wars and local conflicts also give extra push to migrate

11. B
Model of kolkhoz is associated with Collective Farming. This was introduced in erstwhile Soviet Union to improve upon the inefficiency of the previous methods of agriculture and to boost agricultural production for self-sufficiency.

12. C
Mixed farming is found in the highly developed parts of the world example north-western Europe,eastern north America,parts of Eurasia and the temperate latitudes of southern continents.

Ans :KSCSAPT 510

The regions where farmers specialize in vegetables only, the farming is known as truck farming.the distance of truck farms from the market is governed by the distance that a truck can cover overnight,hence the name truck farming

13. D
    The first work that clarified and elaborated on the subject of musicology was Bharata's Natyashastra. Sangeetha makaranda was composed by Nanda who enumerated 93 ragas.other important work was Swaramela-kalanidhi by Rammatya
    Shadhava Raga is a hexatonic raga,sampurna is a heptatonic raga and odava is a pentatonic raga
    Vilambit is a slow Raga,Madhya is a medium raga and drut is a fast raga

14. A
    It is from the state of Rajasthan
    The songs are generally about women fetching water from the well and carrying the water back to their households in matkas over their head
    Tijanbai is a well known artist from the padwani folksong

    Pandavani (lit.: Songs and Stories of the Pandavas) is a folk singing style involving narration of tales from the ancient Indian epic Mahabharata. The singing also involves musical accompaniment. Bhima, the second of the Pandava is the hero of the story in this style.

    This form of folk theatre is popular in the central Indian state of Chhattisgarh and in the neighbouring areas of Madhya Pradesh, Orissa and Andhra Pradesh

15. A
    It is from Madhya pradesh
    It is a heroic ballad song with intricate words
    It is usually sung in different language like Braj,Awadhi and Bhojpuri
    This form is also related to the epic Mahabharata
    The five brother's of pandavas are substituted here as Alha,Udal,Malkhan,Lakhan and Deva

16. C
    Niche refers to the function, or occupation, of a life form within a given community
    An ecological niche consist of
    Habitat-where the species live
    Food Niche- what a species eats and decomposes and what species it competes with
    Physical and chemical Niche- temperature,moisture and landform
    Geo-ecological niche-topology,terrain,slope and soils

17. B
    Gross primary productivity which is total amount of chemical energy assimilated by the autotrophs from solar energy

Ans :KSCSAPT 510

Net primary productivity is equal to gross primary productivity minus the energy lost through respiration

The rate at which ecosystem's consumers convert the chemical energy of the food they eat into their own new biomass is called the gross secondary productivity

18. C

Wildlife Protection Act, 1972 (with Amendment Acts of 2003 and 2006):

- The act provides for the protection of **wild animals, birds** and **plants**and matters connected with them, with a view to ensure the ecological and environmental security of India.
- Extends to the whole of India, except the State of Jammu and Kashmir which has its own wildlife act
- It provides for prohibition on use of animal traps except under certain circumstances
- It provides for protection of hunting rights of the Scheduled Tribes in Andaman and Nicobar Islands
- Has provisions for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**)
- It has six schedules which give varying degrees of protection
  - Species listed in Schedule I and part II of Schedule II get absolute protection — offences under these are prescribed the highest penalties
  - Species listed in Schedule III and Schedule IV are also protected, but the penalties are much lower
  - Schedule V includes the animals which may be hunted
  - The plants in Schedule VI are prohibited from cultivation and planting
- The act constitutes a **National Board for Wildlife** that
  - provides guidelines for framing policies and advising Central and State Government on promotion of wildlife conservation and controlling poaching and illegal trade of wildlife and its products;
  - Making recommendations for setting up and managing national parks, sanctuaries and other protected areas; and
  - Suggesting measures for improvement of wildlife conservation.
- It also sets up **National Tiger Conservation Authority.**
- The acts sets up various provisions related to trade and penalties for hunting the animals in wild.
- **Five kinds of protected areas** can be notified in the Act. These are:
  - **Sanctuaries:** The State or Central Government may by notification declare its intention to constitute any area as a sanctuary for protecting wildlife and the environment. The government determines the nature and extent of rights of persons in or over the land within the sanctuary.
  - **National Parks:**
    - The State or Central Government may declare an area, whether inside a sanctuary or not, as a national park for the purpose of protecting and developing wildlife and its environment.
    - The State Government **cannot** alter the boundaries of a national park except on the recommendation of the National Board for Wildlife.
  - **No grazing** is allowed inside a national park.
  - All provisions applicable to a sanctuary are also applicable to a national park.
  - **Conservation Reserves:** The State Government after consultations with local communities can declare any area owned by the Government, particularly areas adjacent to national parks or sanctuaries, as conservation reserves. The government constitutes a Conservation Reserve Management Committee to manage and conserve the conservation reserve.
  - **Community Reserves:** The State Government can, in consultation with the community or an individual who have volunteered to conserve wildlife, declare any private or community land as

Ans :KSCSAPT 510

community reserve. A Community Reserve Management Committee shall be constituted by State Government for conserving and managing the reserve.

- **Tiger Reserve:** These areas were reserved for protection tiger in the country. The **State Government** on the recommendation of the Tiger Conservation Authority may notify an area as a tiger reserve, for which it has to prepare a Tiger Conservation Plan

19. C

Objectives of the Act

- Conservation of biological diversity
- sustainable use of its components
- fair and equitable sharing of the benefits arising from the utilization of genetic resources

Structure of the Administrative Mechanism

The Act envisages a three-tier structure to regulate the access to biological resources, comprising of

- National Biodiversity Authority (NBA) at the central level. A foreign national or a foreign company needs to take the permission from the NBA for utilizing the biological resources or accessing the knowledge thereof, for a survey, research, and commercial purposes. In case a company applies for a patent over the biological resources or the knowledge associated with them, it needs to take the permission from NBA which can order for benefit sharing or payment of royalties for the protection of such intellectual property
- State Biodiversity Boards (SBB) at the level of the States. Indian nationals and companies need to take the permission from SBBs to utilize the country's biological resources.
- Biodiversity Management Committees at the local level. These committees are tasked with preserving and protecting the local biodiversity. They are mandated to prepare a Peoples' Biodiversity Register (PBR) which includes the information about all the locally available biological resources, prepared in consultation with the local communities. They also have the right to levy fees on any individual or company for accessing and utilizing the local biodiversity or the knowledge thereof

20. D

Given features are of Barbed drainage pattern:
It is a rare kind of drainage pattern,is formed when the tributaries flow in opposite direction to their master streams
The tributaries join their master streams in a hook-shaped bend
This drainage pattern is generally developed due to river capture
Features of Parallel drainage pattern:
It comprises numerous rivers which are parallel to each other and follow the regional slope.this pattern is more frequently developed on uniformly sloping and dipping rock beds such as cuestas or newly emerged coastal plains.the western coastal plains of India represent several examples of parallel drainage patterns where the streams after taking

Ans :KSCSAPT 510

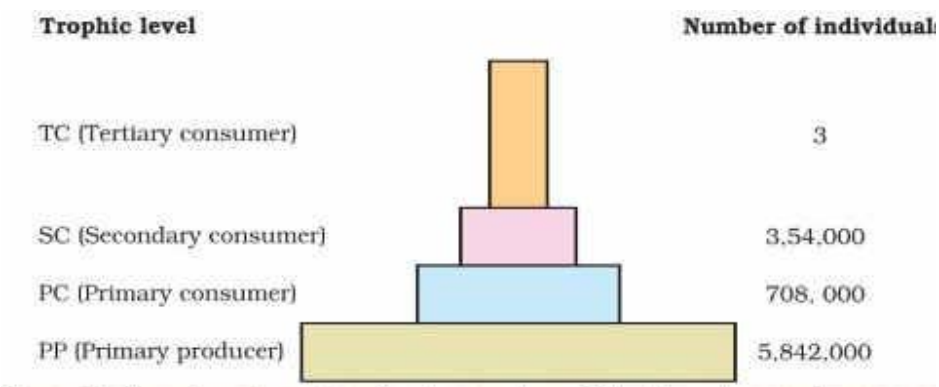
their sources from the western flanks of the western ghats drain in straight courses towards west to empty into the Arabian sea.

21. C

- The pyramidal representation of trophic levels of different organisms based on their ecological position [producer to final consumer] is called as an ecological pyramid.
- The food producer forms the base of the pyramid and the top carnivore forms the tip. Other consumer trophic levels are in between.
- The pyramid consists of a number of horizontal bars depicting specific trophic levels. The length of each bar represents the total number of individuals or biomass or energy at each trophic level in an ecosystem.
- The ecological pyramids are of three categories.

1. **Pyramid of numbers,**
2. **Pyramid of biomass,** and
3. **Pyramid of energy or productivity.**

Pyramid of Numbers



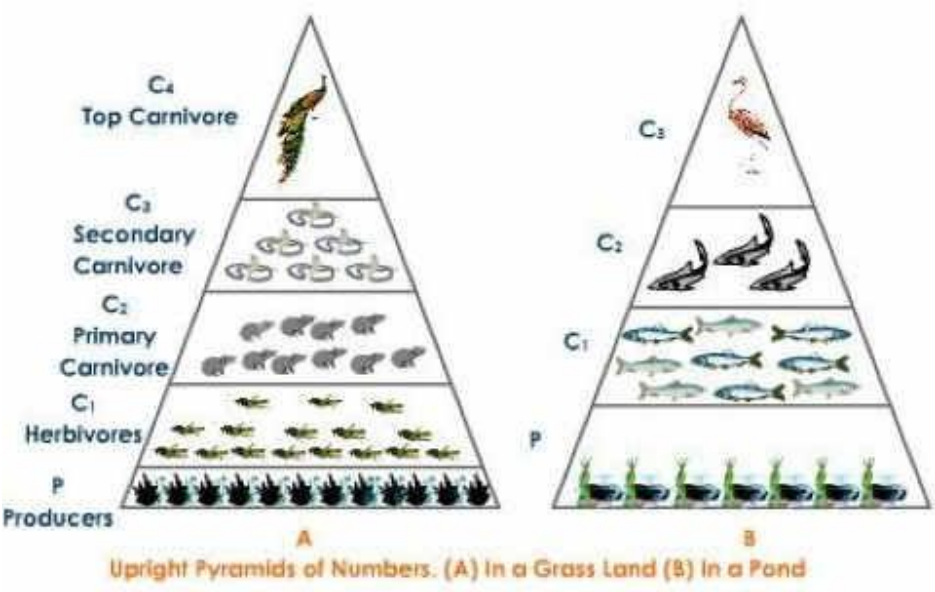
Pyramid of numbers in a grassland ecosystem. Only three top-carnivores are supported in an ecosystem based on production of nearly 6 millions plants

- Pyramid of numbers represents the **total number of individuals of different species** (population) at each trophic level.
- Depending upon the size, the pyramid of numbers may not always be upright, and may even be completely inverted.
- It is very difficult to count all the organisms, in a pyramid of numbers and so the pyramid of number *does not completely define the trophic structure for an ecosystem*.

Pyramid of numbers – upright

- In this pyramid, the number of individuals is decreased from lower level to higher trophic level.

Ans :KSCSAPT 510



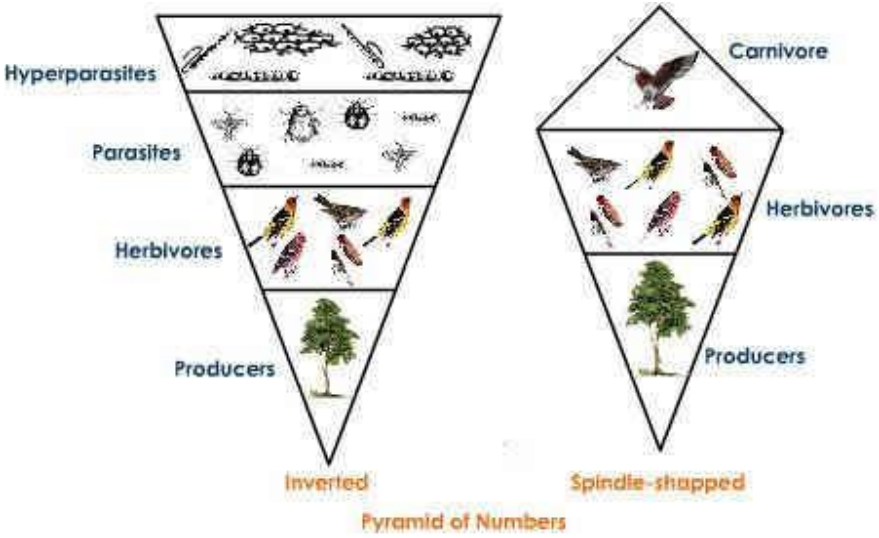
Upright Pyramids of Numbers. (A) In a Grass Land (B) In a Pond

- This type of pyramid can be seen in **grassland ecosystem** and **pond ecosystem**.
- The grasses occupy the lowest trophic level (base) because of their abundance.
- The next higher trophic level is primary consumer – herbivore (example – grasshopper).
- The individual number of grasshopper is less than that of grass. The next energy level is primary carnivore (example – rat).
- The number of rats are less than grasshopper, because, they feed on grasshopper. The next higher trophic level is secondary carnivore (example – snakes). They feed on rats.
- The next higher trophic level is the top carnivore. (Ex: Hawk).
- With each higher trophic level, the number of individual decreases.

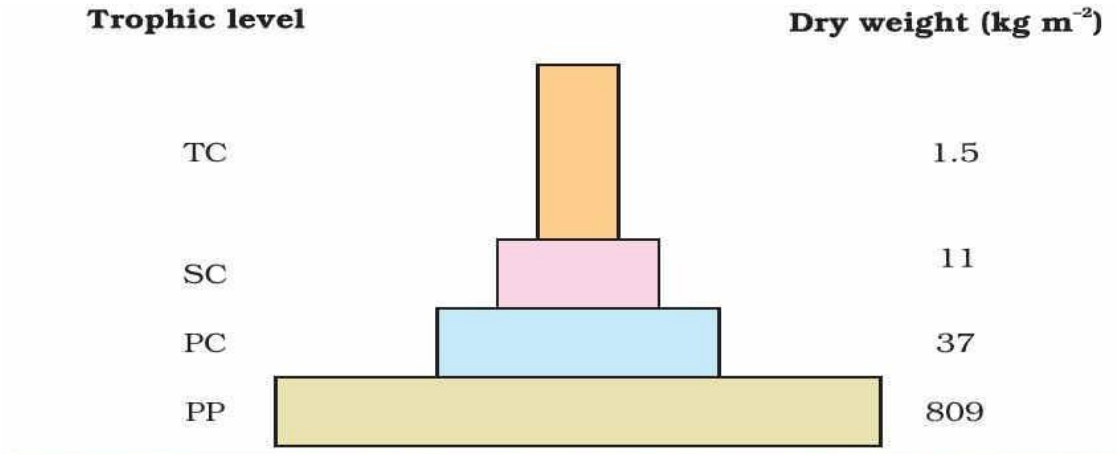
Pyramid of numbers – inverted

- In this pyramid, the number of individuals is increased from lower level to higher trophic level. E.g. Tree ecosystem.

