

**Model questions (ECONOMY - FORESTRY AND ENVIRONMENT) based on
TELANGANA SOCIO-ECONOMIC OUTLOOK 2022
STUDY MATERIAL FOR UPSC CIVIL SERVICES /
TSPSC GROUP I & Group 4 ;
TSLPRB SUB-INSPECTOR /CONSTABLE
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For Study purpose
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FORESTRY AND ENVIRONMENT

Forest Cover in Telangana(TFC)

Total forest cover: 26,969.54 sq.km

1)Telangana has a total forest cover (TFC) of 26,969.54 square kilometres, accounting for 24.05% of the total geographical area of the state.

Question: Telangana has a total forest cover (TFC) of how much?

Ans : 26,969.54 Sq.Kilometers

Question: Total forest cover in Telangan state is account for how much of total geographical area of the Telangana ?

Ans : 24.05%

2)Five districts — Bhadradi Kothagudem, Mulugu, Nagarkurnool, Komaram Bheem and Mancherial — together account for more than 50% of the total forest area in the state. Bhadradi Kothagudem accounts for nearly 16% of the total forest area in the state.

Question: In which five districts only together account for more than 50% of the total forest area in the Telangana state ?

- a)Bhadradi Kothagudem,
- b)Mulugu, Nagarkurnool,
- c)Komaram Bheem and Mancherial
- d)All the above

Ans : d

Question: Nearly 16% of the total forest area in Telangana in which district ?

Ans : Bhadradi Kothagudem district

3)Telangana is endowed with a rich diversity of flora and fauna with over 2,939 plant species, 365 bird species, 103 mammal species, 28 reptile species, and a large number of invertebrate species.

Question: In Telangana how many bird species are there ?

Ans : 365

4) In 2021-22, the forestry and logging sub-sector added Rs. 1,944 crore that accounted for 1.77% of the Gross Value Added by the primary sector and 0.32% of the total Gross State Value Added at constant (2011-12) prices.

Question: From forestry and logging sub-sector in 2021-22 how much money is added to the Telangana Government ?

Ans : Rs.1,944 Crores

Question: Forestry and logging sub-sector comes under which sector ?

Ans : Primary Sector of the economy

5) Between 2014-15 and 2021-22, the GVA at constant (2011-12) prices by the forestry and logging grew from _____ in 2014-15 to Rs. 1,944 crore in 2021-22; an absolute increase of 13.35% at a Compound Annual Growth Rate of 1.81%.

Ans : Rs. 1,715 crore

6) The Government set a target of planting 23,000 lakh seedlings across the state from 2015-16 to 2021-22. By January, 2022, _____ seedlings had been planted—an achievement of 102.6% against the target.

Ans : 23,599.5 lakh

7) There are 12 protected areas in Telangana that includes 9 wildlife sanctuaries and 3 national parks covering a total of 5,692 sq.km. This also includes the Amrabad and Kawal Tiger Reserves.

Question: How many protected areas are there in Telangana ?

Ans : 12

Question: How many wildlife sanctuaries are there in Telangana ?

Ans : 9

Question: Amrabad Tiger Reserve is in which state ?

Ans : Telangana

Question: Kawal Tiger Reserve is in which state ?

Ans : Telangana

Question: How much area is there under 12 protected areas (including wildlife sanctuaries and national parks) in Telangana ?

Ans: 5692 Sq.KM

8) 29 Sewage Treatment Plants (STP) are operational in the state accounting for a total capacity of 885.5 million litres per day (MLD) and utilization of 735.8 MLD.

Question: What is the total capacity of 29 Sewage Treatment Plants (STP) in Telangana state?

Ans : 885.5 million litres per day (MLD)

9) The 'Disability-Adjusted Life Years' (DALY) Rate attributable to air pollution (per 1 lakh population) is 2,710 in Telangana compared to the national average of 3,469, implying that per 1 lakh population, 759 fewer persons suffered from deaths and diseases on account of air pollution in Telangana than in the country as a whole.

Question: Expand DALY Rate ?
Ans : Disability-Adjusted Life Years Rate

Question: The `Disability-Adjusted Life Years' (DALY) Rate attributable to air pollution (per 1 lakh population) in Telangana is how much ?
Ans : 2,710

Question: In the context of the `Disability-Adjusted Life Years' (DALY) Rate attributable to air pollution (per 1 lakh population) what is the o the national average of
Ans : 3,469

10) In all years from 2016-17 to 2020- 21, the Government has ensured that 100% of the Bio-Medical Waste (BMW) generated in theTelangana state is treated either through _____

Ans : incineration or autoclaved.

=====

1)With a total forest area of _____, Telangana is endowed with a rich diversity of flora and fauna with over 2,939 plant species, 365 bird species, 103 mammal species, 28 reptile species and a large number of invertebrate species.

Ans : 26,969.54 square kilometers

2)The Constitution of India, through Article 48A, directs the governments at all levels to `endeavour to protect and improve the environment, and to safeguard the forests and wild life of the country'. Article 51A(g) of the Constitution imposes the duty on every citizen to `protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures`.

Question: Article 48A of the Constitution of India is relating to what ?
Ans : It says the government at all levels to `endeavour to protect and improve the environment and to safeguard the forests and wild life in the country

Question: Article 51A(g) of the Constitution of India relating to what ?
Ans : It imposes the duty on every citizen to `protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures`.