Ans :KSCSAPT 510



Pyramid of Biomass



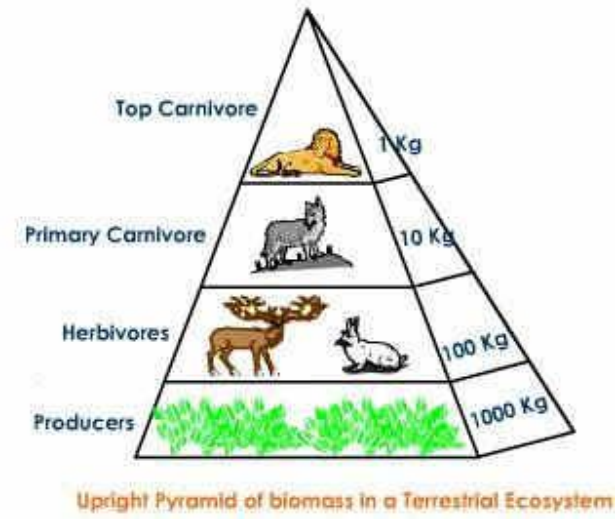
Pyramid of biomass shows a sharp decrease in biomass at higher trophic levels

- Pyramid of biomass is usually determined by collecting all organisms occupying each trophic level separately and measuring their **dry weight**.
- This overcomes the size difference problem because all kinds of organisms at a trophic level are weighed. Biomass is measured in g/m^2.
- The biomass of a species is expressed in terms of fresh or dry weight. Measurement of biomass in terms of dry weight is more accurate.
- Each trophic level has a certain mass of living material at a particular time called as the **standing crop**.
- The standing crop is measured as the mass of living organisms (biomass) or the number in a unit area.

Pyramid of Biomass – Upright

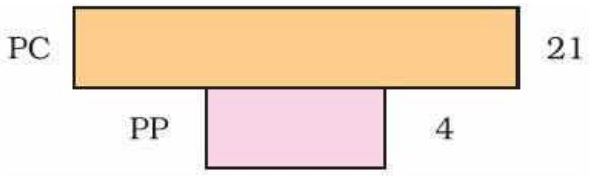
Ans :KSCSAPT 510

- For most ecosystems on land, the pyramid of biomass has a large base of primary producers with a smaller trophic level perched on top.
- The biomass of producers (autotrophs) is at the maximum. The biomass of next trophic level i.e. primary consumers is less than the producers. The biomass of next higher trophic level i.e. secondary consumers is less than the primary consumers. The top, high trophic level has very less amount of biomass.



Upright Pyramid of biomass in a Terrestrial Ecosystem

Pyramid of Biomass – Inverted



Inverted pyramid of biomass-small standing crop of phytoplankton supports large standing crop of zooplankton

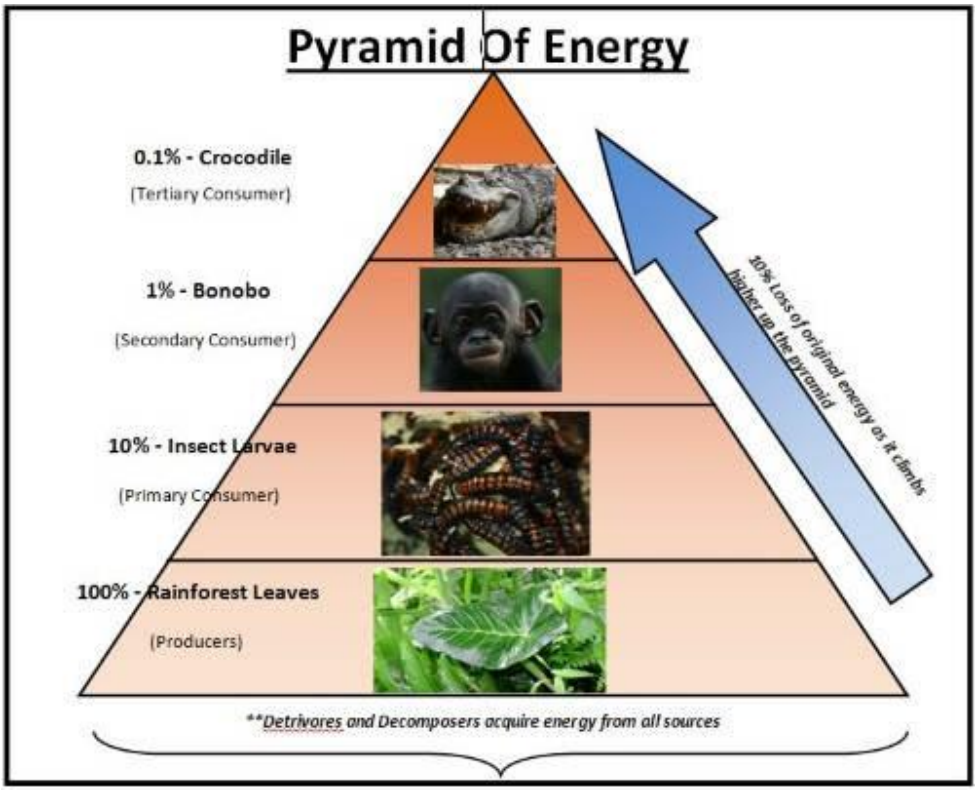
- In contrast, in many **aquatic ecosystems**, the pyramid of biomass may assume an inverted form. [Pyramid of numbers for aquatic ecosystem is upright]
- This is because the producers are tiny phytoplankton that grow and reproduce rapidly.
- Here, the pyramid of biomass has a small base, with the consumer biomass at any instant actually exceeding the producer biomass and the pyramid assumes inverted shape.

Pyramid of Energy

- To compare the functional roles of the trophic levels in an ecosystem, an energy pyramid is **most suitable**.

Ans :KSCSAPT 510

- An energy pyramid represents the amount of energy at each trophic level and loss of energy at each transfer to another trophic level. Hence the pyramid is **always upward**, with a large energy base at the bottom.



- Suppose an ecosystem receives 1000 calories of light energy in a given day. Most of the energy is not absorbed; some is reflected back to space; of the energy absorbed only a small portion is utilized by green plants, out of which the plant uses up some for respiration and of the 1000 calories, therefore only 100 calories are stored as energy rich materials.
- Now suppose an animal, say a deer, eats the plant containing 100 calorie of food energy. The deer uses some of it for its own metabolism and stores only 10 calorie as food energy. A lion that eats the deer gets an even smaller amount of energy. Thus usable energy decreases from sunlight to producer to herbivore to carnivore. Therefore, the energy pyramid will always be upright.
- **Energy pyramid** concept helps to explain the phenomenon of **biological magnification** – the tendency for toxic substances to increase in concentration progressively with higher trophic levels.

Ecological Efficiency

- Ecological efficiency describes the efficiency with which energy is transferred from one trophic level to the next.

Ans :KSCSAPT 510

- The number of trophic levels in the grazing food chain is restricted as the transfer of energy follows 10 per cent law – only 10 per cent of the energy is transferred to each trophic level from the lower trophic level. [above figure]
- The decreases at each subsequent trophic level is due to two reasons:

1. At each trophic a part of the available **energy is lost in respiration** or **used up in metabolism**.
2. A part of energy is lost at each **transformation**, i.e. when it moves from lower to higher trophic level as heat.

Limitations of Ecological Pyramids

- It does not take into account the **same species belonging to two or more trophic levels**.
- It assumes a simple food chain, something that almost never exists in nature; it **does not accommodate a food web**.
- Moreover, saprophytes (plant, fungus, or microorganism that lives on decaying matter) are not given any place in ecological pyramids even though they play a vital role in the ecosystem.

22. C

BIOTIC INTERACTION :

The biological community of an area or ecosystem is a complex network of interactions. The interaction that occurs among different individuals of the same species is called **intraspecific interaction** while the interaction among individuals of different species in a community is termed as **interspecific interaction**.

1. Amensalism:

This is a negative association between two species in which one species harms or restricts the other species without itself being adversely affected or harmed by the presence of the other species. one species is inhibited while the other species is unaffected.

2. Predation:

In this type of interaction **predator** captures, kills and eats an animal of another species called the **prey**.The predator naturally benefits from this relationship;while the prey is harmed. Predators like leopards, tigers and cheetahs use speed, teeth and claws to hunt and kill their prey.

3. Parasitism:

In this type of interaction, one species is harmed and the other benefits.

Parasitism involves parasite usually a small size organism living in or on another living species called the **host** from which the parasite gets its nourishment and often shelter.

- The parasite is benefited and the host is harmed.
- Tap worm, round worm, malarial parasite, many bacteria, fungi, and viruses are common parasites of humans.

4. Competition:

This is an interaction between two populations in which both species are harmed to some extent.Competition occurs when two populations or species, both need a vital resource that is in short supply.The vital resource could be food, water, shelter, nesting site, mates or space.

Ans :KSCSAPT 510

5. Commensalism:

In this relationship one of the species benefits while the other is neither harmed nor benefited.

- Some species obtain the benefit of shelter or transport from another species.
- example of commensalisms is the relationship between trees and epiphytic plants.
- Epiphytes live on the surface of other plants like ferns, mosses and orchids and use the surface of trees for support and for obtaining sunlight and moisture.
- The tree gets no benefit from this relationship nor are they harmed.

6. Mutualism:

This is a close association between two species in which both the species benefit.

- some mutualisms are so intimate that the interacting species can no longer live without each other as they depend totally on each other to survive. Such close associationsare called **symbiosis**.
- An example of such close mutualistic association is that of termite and their intestinal flagellates.
- Termites can eat wood but have no enzymes to digest it.
- However, their intestine contains certain flagellate protists (protozoans) that have the necessary enzymes to digest the cellulose of the wood eaten by termites and convert it into sugar.
- The flagellates use some of this sugar for their own metabolism while enough is left for the termite.
- Both termite and flagellates cannot survive without each other.
- Another familiar example of symbiosis is seen in pollination of flowers where flowering plants are cross pollinated by the bees which benefit by getting nectar from the plants and both cannot survive without the other.

7. Neutralism:

Neutralism describes the relationship between two species which do interact but do not affect each other.

- It is to describe interactions where the fitness of one species has absolutely no effect what so ever on that of other.
- True neutralism is extremely unlikely and impossible to prove.
- When dealing with the complex networks of interactions presented by ecosystems, one can not assert positively that there is absolutely no competition between or benefit to either species.
- Since true neutralism is rare or non-existent, its usage is often extended to situations where interaction are merely insignificant or neglible.

Interaction	Species A	Species B
Commensalism	Receives benefit	Not affected
Mutualism	Receives benefit	Receives benefit
Parasitism	Receives benefit	Harmed

Ans :KSCSAPT 510

Table 1 – Impact of symbiotic relationships on organisms.

Relationship	Self	Opponent
Amensalism	Neutral	Harm
Commensalism	Benefit	Neutral
Competition	Harm	Harm
Mutualism	Benefit	Benefit
Parasitism	Benefit	Harm
Predation	Benefit	Harm
Proto-cooperation	Benefit	Benefit

23. B

    Umbrella species are typically large and require a lot of habitat.by protecting this larger area, other species are protected as well

    Coral reefs are the example of foundation species

    Lichen indicates sulphur-dioxide pollution because it is a indicator species

Types of Species

The species according to their role are divided as:

• Dominant species

These are species with substantially higher abundance or biomass than other species in a community. They exert a powerful control over the occurrence and distribution of other species. For example: Tidal swamps in the tropics are usually dominated by species of mangrove (Rhizophoraceae).

• Keystone species

These are species that is not necessarily abundant in a community yet exerts strong control on community structure by the nature of its ecological role or niche. A small number of keystone species can have a huge impact on the environment.

A keystone species' disappearance would start a domino effect. Other species in the habitat would also disappear and become extinct. The keystone species' disappearance could affect other species

that rely on it for survival. For example, the population of deer or rabbits would explode without the presence of a predator. The ecosystem cannot support an unlimited number of animals, and the deer soon compete with each other for food and water resources. Their population usually declines without a predator such as a mountain lion.

• Foundation Species

Foundation species play a major role in creating or maintaining a habitat that supports other species. Corals are one example of a foundation species in many islands in the South Pacific Ocean.

Corals produce the reef structures on which countless other organisms, including human beings, live. Umbrella Species An umbrella species is a large animal or other organism on which many other species depend.

• Umbrella species

Umbrella species are very similar to keystone species, but umbrella species are usually migratory and need a large habitat.

Protection of umbrella species is thought to automatically protect a host of other species. Tigers are an example of an umbrella species. Efforts to save wild tigers in forests in the Indian state of Rajasthan also accomplish the goal of saving other species there, such as leopards, boars, hares, antelopes, and monkeys.

• Critical Link Species

They are species that play an important role in supporting network species as pollinators, dispersal agents, absorption or circulation of nutrients, etc. Mycorrhizal fungi help the vascular plants in obtaining inorganic nutrients from soil and organic residues.

• Flagship species

Flagship species are species that have the ability to capture the imagination of the public and induce people to support conservation action and/or to donate funds.

Ans :KSCSAPT 510

These are popular, charismatic species that serve as symbols and rallying points to stimulate conservation awareness and action.

Examples of flagship species include the Bengal tiger, the giant panda, Asian elephant (Elephas maximus), etc.
Flagship species can represent an environmental feature (e.g. a species or ecosystem), cause (e.g. climate change or ocean acidification), organization (e.g. NGO or government department) or geographic region (e.g. state or protected area).

• **Indicator species**

An indicator species is an organism whose presence, absence or abundance reflects a specific environmental condition.

Indicator species can signal a change in the biological condition of a particular ecosystem, and thus may be used as a proxy to diagnose the health of an ecosystem. For example, plants or lichens sensitive to heavy metals or acids in precipitation may be indicators of air pollution.

Indicator species can also reflect a unique set of environmental qualities or characteristics found in a specific place, such as a unique microclimate.

• **Edge species**

The species which are found abundantly in ecotone boundary are known as edge species

Eg: Mangrove forest

24. D

- Found **only** in the northern hemisphere [due to great east-west extent. Absent in the southern hemisphere because of the narrowness in the high latitudes].
- Experienced in the regions **just below Arctic circle.**
- On its poleward side, it merges into the **Arctic tundra**.
- The climate fades into the temperate **Steppe climate.**

Ans :KSCSAPT 510

Distribution

- It stretches along a continuous belt across **central Canada**, some parts of **Scandinavian Europe** and most of **central and southern Russian**. **[50° to 70° N]**

Absent in Southern Hemisphere

- Narrowness of the southern continents in the high latitudes is the main reason.
- The **strong oceanic influence** reduces the severity of the winter.
- Coniferous forests are found only on the mountainous uplands of southern Chile, New Zealand, Tasmania and south-east Australia.

Taiga Climate

Temperature

- Summers are brief and warm reaching 20-25 °C whereas winters are long and brutually cold – always 30-40 °C below freezing.
- Annual temperature range of the Siberian Climate is the ***greatest [Almost 50-60 °C in Siberia].***
- Some of the lowest temperatures in the world are recorded in **Verkhoyansk** (68°N. 113°E) where -67 °C was once recorded.
- In North America, the extremes are less severe, because of the continent's lesser east-west stretch.
- All over Russia, nearly all the rivers are **frozen**. In normal years, the Volga is ice-covered for about 150 days.
- Occasionally cold, northerly polar local winds such as the **blizzards of Canada** and **buran of Eurasia** blow violently.
- Permafrosts [a thick subsurface layer of soil that remains below freezing point throughout the year] are generally absent as **snow is a poor conductor of heat** and protects the ground from the severe cold above.

Precipitation

- Maritime influence in the interiors is absent.
- Frontal disturbances might occur in winter.
- Typical annual precipitation ranges from 38 cm to 63 cm.
- It is quite **well distributed throughout the year**, with a **summer maxima** [convectional rain in mid-summer – 15 °C to 24 °C]
- In winter the precipitation is in the form of snow, as mean temperatures are well below freezing all the time.

Ans :KSCSAPT 510

Climate Graph of Taiga Climate

Natural Vegetation of Taiga Climate

- The predominant vegetation is **evergreen coniferous forest**.
- The conifers, which require little moisture are best suited to this type of sub-Arctic climate.
- The greatest single band of the coniferous forest is the **taiga** (a Russian word for coniferous forest) in Siberia.
- In Europe the countries that have a similar type of climate and forests are **Sweden** and **Finland**.
- There are small amounts of natural coniferous forest in Germany, Poland, Switzerland, Austria and other parts of Europe.
- In North America, the belt stretches from **Alaska** across **Canada** into **Labrador**.

Softwood trees

- The coniferous forest belts of Eurasia and North America are the **richest sources of softwood.**
- Softwood is used in building construction, furniture, matches, **paper and pulp, rayon** and other branches of the chemical industry.
- The world's greatest softwood producers are Russia, U.S.A., Canada and the **Fenoscandian countries (Finland, Norway and Sweden).**
- In the production of **wood pulp** (by both chemical and mechanical methods), the U.S.A. is the leader.
- But in the field of newsprint, **Canada** accounts for almost half of the world's total annual production.
- There are four major species in the coniferous forests – Pine, Fir, e.g. Douglas fir and balsam fir; Spruce and Larch.
- Their presence in **pure stands** and the existence of only a few species are a great advantage in commercial forest exploitation.
- Relatively inaccessible taiga of Siberia will remain the richest reserve of temperate softwood.

Characteristics of Coniferous forests

- Unlike the equatorial rain forests, Coniferous forests are of **moderate density** and are more uniform. The trees in coniferous forests grow straight and tall.
- Almost all conifers are **evergreen**. There is no annual replacement of new leaves as in deciduous trees.
- The same leaf remains on the tree for as long as five years. Food is stored in the trunks, and the bark is thick to protect the trunk from excessive cold.
- Conifers are conical in shape. Their conical shape and sloping branches prevent snow accumulation. It also offers little grip to the winds.
- Transpiration can be quite rapid in the warm summer. So, leaves are small, thick, **leathery** and needle-shaped **to check excessive transpiration.**

Ans :KSCSAPT 510

- The soils of the coniferous forests are **poor.** They are excessively **leached** and very **acidic**. Humus content is also low as the evergreen leaves barely fall and the rate of decomposition is slow. Under-growth is negligible because of the poor soil conditions.
- Absence of direct sunlight and the short duration of summer are other contributory factors.
- Coniferous forests are also found in regions with high elevation [Example: The forests just below the snowline in Himalayas].
- But on very steep slopes where soils are immature or non-existent, even the conifer cannot survive [Example: Southern slopes of Greater Himalayas].

Economic Development of Taiga Region

- Lot of coniferous forests in the northern hemisphere are still untouched due to **remoteness.**
- Only a small fraction of coniferous forests in Canada, Russia etc. are exploited leaving a huge potential for the future.
- More accessible forests are cleared for lumbering on a large scale.
- Agriculture is most unlikely as few crops can survive in the sub-Arctic climates.

Trapping

- Many fur-bearing animals are trapped in northerly lands of Canada and Eurasia.
- Wherever the cold is severe, the quality and thickness of the fur increases.
- The most severe winters produce the finest furs.
- In Canada trappers and hunters, armed with automatic rifles, reside in log cabins in the midst of the coniferous forests to track down these animals.
- Muskrat, ermine, mink, and silver fox are the most important fur-bearing animals.
- To ensure a more regular supply of furs many fur farms have been established in Canada and Siberia.

Lumbering

- This is the **most important occupation** of the Siberian type of climate.
- The vast reserves of coniferous forests provide the basis for the lumbering industry.
- **Lumberjacks:** Contract laborers called lumber jacks used to temporarily move to the forest regions to fell the trees. Now felling is done by machines.
- **Rivers for transportation:** The soft wood logs easily float on rivers. Hence rivers are used to transport logs to the sawmills located down the stream.
- **Sawmilling:** Logs are processed in saw mills into timber, plywood, and other constructional woods.
- **Paper and pulp industry:** Timber is pulped by both chemical and mechanical means to make wood pulp. Wood pulp is the raw material for paper-making and newsprint.
- **Canada and U.S.A**. are leading suppliers of **newsprint** and **wood pulp** respectively.
- **As a fuel:** Very little softwood is burnt as fuel as its industrial uses are far more significant.
- **As an industrial raw material:** In Sweden, matches form a major export item.
- From other temperate countries, timber is used for making furniture, wood- carvings, toys, packing cases etc..

Ans :KSCSAPT 510

- From the by-products of the timber, many chemically processed articles are derived such as rayon turpentine, varnishes, paints, dyes, liquid resins, wood-alcohols, disinfectants and cosmetics.

Factors that favor lumbering

Coniferous forests is characterized by the following favorable features for Lumbering.

- The conifers are **limited in species**. Pine, spruce and fir in the northern forests and larch in the warmer south are the most important.
- Unlike rainforests, they occur in **homogeneous groups [Pure stands]**. This saves time, costs and enhances the commercial value of the felled timber.
- Lumbering is normally carried out in the winter when the sap ceases to flow. This makes felling much simpler.
- The snow-covered ground makes logging and haulage [commercial transport of goods] a relatively easy job.
- The logs are dragged to the rivers and float to the saw-mills downstream when the rivers thaw [unfreeze] in spring. This has greatly assisted the lumbering industry in eastern Canada and Sweden.
- Lumbering is quite easy in Canada, Norway and Sweden as the rivers are not frozen for a greater part of the year. But in Russian taiga most of Siberian rivers drain poleward into the Arctic Ocean which is frozen for three-quarters of the year, and there are few saw-mills there.
- With the use of the Northern Sea Route, which links Murmansk and Vladivostok via the Arctic Ocean, development is increasing.
- Cheap hydro-electricity for driving the saw-mills is harnessed in the mountainous uplands of North America and Europe and has greatly assisted the lumbering industry.

25. C

    Simpson's index(D) measures the probability that two individuals randomly selected from a sample will belong to same species

    Value of index ranges from 0 to 1

    As the value of D increases diversity decreases

    Simpson's index of diversity 1-D:

    Probability that two individuals randomly selected from a sample will belong to different species,greater the value greater the diversity

26. A

    This song is from Madhya Pradesh

Ans :KSCSAPT 510

They are Sung during festivels that fall in the rainy season.these songs generally plead for a good monsoon and a good harvest as these are the songs of the farmer communities.generally the Saira dance is performed on the Pai Music

27. C

It is developed in a narrow valley flanked by steep ranges

The tributaries originating from the steep sides of parallel ridges join the longtitudinal master stream at acute angles

Upper Son and Narmada are the example of this pattern

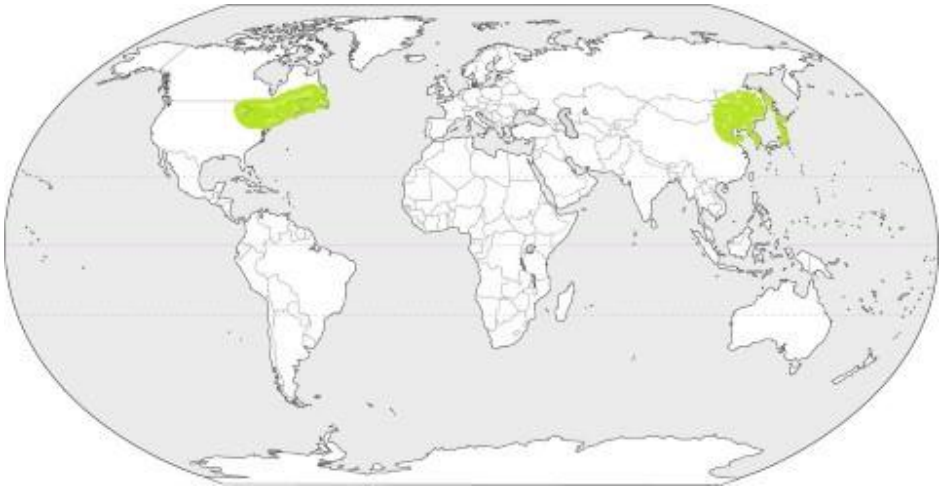
This pattern resembles the veins of a leaf

28. D

- Intermediate type of climate between the **British Type Climate (moderate)** and the **Taiga Type Climate (extreme)** of climate.
- It has features of **both** the maritime and the continental climates.

Distribution of Laurentian Climate

- Laurentian type of climate is found only in two regions and that too only in the northern hemisphere.



North American region

- North-eastern North America, including **eastern Canada, north-east U.S.A.**, and **Newfoundland**. This may be referred to as the North American region.

Ans :KSCSAPT 510

Asiatic region

- Eastern coastlands of Asia, including eastern **Siberia, North China, Manchuria, Korea and northern Japan.**

Absent in Southern Hemisphere

- In the southern hemisphere only a small section of continents extends south of 40°S latitude.
- Some of these small sections come under the rain-shadow region of Andes (Patagonia) and hence Westerlies hardly ever reach these regions.
- So these regions are subjected to **aridity** rather than continentiality.
- In other regions, the oceanic influence is so profound that neither the continental nor the eastern margin type of climate exists.

Laurentian Climate

Temperature

- Characterized by **cold, dry winters and warm, wet summers**.
- Winter temperatures is below freezing-point and snow fall is quite natural.
- Summers are as warm as the tropics (~25 °C).

Precipitation

- Rainfall occurs throughout the year with **summer maxima** [easterly winds from the oceans bring rains]
- Annual rainfall ranges from 75 to 150 cm [two – thirds of rainfall occurs in the summer].
- Dry **Westerlies** that blow from continental interiors dominate winters.

The North American region

- In summer, prolonged heat waves cause discomfort.
- In winter, the temperature drops below freezing and snowfall occurs.
- Precipitation occurs **all-round the year** due to the influence of **Atlantic ocean (summer)** and the **Great Lakes (winter).**
- The **warm Gulf Stream** increases the moisture of easterly winds.
- The prevailing Westerlies carry depressions over the Great Lakes towards eastern regions causing wet conditions in winter [vital for the agricultural activities].
- Convergence of the warm Gulf Stream and the cold Labrador Current near Newfoundland produces dense mist and fog and gives rise to much precipitation.
- It is said that Newfoundland experiences more **drizzles** than any other part of the world.

Ans :KSCSAPT 510

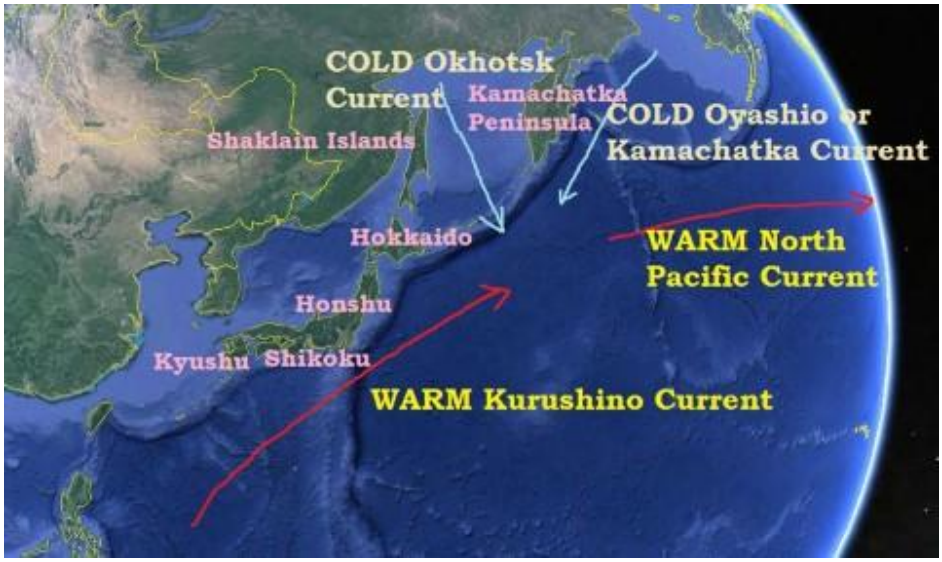
The Asiatic region

- Rainfall distribution of the Asiatic region is **far less uniform** when compared to North American Region.
- Winters are cold and **very dry** while summers are very warm and **exceptionally wet**.
- The rainfall regime resembles the **tropical monsoon type** in India.
- Intense heating of the mountainous interior of China in summer creates a region of extreme low pressure, and moisture-laden winds from the Pacific Ocean and the Sea of Japan blow in as the **South-East Monsoon**.
- Thus the Laurentian type of climate in China is often described as the **Cool Temperate Monsoon Climate**.
- It has a very long, cold winter, and a large annual range of temperature.
- Much of the winter precipitation in northern China, Korea and Hokkaido, Japan, is in the form of **snow.**

Japan

- The climate of Japan is modified by the **meeting of warm and cold ocean currents.**
- It receives adequate rainfall from both the South-East Monsoon in summer and the North-West Monsoon in winter (western coasts of Japan)
- The **warm Kuroshio** makes the climate of Japan less extreme.
- The meeting zone between **warm Kuroshio** from south and **cold Oyashio** from the north produce fog and mist, making north Japan a **'second Newfoundland'**.
- ***Fishing*** replaces agriculture as the main occupation in many of the **indented coastlands**.

Ans :KSCSAPT 510



Natural Vegetation – Laurentian Climate

- The predominant vegetation is **cool temperate forest**.
- The heavy rainfall, the warm summers and the damp air from fogs, all **favor** the growth of trees.
- Forest tend to be **coniferous** north of the 50°N latitude.
- In the Asiatic region (eastern Siberia and Korea), the coniferous forests are a continuation of the great coniferous belt of the taiga.

Lumbering

- **Timber** and **fish** are the leading export items.
- Much of the coniferous forests of fir, spruce and larch are exploited to a great extent.
- Eastern Canada is the heart of the Canadian timber and wood pulp industry [**St. Lawrence River helps in export**].
- South of latitude 50°N., the coniferous forests give way to *deciduous forests*. Oak, beech, maple and birch are most common.
- Almost homogeneous species of trees **[pure stands]**, and the predominance of only a handful of species greatly enhance the commercial value of these forests.
- They have been extensively felled for the extraction of **temperate hardwood.** [From Laurentian Climate regions, both temperate hardwood and temperate softwood are obtained]
- In Manchuria, Korea and Japan, the forests have made way for the **agriculture.**

Ans :KSCSAPT 510

Economic Development – Laurentian Climate

- Lumbering and its associated **timber, paper and pulp** industries are the most important economic undertaking.
- Agriculture is less important because of long and severe winters.
- In the North American region, farmers are engaged in **dairy farming.**
- The **Annapolis valley in Nova Scotia** is the world's most renowned region for **apples.**
- Fishing is, however, the most outstanding economic activity.

Fishing off Newfoundland

- Regions around the **Grand Banks of Newfoundland** are the **world's largest fishing grounds.**
- Mixing of **warm Gulf Stream** and **cold Labrador currents** make the region the most productive fishing ground on earth.

Fish feed on minute marine organisms called plankton. Plankton is abundantly available in shallow waters [continental shelves] where they have access to both sunlight as well as nutrients. Also, cold and warm water mixing creates upwelling of cold nutrient rich water to the surface.

- The gently sloping continental shelves stretch for over 200 miles south-east of Newfoundland, and off the coasts of the Maritime Provinces and New England.
- Hence microscopic plankton are abundant [Continental Shelf + Mixing of Warm and Cold Ocean Currents].
- Fish of all types and sizes feed and breed here and support a **thriving fishing industry.**
- Along with Canada and U.S.A., countries like Norway, France, Britain, Portugal, Denmark, Russia and Japan, also send fishing fleets to the Grand Banks.
- In Newfoundland, fishing provides employment for almost the entire population.
- Further inland, in lakes and rivers, such as the St. Lawrence and the Great Lakes, freshwater fish, e.g. salmon etc. are caught.
- All the fishing activities are carried out by highly mechanized trawlers which can store fish in refrigerated chambers for months.
- St. John's, chief port of Newfoundland is the headquarters of the Grand Banks fishing industries.
- All processing activities like cutting, cleaning, packing for disposal are done at the ports itself.
- Over-fishing is a growing problem.

29. C

- This type of climate has **alternate wet and dry seasons** similar to monsoon climate but has **considerably less annual rainfall**.
- Also, there is **no distinct rainy season** like in monsoon climate.

[Only two seasons – winter and summer. **Rains occur in summer**].

Ans :KSCSAPT 510

- Floods and droughts are common.
- Vegetation, wildlife and human life are quite different from monsoon climate regions.

Distribution of Savanna Climate

- It is confined within the tropics and is best developed in **Sudan**, hence its name the **Sudan Climate**.
- It is a **transitional type** of climate found between the **equatorial rainforests** and **hot deserts.**

African Savanna

- The belt includes **West African Sudan**, and then curves southwards into East Africa and southern Africa north of the Tropic of Capricorn.

South American Savanna

- There are two distinct regions namely the **llanos** of the Orinoco basin [north of equator] and the **compos** of the Brazilian Highlands [South of equator].

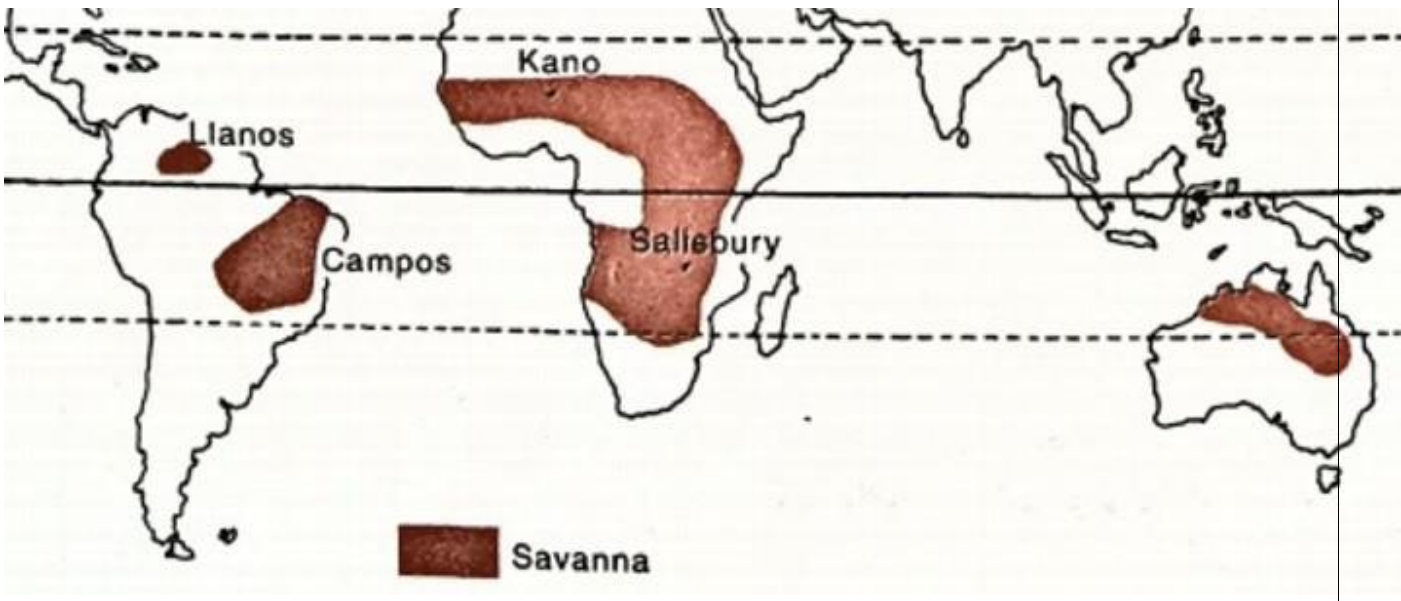
Australian savanna

- The Australian savanna is located south of the monsoon strip (northern Australia) running from west to east north of the Tropic of Capricorn.

Indian Savanna

- Certain parts across Northern Karnataka, Southern Maharashtra and Telangana exhibit characteristics of both semi-arid and savanna climate.
- Due to irrigation and cultivation, this region is different from other savanna regions.

Ans :KSCSAPT 510



Savanna Climate

Rainfall

- Mean annual rainfall ranges from **80 – 160 cm** [Rainfall decreases with distance from equator].
- In the northern hemisphere, the rainy season begins in May and lasts till September.
- In the southern hemisphere, the rainy season is from October to March.

Temperature

- Mean annual temperature is **greater than 18° C.**
- The monthly temperature hovers between 20° C and 32° C for lowland stations.
- **Highest temperatures do not coincide with the period of the highest sun** (e.g. June in the northern hemisphere) but occur just before the onset of the rainy season, i.e. April in Northern Hemisphere and October in Southern Hemisphere.
- **Days are hot and nights are cold**. This **extreme diurnal range** of temperature is another characteristic feature of the Sudan type of climate.

Winds

- The prevailing winds of the region are the Trade Winds, which bring rain to the coastal districts.
- They are strongest in the summer [favorable position of ITCZ] but are relatively dry by the time they reach the continental interiors or the western coasts [Trade winds are easterlies – flow from east to west. So rainfall decreases from east to west here].
- In West Africa, the North-East Trades, in fact, blow off-shore [continent to sea] from the Sahara Desert and reach the Guinea coast as a dry, dust-laden winds.

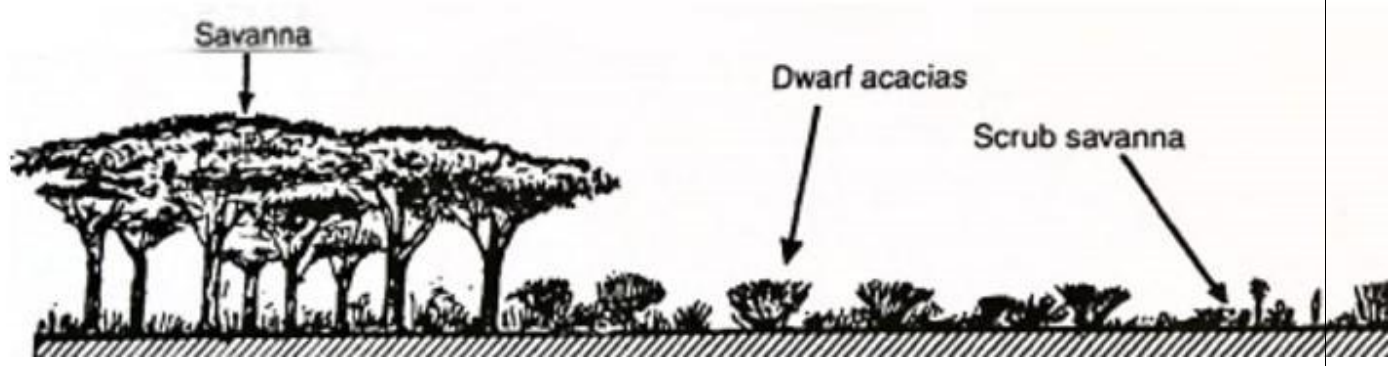
Ans :KSCSAPT 510

What is the reason for alternating wet and dry seasons in Savanna type climate?

- On shore winds is summer bring rains.
- Off-shore winds in winter keep the climate dry.

Natural Vegetation of Savanna Climate

- The savanna landscape is typified by **tall grass and short trees**.
- The grasslands are also called as ***'bush-veld'.***
- The trees are **deciduous**, shedding their leaves in the cool, dry season to prevent excessive loss of water through transpiration, e.g. acacias.
- Trees usually have **broad trunks**, with water-storing devices to survive through the prolonged drought.
- Many trees are umbrella shaped, exposing only a narrow edge to the strong winds.
- In true savanna lands, the grass is **tall and coarse**, growing 6 to 12 feet high. The **elephant grass** may attain a height of even 15 feet.
- Grasses appear greenish and well-nourished in the rainy season but turns yellow and dies down in the dry season that follows.
- As the rainfall diminishes towards the deserts the savanna merges into thorny scrub.



Animal Life of the Savanna

- The savanna is known as the **'big game country'** as thousands of animals are trapped or killed each year by people from all over the world.
- There are two main groups of animals in the savanna, the grass-eating herbivorous animals and the fleshing-eating carnivorous animals.
- The herbivorous include the zebra, antelope, giraffe, deer, gazelle, elephant etc. [most of the National geographic and Animal Planet documentaries on wild animals are shot in savanna regions] and carnivorous animals include the lion, tiger, leopard, hyena, panther, jaguar, jackal etc..
- Species of reptiles and mammals including crocodiles, alligators, giant lizards live together with the larger rhinoceros and hippopotamus in rivers and marshy lakes.

Ans :KSCSAPT 510

Life and Economy in the Savanna

- Many tribes live in savanna region. Tribes like the **Masai** tribes of the East African plateau are pastoralists whereas **Hausa** of northern Nigeria are settled cultivators.
- The old grazing grounds of Masai tribes in the **Kenyan Highlands** were taken over by the immigrant white settlers for plantation agriculture (coffee, tea, cotton) and dairy farming.
- The cattle kept by the Masai are kept entirely for the supply of milk. They don't slaughter cattle for meat. **Agriculture is barely practiced**.
- The Hausa are a tribe of settled cultivators who inhabit the savanna lands of the Nigeria. They are more advanced in their civilization.
- They do not practice shifting cultivation. Instead, they clear a piece of land and use it for several years.

Crops in Savanna

- Settlements in central Africa, northern Australia and eastern Brazil have shown that the savannas have immense agricultural potential for **plantation agriculture** of cotton, cane sugar, coffee, oil palm, groundnuts and even tropical fruits.
- Tropical Queensland, despite its scarcity of labour force has been very successful in developing its huge empty land.
- Kenya, Uganda, Tanzania and Malawi have already taken to large-scale production of cotton.
- In West Africa, the commercial cultivation of groundnuts, oil palm and cocoa have been gradually extended into the savanna lands.
- In the cooler highlands, temperate crops have been successfully raised.

Farming

- Droughts are long due to unreliable rainfall.
- Political instability hinders the development of agricultural infrastructure.
- The Sudan Climate, with **distinct wet-and-dry periods** is also responsible for the **rapid deterioration of soil fertility**.
- During the rainy season, torrential downpours of heavy rain cause leaching of nitrates, phosphates and potash.
- During the dry season, intense heating and evaporation dry up most of the water.
- Many savanna areas therefore have **poor lateritic soils** which are incapable of supporting good crops.

Cattle rearing

- The savanna is said to be the **natural cattle country** and many of the native people are pastoralists.
- But the **quality of grass doesn't support large scale ranching**.
- Grasses here are no match to nutritious and soft grasses of temperate grasslands.
- The cattle varieties are also poor and yield little meat or milk.
- The export of either beef or milk from the tropical grasslands is so far not important.

Ans :KSCSAPT 510

- Few regions progressed with the adaptation of science and technology. **Queensland** has become Australia's largest cattle producing state. Both meat and milk are exported.

30. D

- Deserts are regions where **evaporation exceeds precipitation.**
- There are mainly two types – hot like the **hot deserts** of the Saharan type and temperate as are the **mid-latitude deserts** like the Gobi.

Hot Desert Climate

- The aridity of the hot deserts is mainly due to the effects of **off-shore Trade Winds**, hence they are also called **Trade Wind Deserts.**
- The major hot deserts of the world are located on the **western coasts of continents** between latitudes 15° and 30°N. and S (Question asked in Previous Mains Exam).
- They include the biggest **Sahara Desert** (3.5 million square miles), **Great Australian Desert, Arabian Desert, Iranian Desert, Thar Desert, Kalahari** and **Namib Deserts**.
- In North America, the desert extends from Mexico into U.S.A. and is called by different names at different places, e.g. the **Mohave, Sonoran, Californian** and **Mexican Deserts.**
- In South America, the **Atacama or Peruvian Desert** (**rain shadow effect** and **off-shore trade winds**) is the **driest** of all deserts with less than 2 cm of rainfall annually.

Ans :KSCSAPT 510

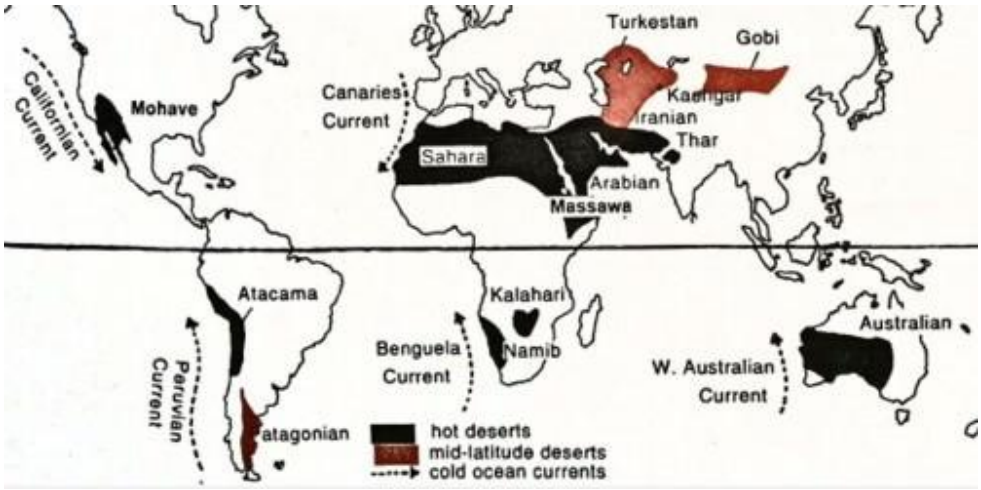
Mid-Latitude Desert Climate

- The temperate deserts are rainless because of either **continentiality or rain-shadow effect.** [**Gobi desert** is formed due to **continentiality** and **Patagonian desert** due to **rain-shadow effect**]
- Amongst the mid-latitude deserts, many are found on plateau and are at a considerable distance from the sea. These are **Ladakh, The Kyzyl Kum, Turkestan, Taklimakan and Gobi deserts of Central Asia, drier portions of the Great Basin Desert of the western United States** and **Patagonian Deserts of Argentina etc..**
- The Patagonian Desert is more due to its rain-shadow position on the leeward side of the lofty Andes than to continentiality.

Desert Climate

Rainfall (Both Hot and Cold deserts)

- Deserts, whether hot or mid-latitude have an annual precipitation of **less than 25 cm.**
- **Atacama (driest place on earth)** has practically no rain at all.
- Rain normally occurs as violent thunderstorms of the convectional type.
- It 'bursts' suddenly and pours continuously for a few hours over small areas.
- The thunderstorm is so violent, and comes so suddenly that it has disastrous consequences on desert landforms [flash floods].



Temperature of Hot deserts

- There is no cold season in the hot deserts and the average summer temperature is high around 30°C.
- The highest temperature recorded is **57.77° C in 1922 at A1 Azizia, Libya.**
- The reasons for the high temperatures are obvious—a clear, cloudless sky, intense insolation, dry air and a rapid rate of evaporation.

Ans :KSCSAPT 510

- Coastal deserts by virtue of their maritime influence and the cooling effect of the cold currents have much lower temperatures.
- The desert interiors, however, experience much higher summer temperatures and the winter months are rather cold.
- The diurnal range of temperature in the deserts is very great. Intense insolation by day in a region of dry air and no clouds causes the temperature to rise with the sun.
- But as soon as the sun sets, the land loses heat very quickly by radiation and the mercury levels drop.
- **High diurnal temperature range** is a typical feature of hot deserts. Average diurnal range varies from 14 to 25° Celsius.
- Frosts may occur at night in winter.

Climatic Conditions in the Mid-Latitude deserts

- These inland basins lie hundreds of miles from the sea, and are sheltered by the high mountains all around them. As a result they are **cut off from the rain-bearing winds**.
- Occasionally depressions may penetrate the Asiatic continental mass and bring light rainfall in winter. Due to their coldness and elevation, snow falls in winter.
- The annual range of temperature is **much greater** than that of the hot deserts. **Continentiality** accounts for these extremes in temperature.
- Winters are often severe, freezing lakes and rivers, and strong cold winds blow all the time. When the ice thaws in early summer, floods occur in many places.

Desert Vegetation

- The predominant vegetation of both hot and mid-latitude deserts is **xerophytic** or drought-resistant.
- This includes the cacti, thorny bushes, long-rooted wiry grasses and scattered dwarf acacias.
- Trees are rare except where there is abundant ground water to support clusters of **date palms.**
- Along the western coastal deserts washed by cold currents as in the Atacama Desert, support a thin cover of vegetation.
- Intense evaporation increases the salinity of the soil so that the dissolved salts tend to accumulate on the surface forming hard pans [Bajada, Palaya].
- Absence of moisture retards the rate of decomposition and desert soils are very deficient in humus.
- Most desert shrubs have long roots and are well spaced out to gather moisture, and search for ground water. Plants have few or no leaves and the foliage is either **waxy, leathery, hairy or needle-shaped** to reduce the loss of water through transpiration.
- The seeds of many species of grasses and herbs have **thick, tough skins** to protect them while they lie dormant.

Life in the Deserts

- Despite its inhospitality, the desert has always been peopled by different groups of inhabitants.

Ans :KSCSAPT 510

Tribe	*Desert*	*Occupation*
Bedouin Arabs	Arabia	nomadic herdsmen
Tuaregs	Sahara	nomadic herdsmen
Gobi Mongols	Gobi	nomadic herdsmen
Bushmen	Kalahari	primitive hunters and collectors.
Bindibu	Australia	primitive hunters and collectors.

The settled cultivators

- The life-giving waters of the Nile made it possible for the Egyptians to raise many crops as early as 5,000 years ago.
- Modem concrete dams constructed across the Nile e.g. **Aswan and Sennar Dams** improved agriculture.
- In the same way, desert cultivators rely on the **Indus in Pakistan**, the **Tigris-Euphrates in Iraq**, and the **Colorado in the Imperial Valley of California**.
- In the deserts, wherever there are oases, some form of settled life is bound to follow. These are depressions of varying sizes, where underground, water reaches the surface.
- Some of them are abnormally large like the **Tafilalet Oasis in Morocco** which measures 5,000 square miles.
- A wall is usually constructed around the oasis to keep out the violent dust storms called **simooms.**
- The most important tree is the date palm. The fruit is consumed locally and also exported.
- Other crops cultivated include maize, barley, wheat, cotton, cane sugar, fruits and vegetables.

Ans :KSCSAPT 510

The mining settlers

- It was **gold** that brought immigrants scrambling into the Great Australian Desert.
- Some of them like **Kalgoorlie and Coolgardie** have become towns of considerable size.
- In the Kalahari Desert, the discovery of **diamonds** and **copper** has brought many white men to the 'thirstland' as it is called.
- Even in the most arid Atacama, in northern Chile, large mining camps have been established for the mining of **caliche (cemented gravels)** from which **sodium nitrate**, a valuable fertilizer, is extracted and exported to all parts of the world.
- Besides nitrates, **copper** is also mined. **Chuquicamata** is the world's largest copper town.
- Similarly in the deserts of North America, silver is mined in Mexico, uranium in Utah and copper in Nevada.
- In recent years, the discovery of oil, in many parts of the Saharan and Arabian Deserts has transformed this forgotten part of the globe.
- Saudi Arabia, Iran, Iraq, Kuwait, Algeria, Libya, Lebanon, Nigeria etc. are important oil producing desert countries.

31. B

Tata Vadya	Chordophones	Stringed instruments
Sushira Vadya	Aerophones	Wind instruments
Avanaddha Vadya	Membranophones	Percussion instruments
Ghana Vadya	Idiophones	Solid instruments

Tata Vadya (Stringed Instruments)

- Sound is produced by the vibration of a string or chord.
- Vibrations are caused by plucking or by bowing on the string
- Degree to which string is tightened, determines pitch of the note & also, to some extent, the duration of the sound

Ans :KSCSAPT 510

- Increase or decrease in the length of the vibrator wire is responsible for the changes in pitches of notes-swaras.
- Harps → Oldest evidence in the shape of the hunter's bow.
- Veena was the generic term for stringed instruments' referred to in texts
- Another class is of the dulcimer type, where a number of strings are stretched on a box of wood → Santoor
- Bowed instruments – the upright (Sarangi) and the inverted (Violin)

Different parts of a stringed instrument

Resonator (Toomba)	Either made of wood or from a specially grown gourd
Tabli	Wooden over this Toomba
Danda	Resonator attached to the fingerboard, at the top end of which are Khoontis, for tuning the instrument
Bridge	A bridge made of ivory or bone on the Tabli
Tarab	Main strings passing over the bridge – When these strings vibrate, they add resonance to the sound

---

Sushira Vadya (Wind Instruments)

- Sound is produced by blowing air into an hollow column
- Pitch of the note is determined by controlling the air passage
- Melody is played by using the fingers to open and close the in the instrument

Ans :KSCSAPT 510

- Indus civilizations excavations → bird whistles of clay, wind and percussion instruments inscribed on seals
- Wind instruments are roughly divided into two categories on the basis of how sound is produced viz.

Flutes

- The simplest of these instruments, generally made of bamboo or wood
- Mostly played by musicians of the tribal and rural areas
- Resembles beak flutes which have a narrow aperture at one end.

Reed

- Have one or two reeds inserted in the hollow beak or tube of the instrument – which vibrate when air is blown into them
- Reeds are bound together with a gap between them before inserting into the body of the instrument.
- The body of the tube is conical in shape; narrow at the blowing end and opening out gradually, with a metallic bell at the farther end to enhance the volume of the sound
- A set of spare reeds, an ivory or silver needle for adjusting and cleaning the reeds are also hung from the mouth piece of the instrument.
- Examples → Shehnai & Nadaswaram

<u>Avanaddha Vadya (Percussion Instruments)</u>

- Sound is produced by striking the animal skin which has been stretched across an earthen or metal pot or a wooden barrel or frame
- The earliest references to such instruments have been found in the Vedas where there is mention of Bhumi Dundhubhi
- Bhumi Dundhubhi was a hollow pit dug in the ground and covered with the hide of a buffalo or ox which was stretched across the pit

Ans :KSCSAPT 510

- The tail of the animal was used for striking the animal hide and thus sound was produced
- Examples → Oordhwaka, Tabla, Ankya, Alingya & Damaru

Oordhwaka

- Oordhwaka drums are placed vertically before the musician and sound is produced by striking them with sticks or the fingers.
- Prominent among these are the Tabla pair and Chenda

Tabla

- Tabla pair is a set of two vertical Oordhwaka drums
- Right side is called the Tabla and the left, the Bayan or Dagga
- Tabla pair is used as accompaniment to vocal and instrumental Hindustani music and with many dance forms of northern India
- Prominent musicians → Ustad Alla Rakha Khan and his son Zakir Hussain, Shafat Ahmed and Samata Prasad

Tabla

- Has a wooden body with a covering of animal skin
- Whole structure is held together with leather straps
- Ink paste is applied at the centre of the animal skin
- Between the straps & wooden body, oblong wooden blocks are placed for tuning the drums

Bayan

- Bayan is made of clay or metal & is also covered with animal skin
- Some musicians do not tune this drum to an accurate pitch
- Bayan also has ink paste applied on its center

Ankya

- Ankya drums are held horizontally before the musician and usually both sides are covered with animal hide
- Sound is produced by striking both sides with sticks or fingers
- Prominent examples include Mridangam, Pakhawaj & Khol

Ans :KSCSAPT 510

- Seals which have been excavated of the Indus Civilization show figures of men playing the horizontal drums hung from the neck

Alingya

- Drums having the animal skin fixed to a wooden round frame
- Held close to the body with one hand while the other hand is used for playing on the instrument
- Notable example → Duff, Dufl

Damaru

- Ranges from the small Huddaka of Himachal Pradesh to the larger instrument known as Timila of the southern region
- Huddaka is struck with the hands while Timila is hung from the shoulders and played with sticks and fingers.
- Also known as the hourglass variety of drums as their shape resembles an hourglass

---

<u>Ghana Vadya (Solid Instruments)</u>

- Earliest instruments invented by man
- Once constructed, this variety of instrument do not need special tuning prior to playing
- Principally rhythmic in function and are best suited as accompaniment to folk and tribal music and dance
- Notable examples → Jhanj, Ghatam

Jhanj Player, Konarak, Orissa

- Sun temple (Konarak, Orissa) → large sculpture of a lady playing the Jhanj
- Jhanj is also known as manjira or cymbals

Ghatam, Carnatic music

- An earthenware pot → the artist uses the fingers, thumbs, palms, and heels of the hands to strike its outer surface

Ans :KSCSAPT 510

- An airy low-pitch bass sound, called Gumki, is created by hitting the mouth of the pot with an open hand
- Artist sometimes presses the mouth of the pot against their bare belly, which deepens the tone of the bass stroke (Gumki)
- Different tones can be produced by hitting different areas of the pot with different parts of the hands
- The Ghatam usually accompanies a mridangam

32. D

Carnatic music is a system of music commonly associated with the southern part of India especially. Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. Carnatic music is completely melodic with improvised variations. Purandara Dasa is credited with having founded today's Carnatic music.He is credited with having elevated Carnatic music from religious and devotional music into the realm of a performing art. Carnatic music is usually performed by a small ensemble of musicia ns consi s t ing of a principa l per former (vocalist) a viol in, mridanga ,and a tamburu. Today carnatic music is presented by musicians in concerts or recordings either vocally or through instruments.
M.L.Vasantha kumari was a carnatic musician and playback singer for film songs. M.L. Vasanthakumari popularised unfamiliar ragas. She popularised the compositions of Purandara Dasa. She had received many awards including the Padma Bhushan.

Types of Carnatic Music and its meaning Ragam

Tanam- Pallavi - Elaborate r hythmic a nd melodic variat ion in unmeasured sense.
Kriti-Kirthanai - Most popular type which refers to devotional music laced with poetic beauty.
Varnam - Performed at the beginning of a concert ; a completely composed piece.
Padam - Slower tempoed love songs referring to the human yearning for the adored god head.
Javalis - Faster tempoed love songs with direct description of human love.
Tillana - Meaningful phrases are interspersed with variety of meaningless syllables

33. D

Sustainable and Accelerated Adoption of efficient Textile technologies to Help Small Industries (SAATHI) is a joint initiative by Ministries of Power and Textiles.

• It aims to accelerate the adoption of energy efficient textile technologies in the powerloom sector and promote cost savings.

• Energy Efficiency Services Limited (EESL), a public sector unit under Ministry of power will help in implementing the initiative.

• EESL will replace old inefficient electric motors with energy efficient motors.

Ans :KSCSAPT 510

• It would procure energy efficient power loom and other kits in bulk and provide them to the small and medium power loom units at no upfront cost

34. D

It is a mobile app launched by the Ministry of Commerce and Industry.

• It provides wide range of information required to undertake international trade.

• The information includes policy provisions for export and import, applicable GST rate, available export incentives, tariff,preferential tariff.

• ITC (HS) code refers to Indian Trade Clarification (ITC) and are based on Harmonized System (HS) of Coding.

• It was adopted in India for import-export operations.

• This app works internally to map the ITC HS code of other countries with that of India and provides all the required data without the users bothering about the HS code of any country

35. B

Move Hack is a global level hackathon launched by NITI Aayog, to crowd source solutions aimed at the future of mobility in India.

• It aims to bring about innovative, dynamic and scalable solutions to problems pertaining to mobility.

• It is open to individuals from all nationalities, making it a truly global hackathon.

• Move Summit 2018, which is going to be organised by NITI Aayog in New Delhi, will announce the winners of this hackathon.

• It is expected that it will provide solutions to mobility-related challenges and pave the way for developing interconnected global community

36. D

Ocean Services, Technology, Observations, Resources Modelling and Science (O-SMART) is an umbrella scheme for the development of ocean activities.

• It encompasses a total of 16 sub-projects addressing ocean development activities by the Ministry of Earth Sciences.

• Its implementation period is from 2017-18 to 2019-20.

• It aimed at stepping up ocean research and setting up early warning weather systems.

• The important deliverables under the scheme are,

i. Strengthening of ocean observations, modelling, ocean services for fishermen,

ii. Setting up marine coastal observatories for tracking marine pollution in 2018,

iii. Setting up Ocean Thermal Energy Conversion Plant (OTEC) in Kavaratti in Lakshadweep.

Ans :KSCSAPT 510

iv. Setting up of the state-of-the-art Early Warning Systems to deal with ocean disasters like tsunami, storm surges.

• The technologies developed under this Scheme will help in harnessing the vast ocean resources of both living and nonliving resources from the seas

37. A

Bureau of Indian Standards (BIS) is the National Standard body of India which sets the quality regulations for various product

• BIS is set to formulate new standards to measure quality of services offered to consumers across different sectors

• The initial focus will be the 12 champion services sectors identified by the government.

• These include IT, tourism and hospitality, transport and logistics, accounting and finance services, legal services,communication services and construction

• A framework for quality services will be provided to consumers and a benchmark to deal with consumer complaints will be set by BIS

38. C

The Hague Convention on Protection of Children and Co-operation in Respect of Inter-country Adoption was adopted in the year of 1993.

• It protects children and their families against the risks of illegal, irregular, premature or ill-prepared adoptions abroad.

• It seeks to prevent the abduction, the sale of, or traffic in children.

• It reinforces Article 21 of the UN Convention on the Rights of the Child.

• The convention operates through a system of national Central Authorities.

• In India, Central Adoption Resource Authority (CARA) is the nodal agency designated to deal with the provisions of this convention.

• Recently, the government of Australia has decided to recommence the adoption programme with India as per this convention

39. A

The G20 is made up of 19 countries and the European Union.

• G20 Digital Economy Ministerial Meeting was recently held at Salta, Argentina.

• This event took place as part of G20 Leaders' summit, which is going to be held at the end of 2018.

• It is going to be hosted by Argentina under the theme "Building consensus for fair and sustainable development".

Ans :KSCSAPT 510

• Under the Turkish presidency in 2015, G20 leaders recognized the modern period as a critical era of digital transformation.

• The Digital Economy Task Force (DETF) was established under the 2017 German presidency, based on the decision adopted in Hangzhou in 2016 under the Chinese Presidency.

• DETF will meet twice in a year to provide recommendations for inclusive development in the era of digital transformation

40. C

The Khangchendzonga Biosphere Reserve in Sikkim has been included in the UNESCO designated World Network of Biosphere Reserves (WNBR).

• The decision was taken at the 30th Session of International Coordinating Council (ICC) of Man and Biosphere (MAB) Programme of UNESCO held at Palembang, Indonesia.

• It has become the 11th Biosphere Reserve from India to be included in WNBR.

• The core zone of Khangchendzonga National Park was designated a World Heritage Site in 2016 under the 'mixed' category.

• The biosphere reserve is one of the highest ecosystems in the world, reaching elevations of 1, 220 metres above sea-level.

41. D

The operation 'Madad' has been launched by the Southern naval command at kochi.

• It is for assisting the state administration of Kerala and undertaking disaster relief operations due to the unprecedented flooding experienced in many parts.

• Flooding in many parts is due to incessant rainfall and release of excess water from Idukki and other dams.

• INHS Sanjivani has been deployed for rendering medical assistance.

42. A

The index is released by Economist Intelligence Unit (EIU), research and analysis wing of "The Economist" group, headquartered in London.

• It ranks 140 global cities based on their living conditions. It quantifies the challenges that might be presented to an individual's lifestyle in the cities worldwide.

• The index assigns cities scores on five broad parameters such as stability, healthcare, culture/environment, education, and infrastructure using 30 indicators.

• In this year's Global Liveability Index 2018, Vienna displaces Melbourne as the most liveable city in the world.The other top 10 cities are Melbourne, Osaka, Calgary, Sydney, Vancouver, Tokyo, Toronto, Copenhagen and Adelaide.

• Syrian capital of Damascus continues to be ranked at the bottom, Dhaka in Bangladesh is the second worst and Karachi in Pakistan is the fourth worst.

Ans :KSCSAPT 510

- Indian cities Delhi and Mumbai ranked at 112 and 117 respectively.
- This index is in contrast with the Ministry of Housing and Urban Affairs' Ease of Living Index for 111 Indian cities wherein Mumbai ranked at number 3, far ahead of New Delhi at a low 65th rank

43. C

Repo rate is the rate at which RBI lends to its clients generally against government securities. Reduction in Repo rate helps the commercial banks to get money at a cheaper rate and increase in Repo rate discourages the commercial banks to get money as the rate increases and becomes expensive.

44.D

An open market operation (OMO) is an activity by a central bank to give (or take) liquidity in its currency to (or from) a bank or a group of banks.

The central bank can either buy or sell government bonds in the open market (this is where the name was historically derived from) or, in what is now mostly the preferred solution, enter into a repo or secured lending transaction with a commercial bank: the central bank gives the money as a deposit for a defined period and synchronously takes an eligible asset as collateral.

45. C

The restructured National Bamboo Mission (NBM) has been launched this year with the approval of Cabinet Committee on Economic Affairs (CCEA) under the National Mission for Sustainable Agriculture (NMSA) for implementation.

Objectives of the restructured NBM

· To increase the area under bamboo plantation in non-forest Government and private lands to supplement farm income and contribute towards resilience to climate change as well as availability of quality raw material requirement of industries. The bamboo plantations will be promoted predominantly in farmers' fields, homesteads, community lands, arable wastelands, and along irrigation canals, water bodies etc.

· To improve post-harvest management through establishment of innovative primary processing units near the source of production, primary treatment and seasoning plants, preservation technologies and market infrastructure.

· To promote product development keeping in view market demand, by assisting R&D, entrepreneurship & business models at micro, small and medium levels and feed bigger industry.

· To rejuvenate the under developed bamboo industry in India.

46. D

Ans :KSCSAPT 510

Goods & Services Tax Council is a constitutional body for making recommendations to the Union and State Government on issues related to Goods and Service Tax.

The GST Council is chaired by the Union Finance Minister and other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States.

Every decision of the Goods and Services Tax Council shall be taken at a meeting, by a majority of not less than three-fourths of the weighted votes of the members present and voting, in accordance with the following principles, namely: —the vote of the Central Government shall have a weightage of one third of the total votes cast, and the votes of all the State Governments taken together shall have a weightage of two-thirds of the total votes cast, in that meeting.

47.B

The Employees' Provident Fund Organisation (abbreviated to EPFO), is an organization tasked to assist the Central Board of Trustees, a statutory body formed by the Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and is under the administrative control of the Ministry of Labour and Employment, Government of India.

EPFO assists the Central Board in administering a compulsory contributory Provident Fund Scheme, a Pension Scheme and an Insurance Scheme for the workforce engaged in the organized sector in India.

It is also the nodal agency for implementing Bilateral Social Security Agreements with other countries on a reciprocal basis.

The schemes cover Indian workers as well as International workers (for countries with which bilateral agreements have been signed.

As of now 17 Social Security Agreements are operational). It is one of the largest social security organisations in India in terms of the number of covered beneficiaries and the volume of financial transactions undertaken.

The EPFO's apex decision making body is the Central Board of Trustees.

48.C

Project Sashakt was proposed by a panel led by PNB chairman Sunil Mehta.

Bad loans of up to ₹50 crore will be managed at the bank level, with a deadline of 90 days.

For bad loans of ₹50-500 crore, banks will enter an inter-creditor agreement, authorizing the lead bank to implement a resolution plan in 180 days, or refer the asset to NCLT.

For loans above ₹500 crore, the panel recom-mended an independent AMC, supported by institutional funding through the AIF.

The idea is to help consolidate stressed assets.

Ans :KSCSAPT 510

49.D

The Government of Andhra Pradesh has launched a scale-out plan to transition 6 million farms/farmers to 100% chemical-free agriculture by 2024.

This is an unprecedented transformation towards sustainable agriculture at such a massive scale.

Zero Budget Natural Farming also aims to create the human and social capital necessary for vibrant and inclusive agricultural production.

By this Andhra Pradesh became the first state to introduce ZBNF policy.

50.D

A common European area without borders.

The main objective of EU is to develop smooth and efficient trade within Europe.

Competition between companies is free and fair.

It means balanced economic growth and stable prices.

The European Union seeks to create a competitive market economy which takes into account people's wellbeing and social needs.

An important issue is environmental protection.

Efforts are made to protect the environment and repair any damage made.

The European Union seeks to promote peace not only in Europe but also elsewhere in the world.

It seeks to ensure that peace is maintained in Europe and that people have security.

With the common foreign policy, the European Union wants to make sure that the resources of the planet are used sensibly and that the environment is not destroyed.

51. d

Statement 1 is correct: In July, 2016 UN General Assembly unanimously adopted a resolution approving an agreement to make the International Organisation for Migration part of the UN as a related organization.

Established in 1951, IOM is the leading inter-governmental organization in the field of migration and works closely with governmental, intergovernmental and non-governmental partners.

Statement 2 is correct: It was founded in the wake of the World War II to resettle refugees from Europe.

IOM was granted Permanent Observer status to the UN General Assembly in 1992, and a cooperation agreement between IOM and the UN was signed in 1996.

Ans :KSCSAPT 510

Statement 3 is correct: India is its member state.

52. d

Statement 1 is correct: Lok Adalat is one of the alternative dispute redressal mechanisms, it is a forum where disputes/cases pending in the court of law or at pre-litigation stage are settled/ compromised amicably.

Statement 2 is correct: Lok Adalats have been given statutory status under the Legal Services Authorities Act, 1987.

Statement 3 is correct: Under the Act, the award (decision) made by the Lok Adalats is deemed to be a decree of a civil court and is final and binding on all parties and no appeal against such an award lies before any court of law. If the parties are not satisfied with the award of the Lok Adalat though there is no provision for an appeal against such an award.

53. d

All the surcharges and cess can be levied by the Centre at any time. And the proceeds of such taxes belong exclusively to the Centre. (Article 271)

All the duties and taxes mentioned in the Union list except surcharges, any cess, and taxes and duties mentioned in article 268, 268-A, 269 and 271 are taxes levied and collected by centre but distributed between centre and state. (article 270)

Taxes on sale and purchase of in interstate trade and commerce do not form part of Consolidated Fund of India because these taxes are assigned to states after being appropriated by Centre (article 269).

54. a

Statement 1 is correct: The 74th amendment act provides for the constitution of the following three types of municipalities in every state. 1. A nagar panchayat for a transitional area, that is, an area in transition from a rural area to an urban area. 2. A municipal council for a smaller urban area. 3. A municipal corporation for a larger urban area.

Statement 2 is correct: A cantonment board is established for municipal administration for civilian population in the cantonment area. It is set up under the provisions of the Cantonments Act of 2006 legislation enacted by the Central government. It works under the administrative control of the defence ministry of the Central government.

Statement 3 is not correct: A town area committee is set up for the administration of a small town. It is a semi-municipal authority and is entrusted with a limited number of civic functions like drainage, roads, street lighting, and conservancy. It is created by a separate act of a state legislature. Its composition, functions and other matters are governed by the act.

55. a

Ans :KSCSAPT 510

The budget goes through six steps. The first three stages are: Presentation, General Discussion and Scrutiny by departmental committees.

On the basis of report of the departmental committees, the Lok Sabha takes up voting of demand for grants. The demands are presented ministry wise. A demand become a grant after it has been voted upon.

The next step is the passing of Appropriation bill. This is done in order to satisfy the constitutional requirement which says: "no money shall be withdrawn from the Consolidated Fund of India except under appropriation made by law".

However, passing of this bill takes time. In the meantime, government needs certain amount to run its normal activities. To overcome this functional difficulty, the constitution has authorised the Lok Saha to make any grant in advance in respect to the estimated expenditure for a part of the financial year, pending the completion of the voting of demands for grants and the enactment of the appropriation bill. This provision is known as the 'vote on account'. It is passed after the general discussion on budget is over.

Finally, the Finance Bill is introduced to give effect to the financial proposals of the Government of India for the following year. The Finance Act legalises the income side of the budget and completes the process of the enactment of the budget.

56. b

The Quit India Movement was a spontaneous revolt of people against British rule'

The All India Congress Committee met at Bombay on 8 August 1942. It passed the famous resolution, 'Quit India', and proposed the starting of a non-violent mass struggle under Gandhi's leadership to achieve this aim. But on the very next day, Gandhi and other eminent leaders of the Congress were arrested. The Congress was once again declared illegal.

57. a

The British Government made an announcement on 8 August 1940, which came to be known as the ‘August Offer’:

Statement 1 is not correct - Lord Linlithgow made this offer to solicit cooperation of congress in war efforts.

Statement 2 is correct - It offered Dominion Status as the objective for India.

Statement 3 is correct - It called for an immediate expansion of Viceroy’s Executive Council.

Statement 4 is correct - It offered setting up of Constituent Assembly where mainly Indians would decide the constitution. Hence the answer is (a).

58. d

Ans :KSCSAPT 510

Stafford Cripps was a left wing labourite who actively supported the Indian National movement. He was sent to India to seek cooperation of Indians in the war. Yet following were the reasons for its failure:

The offer of dominion status instead of complete independence. Hence statement 1 is correct.

Representation of the states by nominees instead of elected representatives. Hence statement 2 is correct.

Right to provinces to secede. Hence statement 3 is not correct.

59. a

Objective of the C R Formula was to solve the political deadlock between the All India Muslim League and Indian National Congress.

Statement 1 is not correct: Muslim League would cooperate with Congress in forming interim government.

Statement 2 is correct: Gandhiji supported the plan. Formula stated:

- Muslim League to endorse the demand for complete independence.
- Muslim majority provinces government would go to plebiscite.
- A commission would demarcate the contiguous areas in NWFP and NEI

60. d

Mercury is the smallest planet in our solar system. It's just a little bigger than Earth's moon. It is the closest planet to the sun, but it's actually not the hottest. Venus is hotter.

Along with Venus, Earth, and Mars, Mercury is one of the rocky planets. It has a solid surface that is covered with craters. It has a thin atmosphere, and it doesn't have any moons.

The goal of MESSENGER (2004): Understanding Mercury, the smallest, densest and least-explored of the terrestrial planets.

Mariner 10 was the first spacecraft sent to study Mercury. Mariner 10 also studied Venus while using the planet's gravity to modify its speed and trajectory, enabling it to reach Mercury.

BepiColombo is Europe's first mission to Mercury. It will set off in 2018 on a journey to the smallest and least explored terrestrial planet in our Solar System.

The mission comprises two spacecraft: The Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbiter (MMO). BepiColombo is a joint mission between ESA and the Japan Aerospace Exploration Agency (JAXA), executed under ESA leadership

61. b

Ans :KSCSAPT 510

The Third Pole is a region in Central Asia. It is the world's third largest store of ice after Antarctica and Greenland that's roughly the size of Texas and New Mexico combined.

Third Pole glaciers are vital to billions of people from Vietnam to Afghanistan.

Asia's 10 largest rivers — including the Yangtze, Yellow, Mekong, and Ganges — are fed by seasonal melting. "Depending on how it melts, a lot of the freshwater will be leaving the region for the ocean, which will have severe impacts on water and food security.

It is notable that China's melting glacier draws tourists amid climate worries.

62. a

The IAEA is not a party to the NPT; it is entrusted with key verification responsibilities deriving from the Treaty. Each non-nuclear weapon State party is required under Article III of the NPT to conclude acomprehensive safeguards agreement with the IAEA to enable the IAEA to verify the fulfilment of the State's party obligation under the Treaty.

Statement 2 is incorrect:-IAEA is not a specialized agency of the United Nations but a related organisation of the United Nations.

It is an autonomous international organisation within the UN system.

Source: Current Connect September 2018 – Page 45

http://www.un.org/en/sections/aboutun/

funds-programmes-specialized-agenciesand-others/
https://www.iaea.org/topics/nonproliferation- treaty

63. d

In order to stimulate private sector's investment in R&D, an innovative pilot project named Global Innovation & Technology Alliance (GITA) was initiated by CII and the Department of Science & Technology (DST), Government of India in 2007-08.

Technology Acquisition and Development Fund (TADF) implemented through Global Innovation and Technology Alliance (GITA), a joint venture company

Funding - GITA extends financial support in form of Grant /Loan/Conditional Grant to promote industrial R&D, innovation, Technology Acquisition and International S & T Collaborative efforts.

Capacity Building - GITA catalyses innovation and empowers ideas through training and offering specialized information, matchmaking, IP protection etc. in the areas of technology design and IPR management.

Strengthing Eco System - GITA is involved in Technical, Financial, Strategic policy research and recommendation to industry, research institution, State & Central Government and offers global networking platforms.

Ans :KSCSAPT 510

Deployments - GITA is mandated to facilitate the implementation of various innovative and revolutionary scientific and technological industrial research and development projects worldwide.

64. b

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

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

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

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

65. a

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

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

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

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

It is a UN registered agency: http://www.thehindu.com/news/national/ocean-forecasting-system-for-madagascar-and-mozambique/article19571161.ece

66. b

Jawaharlal Nehru's Opposition to Struggle-Truce-Struggle Strategy

A large number of Congressmen led by Gandhi believed that a mass phase of movement (struggle phase) had to be followed by a phase of reprieve (truce phase) before the next stage of mass struggle could be taken up. The truce period, it was argued, would enable the masses to recoup their strength to fight and also give the Government a chance to respond to the demands of the nationalists. The masses could not go on sacrificing indefinitely. If the Government did not respond

positively, the movement could be resumed again with the participation of the masses. This was the Struggle-Truce-Struggle or S-T-S strategy.

Criticizing the S-T-S strategy, Nehru argued that the Indian national movement had reached a stage, after the Lahore Congress call for purna swaraj programme, in which there should, be a continuous confrontation and conflict with imperialism till it was overthrown. He advocated maintenance of a "continuous direct action" policy by the Congress and without the interposition of a constitutionalist phase. Real power, he said, cannot be won by two annas and four annas. Against a S-T-S strategy, he suggested a Struggle-Victory (S-V) strategy.

The "carrot and stick" approach (also "carrot or stick approach") is an idiom that refers to a policy of offering a combination of reward and punishment to induce good behavior. It is named in reference to a cart driver dangling a carrot in front of a mule and holding a stick behind it. The mule would move towards the carrot because it wants the reward of food, while also moving away from the stick behind it, since it does not want the punishment of pain, thus drawing the cart.

Even the Britishers used this policy to deal with the emergence of Extremists during the “Swadeshi Movement”. Britisher realized that the moderates could be useful as an alternative to the militant nationalists who were growing in popularity. So the British followed policy of carrot and stick.

67. d

Inter-State Council is a recommendatory body and it investigates and discusses such subjects, in which some or all of the States or the Union and one or more of the States have a common interest, for better coordination of policy and action with respect to that subject. It also deliberates upon such other matters of general interests to the States as may be referred by the Chairman to the Council

The Inter-State Council is assisted by Secretariat, which is headed by a Secretary to the Government of India. The Inter-State Council Secretariat closely monitors the implementation of the recommendations made by the Inter-State Council, and places the Action Taken Report before the Standing Committee/Council for consideration. Inter-State Council Secretariat also works as Secretariat of the Zonal Councils.

68. c

The term office of profit has not been defined in the Constitution. But, articles 102 (1) and 191 (1) – which give effect to the concept of office of profit -- prescribe restrictions at the central and state level on lawmakers accepting government positions. Any violation attracts disqualification of MPs or MLAs, as the case may be.

69. b

Inner Line Permit (ILP) is an official travel document issued by the Government of India to allow inward travel of an Indian citizen into a protected area for a limited period. It is obligatory for Indian citizens from outside those states to obtain a permit for entering into the protected state. The document is an effort by the government to regulate movement to certain areas located near

Ans :KSCSAPT 510

the international border of India. This is an offshoot of the Bengal Eastern Frontier Regulations, 1873, which protected Crown's interest in the tea, oil and elephant trade by prohibiting "British subjects" from entering into these "Protected Areas" (to prevent them from establishing any commercial venture that could rival the Crown's agents).

- The states which require the permit are:
- Arunachal Pradesh, Mizoram, Nagaland.
- There are also ongoing demands for the introduction of ILP in Assam, Meghalaya and Manipur to regulate entry of outsiders into the state

70. d

The chief justice of a high court can appoint officers and servants of the high court without any interference from the executive. He can also prescribe their conditions of service.

High Court have the power to review and correct its own judgement.

71) d

There are multiple high courts in India who are entrusted with the jurisdiction of more than one state inclusive of a union territory.

“The decisions of high court regarding constitutional matters and matters involving territorial nexus would be applicable beyond its jurisdiction”.

72. c

The objective of the scheme is the promotion of Zero Defect and Zero Effect (ZED) manufacturing in industry with special focus on micro, small and medium enterprises (MSMEs). "Zero defects” means manufacturing of high quality goods without any defects and "zero effect" means to ensure that the production of goods do not have any impact on environment.

Statement 2 is incorrect

This initiative is applicable to all sectors of manufacturing industries with focus on MSMEs. It will address the quality and ecological needs of domestic and overseas customers, society, employees, partners, regulators, and investors. Statement 3 is correct

The following are some of the objectives of the scheme

Enable MSMEs for manufacturing of quality products.

Encourage MSMEs to constantly upgrade their quality standards in products and processes.

Drive manufacturing with adoption of Zero Defect production processes and without impacting the environment.

Support Make in India campaign.

Ans :KSCSAPT 510

Sources:

http://pib.nic.in/newsite/printrelease.aspx?relid=169325

https://www.zed.org.in/vision-mission

https://www.zed.org.in/brief-history

73. c

Statement 1 is correct as Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia and beyond.

Statement 2 is incorrect as AIIB is Headquartered in Beijing, China.

Statement 3 is correct as AIIB offers sovereign and non-sovereign financing for sound and sustainable projects in energy and power, transportation and telecommunications, rural infrastructure and agriculture development, water supply and sanitation, environmental protection, and urban development and logistics.

Source: https://www.aiib.org/en/aboutaiib/index.html

74. d

Statement 1: He is a member of the Inter-State Council chaired by the prime minister.

Statement 2: He acts as a "vice-chairman" (not Chairman) of the concerned zonal council by rotation, holding office for a period of one year at a time.

Union home minister is the chairman of all the zonal councils.

Statement 3: The Governing council too is chaired by the PM, and not CMs on a rotation basis.

75. d

Statement 1: He lays the reports of the State Finance Commission, the State Public Service Commission and the Comptroller and Auditor-General relating to the accounts of the state, before the state legislature.

Statement 2: This is similar to the powers of the President at the Centre.

Statement 3: Further, Money bills can be introduced in the state legislature

only with his prior recommendation. No demand for a grant can be made except on his recommendation.

76. d

CAFF is the biodiversity working group of the Arctic Council and consists of National Representatives assigned by each of the eight Arctic Council Member States.

Ans :KSCSAPT 510

These are Canada, Greenland/Denmark, Finland, Iceland, Norway, Sweden, Russian Federation and United States. Moreover, Representatives of Indigenous Peoples' organizations are also Permanent Participants to the Council.

The Arctic Council and other such organizations play a crucial role in the meetings of the organization.

CAFF's mandate is to address the conservation of Arctic biodiversity, and to communicate its findings to the governments and residents of the Arctic, helping to promote practices which ensure the sustainability of the Arctic's living resources.

77. a

Statement 1 and 2: A removal motion signed by 100 members (in the case of Lok Sabha) or 50 members (in the case of Rajya Sabha) is to be given to the Speaker/Chairman.

The Speaker/Chairman may admit the motion or refuse to admit it.

If it is admitted, then the Speaker/Chairman is to constitute a three-member committee to investigate into the charges.

The procedure is same for a SC judge. So, 1 and 2 both are correct.

Statement 4: After the motion is passed by each House of Parliament by special majority, an address is presented to the president for removal of the judge.

Finally, the president passes an order removing the judge.

78. d

Statement 1: For e.g. Karnataka had planned to launch a nyaya panchayat adalat. You can see rationale and proposals here

http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/panchayatadalat- to-be-launched-in-december/article2557253.ece

Statement 2 and 3: A Nyaya Panchayat is a system of dispute resolution at village level in India. nyaya panchayats can be endowed with functions based on broad principles of natural justice and can tend to remain proceedurally as simple as possible. They can be given civil and minor criminal jurisdiction. But they should never follow civil and criminal procedure code in letter and spirit.

For e.g. the offences triable by the Delhi Panchayati Adalat includes some petty offences under the Indian Penal Code, Cattle Trespass Act and Delhi gambling Act.

79. d

Statement 1: For e.g. for the erstwhile undivided state of AP, the President was empowered to provide for equitable opportunities and facilities for the people belonging to different parts of the

Ans :KSCSAPT 510

state in the matter of public employment and education and different provisions can be made for various parts of the state.

Statement 2: Similarly, the Governor should submit an annual report to the President regarding the administration of the Hill Areas of Manipur. Moreover, the Governor shall have special responsibility for peace and for an equitable arrangement for ensuring the social and economic advancement of the different sections of the Sikkim population.

Statement 3: Article 371-E empowers the Parliament to provide for the establishment of a Central University in the undivided state of AP.

80. a

Statement 1 and 2: A PIL may be introduced in a court of law by the court itself (suo motu), rather than the aggrieved party or another third party.

For the exercise of the court's jurisdiction, it is not necessary for the victim of the violation of his or her rights to personally approach the court. Locus standi principle means that only those affected could file a suit.

In a PIL, the right to file suit is given to a member of the by the courts through judicial activism. The member of the public may be a nongovernmental organization (NGO), an institution or an individual.

Statement 3: It was introduced by Justice PN Bhagwati of the Supreme Court. It was not mentioned in the constitution.

81. a

The constitution provides that these members of panchayats at the village, intermediate and district levels shall be elected directly by the people.

Further, the chairperson of panchayats at the intermediate and district levels shall be elected indirectly—by and from amongst the elected members thereof.

However, the chairperson of a panchayat at the village level shall be elected in such manner as the state legislature determines.

82. a

Original jurisdiction means the power of a high court to hear disputes in the first instance, not by way of appeal. It extends to the following:

Matters of admirality, will, marriage, divorce, company laws and contempt of court.

Disputes relating to the election of members of Parliament and state legislatures.

Regarding revenue matter or an act ordered or done in revenue collection.

Ans :KSCSAPT 510

Enforcement of fundamental rights of citizens.

Cases ordered to be transferred from a subordinate court involving the interpretation of the Constitution to its own file.

The four high courts (i.e., Calcutta, Bombay, Madras and Delhi High Courts) have original civil jurisdiction in cases of higher value.

83. a

Statement 1: The Supreme Court can issue writs only for the enforcement of fundamental rights and not for any other purpose, that is, it does not extend to a case where the breach of an ordinary legal right is alleged.

Statement 2: The writ jurisdiction of the high court (under Article 226) is not exclusive but concurrent with the writ jurisdiction of the Supreme Court (under Article 32). It means, when the fundamental rights of a citizen are violated, the aggrieved party has the option of moving either the high court or the Supreme Court directly.

This is valid for both centre/state laws/rules/regulations. So, 2 is incorrect.

In the Chandra Kumar case (1997), the Supreme Court ruled that the writ jurisdiction of both the high court and the Supreme Court constitute a part of the basic structure of the Constitution. Hence, it cannot be ousted or excluded even by way of an amendment to the Constitution.

84. b

A significant feature of the Quit India Movement was the emergence of what came to be known as parallel governments in some parts of the country. The first one was proclaimed in Ballia, in East U P, in August 1942 under the leadership of Chittu Pande, who called himself a Gandhian.

In Tamluk in the Midnapur district of Bengal, the Jatiya Sarkar came into existence on 17 December, 1942 and lasted till September 1944. The Jatiya Sarkar undertook cyclone relief work, gave grants to schools and organized an armed Vidyut Vahini. It also set up arbitration courts and distributed the surplus paddy of the well to-do to the poor. Being located in a relatively remote area, it could continue its activities with comparative ease.

85. d

Tebhaga movement saw involvement of women at high level. It saw widespread autonomous action of the "proletariat and semi proletariat women:, belonging to dalit and tribal communities. Through their own initiative they formed Nari Bahinis or women's brigades and resisted the colonial police with whatever weapon they could lay their hands on.

The Government of India Act of 1935 were granted reservation in 41 seats in the provincial legislatures as well as limited reservation in central legislature.

Ans :KSCSAPT 510

Women's Indian Association was started by enlightened European and Indian ladies, the most important being Margaret Cousins and Annie Besant.

The Rani of Jhansi Regiment was the Women's Regiment of the Indian National Army, the armed force formed by Indian nationalists in 1942 in Southeast Asia with the aim of overthrowing the British Raj in colonial India , with Japanese assistance. It was one of the very few all-female combat regiments of the Second World War on any side. Led by Captain Lakshmi Swaminathan (better known as Lakshmi Sehgal), the unit was raised in July 1943 with volunteers from the expatriate Indian population in South East Asia The unit was named the Rani of Jhansi Regiment after Lakshmi Bai, Rani of Jhansi.

86. c

Statement 1 is incorrect. There was no such debate in 1945 election. The debate between Swarajists and no-changers was a characteristic of 1920s and 1930s elections.

Statement 2 is correct. The INA question was the main issue highlighted from the Congress platform in meetings held all over the country - in fact, very often it was difficult to distinguish between an INA and an election meeting.

Statement 3 is incorrect. The Muslim league performed better compared to the elections of 1937. It gained 86.6% of the muslim votes and got majority in Bengal and Sindh. Compared to 1937 elections, the League clearly established itself as the dominant party among Muslims.

87. a

M.K. Gandhi issued a manifesto in March 1920, announcing his doctrine of non-violent Non-Cooperation Movement. He was the main force behind the movement and urged the people to adopt swadeshi principles and habits including hand spinning, weaving and work for removal of untouchability. Subhash Chandra Bose supported the movement and resigned from the civil service. He was appointed as the principal of the National College in Calcutta. Subhash Bose in Calcutta played a major role in uniting the Hindus and Muslims.

88. d

Statement 1: The mission of the Organisation for Economic Cooperation and Development (OECD) is to promote policies that will improve the economic and social well-being of people around the world.

The OECD provides a forum in which governments can work together to share experiences and seek solutions to common problems.

Statement 2: It is separate from EU. It is an inter-governmental organization headquartered in Paris.

Statement 3: India is an enhanced engagement partner of OCED. It is neither a member non-accession candidate to the OECD.

Ans :KSCSAPT 510

89. b

Statement 1: This means the state governments are under constitutional obligation to adopt the new panchayati raj system in accordance with the provisions of the act.

Consequently, neither the formation of panchayats nor the holding of elections at regular intervals depends on the will of the state government any more.

Statement 2: The act has given a practical shape to Article 40 (which already existed and statement 2 is thus wrong) of the Constitution which says that,

“The State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government.” This article forms a part of the Directive Principles of State Policy.

Statement 3: The creation of District Planning Committee to consolidate plans prepared by PRIs and ULBs is a clear validation of this statement.

90. b

Statement 1: Goods and Services Tax Network (GSTN) is a (under new companies Act, not for profit companies are governed under section 8), non-Government, private limited company. It was incorporated in 2013. The Government of India holds 24.5% equity in GSTN and all States of the Indian Union, including NCT of Delhi and Puducherry, and the Empowered Committee of State Finance Ministers (EC), together hold another 24.5%.

Balance 51% equity is with non-Government financial institutions. So, 1 is wrong.

Statement 2: It is for the first time to establish a uniform interface for the tax payer and a common and shared IT infrastructure between the Centre and States. Currently, the Centre and State indirect tax administrations work under different laws, regulations, procedures and formats and consequently the IT systems work as independent sites.

91. d

Abhinav Bharat Society (Young India Society) was a secret society founded by Vinayak Damodar Savarkar and his brother Ganesh Damodar Savarkar in 1903. Initially founded at Nasik as Mitra Mela, the society grew to include several hundred revolutionaries and political activists with branches in various parts of India, extending to London after Savarkar went to study law. It carried out a few assassinations of British officials, after which the Savarkar brothers were convicted and imprisoned. The society was formally disbanded in 1952.

Anushilan Samiti was an armed anti-British organisation in Bengal and the principal secret revolutionary organisation operating in the region in the opening years of the 20th century. Its activities included making of bombs, arms training and assassination of British officials and Indians who they viewed as "traitors".

HSRA was involved in the assasination of John Saunders, a British official.

Ans :KSCSAPT 510

92. d

The Quit India Movement was not supported by the Communists, Muslim League and the Hindu Mahasabha

The communists believed that it would virtually damage the labour movement . Labour Unions under Communist influence had apparently decided against participation in the movement, there were largescale strikes in mills at Kanpur, Jamshedpur and Ahmadabad. When Russia joined the war on behalf of the Allies, the communists began to demand the withdrawal of the movement and pleaded all support to the government in its war effort.

The Muslim League considered the movement as the attempt of the Congress to turn out the British forcefully as a result of which Muslims would be enslaved by the Hindus. Even the depressed class leader Dr. B.R. Ambedkar described the movement as irresponsible and an act of madness.

Hindu Mahasabha (HM) was always suspicious of Indian National Congress (INC). They accused INC of being a pro-Muslim organization, and said they always keep 'Muslim interests' ahead of 'Hindu interests'. So it opposed the Quit India Movement primarily because it was launched by INC, an organization Hindu Mahasabha was hardly at good terms with. Especially in the 1930s, the HM distanced itself more from the INC because, in addition to being 'pro-Muslim', INC was also getting inclined towards communism and socialism.

Also, the threat of Japanese invasion was looming large. The Japanese were slowly capturing colonies in the South-East Asia, and the frightening stories of inhuman treatment they were subjecting on the people of those captured colonies were reaching India. HM knew that the Britishers are the only force that could save India from falling into the hands of a scarily fascist Japan. By taking a pro-British stance, HM also betrayed Subhash Chandra Bose's INA.

VD Savarkar went on a nationwide tour encouraging Hindu youth to join army in large numbers. During the QIM, the British and the HM were allies.

Forming a government was also a chance for Hindu Mahasabha to deepen their roots in India. In 1939, when Britishers declared India's engagement in WWll without even consulting Indian people, INC ministries resigned in protest. Sensing an opportunity, both Muslim League and Hindu Mahasabha formed coalition governments. It was also seen as an opportunity to strengthen their mass base, and as a result, weaken INC's mass base.

93. d

Referendums are instruments of direct democracy where citizens get to directly vote on specific and important issues rather than for representatives who will make a choice on their behalf on those issues. In June 2016 Britain exited the European Union after the Brexit referendum. In October 2016, a referendum called by the Colombian government to ratify the accord with the Revolutionary Armed Forces of Colombia (FARC) resulted in a "No" vote. Last year, in a referendum on Scottish's stay in UK, Scotland voted to remain with Britain in a close verdict.

94. c

Ans :KSCSAPT 510

Statement 1 is incorrect, failure of cripps mission led to popular discontent of leaders of nationalist struggle.infact the round table conferences held before civil disobedience movement.

Statement 2 is correct. Due to world war-II, there were food shortages and crisis in the form of price hike as resources were devoted for war.

Statement 3 is correct. British evacuation from Malaya and Burma exposed the myth of white superiority infront of japanesse agression.

95. a

96. b

The India Health Fund (IHF), an initiative by Tata Trusts, in collaboration with the Global Fund has come forward to financially support innovations and technologies designed to combat tuberculosis and malaria. The IHF aims to support new products and strategies that impact the entire lifecycle of TB and malaria, from prevention to post-cure recovery.

97. c

The Caspian Sea has a number of different species of sturgeon, the fish that yields the highly prized delicacy caviar. Between 80-90% of the world's caviar is sourced from the Caspian, but the numbers have been falling over the past few decades. For those of you who want to read more about caviar, click HERE.

In a landmark deal that has been more than two decades in the making, Russia, Iran, Azerbaijan, Kazakhstan and Turkmenistan – all bordering the Caspian Sea – have agreed in principle on how to divide it (the Caspian) up. Until 1991, the Caspian was known as a lake. But the dissolution of the USSR complicated this issue. Iran had argued it was a lake and not a sea, but none of the other four littoral states agreed.

If it was treated as a sea, then it would be covered by international maritime law, namely the United Nations Law of the Sea. This binding document sets rules on how countries can use the world's oceans. It covers areas such as the management of natural resources, territorial rights, and the environment. And it is not limited to littoral states, meaning others can seek access to its resources. But if it is defined as a lake, then it would have to be divided equally between all five countries.

98. c

Tripuri session of congress 1939: It was held in Tripuri, a small village in the District Jabalpur of Madhya Pradesh (Central Province), presided by Subhash Chandra Bose.

The internal strife in the Congress reached the climax at the Tripuri session. Bose in his presidential address at Tripuri advocated programme of immediately giving the British Government a six-month ultimatum to grant the national demand for independence and of launching a mass civil disobedience movement if it failed to do so. Gandhi too believed that another round for mass struggle was necessary to win freedom but said the time was not yet ripe for an ultimatum because

Ans :KSCSAPT 510

neither the Congress nor the masses were yet ready for struggle. This internal strife forced Bose to resign from the presidentship and Rajendra Prasad was elected in his place. Subsequently, in May, Bose and his followers formed the Forward Bloc as a new party within the Congress and when on 9 July he gave a call for an all-India protest against an AICC resolution, the Working Committee took disciplinary action against him, removing him from the presidentship of the Bengal Provincial Congress Committee and debarring him from holding any Congress office for three years.

A kisan manifesto was issued by the Kisan Congress and the influence of this manifesto was seen in the agrarian programme adopted by the Indian National Congress at its Faizpur session in Maharashtra in December 1936. The second session of the Kisan Congress presided over by N.G. Ranga was held along with the Indian National Congress session at Faizpur. The Faizpur Agrarian Programme reiterated the demand made at Karachi for substantial reduction in both rent and revenue.Hence option (b) is incorrect.

The official Congress unequivocally condemned the Nazi attack on Poland as well as Nazism and Fascism, and declared that India could not be party to a war which was ostensibly being fought for democratic freedom while that freedom was being denied to her and adopted a resolution at a meeting of the Congress Working Committee held at Wardha. Hence option (d) is incorrect.

99. a

100. a

NASA is conducting a study of the world's largest phytoplankton bloom in the North Atlantic to see how the tiny sea critters influence the climate in every season. The North Atlantic Aerosols and Marine Ecosystems Study (NAAMES) mission began its fourth and final deployment, which will study how phytoplanktons give rise to small organic particles that leave the ocean and end up in the atmosphere, ultimately influencing clouds and climate. It is the first research mission to conduct an integrated study of all four distinct phases of the world's largest phytoplankton bloom.