3)Embracing the spirit of environment protection under the Constitutional framework, the Government of Telangana has been taking several initiatives to protect its forests and biodiversity, and minimize the harms done to the environment. In this effort, the Government focuses on striking a balance between the conservation of ecosystems and safeguarding the livelihood of the people. This chapter is divided into four themes: forests, biodiversity, pollution and climate change. The present status of the state, major initiatives taken by the government and the performance under various indicators are discussed under each theme.

Forest

4)Forest is a complex ecosystem consisting mainly of trees that buffer the earth and support a myriad of life forms. Nearly one-third of the world's land surface are forests and they are determined both by the presence of trees and the absence of other predominant land uses. According to the Food and

Agricultural Organization, 'forest' (including natural forests and forest plantations) is a land with a tree canopy cover of more than 10% and area of more than 0.5 hectares.

Question: What is 'forest' according to FAO ?

Ans : According to the Food and Agricultural Organization, 'forest' (including natural forests and forest plantations) is a land with a tree canopy cover of more than 10% and area of more than 0.5 hectares.

5)The Government of Telangana recognizes the role of forests in supporting livelihood, contributing to the economy, mitigating climate change as carbon sinks, protecting soil, providing a cultural ecosystem to tribal communities and conserving vulnerable wildlife. The core objective of the forest sector development strategy of the Government is to enhance green cover by integrating it with livelihood opportunities.

Question: What is the role of Forests ?

a)supporting livelihood,

b)contributing to the economy, mitigating climate change as carbon sinks, protecting soil,

c)providing a cultural ecosystem to tribal communities and conserving vulnerable wildlife.

d)All the above

Ans : d

6)Forest cover in Telangana

Telangana has a total forest cover (TFC) of 26,969.54 square kilometers (sq.km) that accounts for 24.05% of the total geographical area of the state. Nearly one-third of TFC is open forests extending to 8,484 sq.km and 7,896 sq.km of moderately dense forests hold another one-third of TFC. 286 sq.km are very dense forests holding a share of 1.1% of TFC. Scrub forests that hold a share of 16.4% of TFC extends to 4,420 sq.km whereas 157 sq.km of water bodies hold 0.6% of TFC

Question: Which of the following is correct relating to total forest cover of 26,969.54 Sq.Kilometers ?

a) Nearly one-third of TFC is open forests extending to 8,484 sq.km

b)7,896 sq.km of moderately dense forests hold another one-third of TFC.

c)286 sq.km are very dense forests holding a share of 1.1% of TFC.

d)All the above

Ans : d

Question: Scrub forests that hold a share of _____of (Total Forest Cover) TFC extends to 4,420 sq.km whereas 157 sq.km of water bodies hold 0.6% of TFC in Telangana .

Ans : 16.4%

7)The forests in Telangana belong to three forest groups: Tropical Dry Deciduous Forests, Tropical Thorn Forests and Tropical Moist Deciduous Forests

According to the India State of Forest Report 2021, Mango Tree (*Mangifera indica*) is the most abundant tree species in the rural areas of the state with a relative abundance of 38.93%. In urban areas, this is Neem Tree (*Azadirachta indica*) with a relative abundance of 18.35%.

With a forest cover of 15.98%, 10.89%, and 9.25%, Bhadradi Kothagudem, Mulugu and Nagarkurnool districts respectively are the top contributors in the total forest cover of the State. At the district level Mulugu, at 71.81%, has the highest percentage share of forest area to the district's total geographical area, followed by Bhadradi Kothagudem and Komaram Bheem with their percentage share at 60.95% and 54.41% respectively .

Question: The forests in Telangana belong to three forest groups. What are they ?

a)Tropical Dry Deciduous Forests

b)Tropical Thorn Forests

c)Tropical Moist Deciduous Forests

d)All the above

Ans : d

Question: According to the India State of Forest Report 2021, which is the most abundant tree species in the rural areas of the state with a relative abundance of 38.93% ?

Ans : Mango Tree (*Mangifera indica*)

Question: According to the India State of Forest Report 2021, which is In urban areas, this is with a relative abundance of 18.35% ?

Ans :Neem Tree (*Azadirachta indica*)

Question: Which of the following is correct about top contributors in the total forest cover of the Telangana State ?

a)Bhadradri Kothagudem district :forest cover of 15.98%

b)Mulugu district : forest cover of 10.89%,

c)Nagarkurnool district : forest cover of 9.25%,

d)All the above

Ans : d

Forest Types in Telangana

Forests Group

Tropical Dry Deciduous Forests

1 Southern Dry Mixed Deciduous Forests

2 Dry Deciduous Scrubs

3 Dry Teak Forests

4 Secondary Dry Deciduous Forests

5 Dry Bamboo Brakes

6 Hardwickia Forests

7 Boswellia Forests

8 Dry Savannah Forests

9 Dry Grass Lands

Forests Group

Tropical Thorn Forests

1 Southern Thorn Scrubs

2 Southern Thorn Forests

Forests Group

Tropical Moist Deciduous Forests

1 Southern Moist Mixed Deciduous Forests

Question: Which of the following is correct ? (District total geographical area: percentage share)(at district level)

a)Mulugu, at 71.81%, has the highest percentage share of forest area to the district's total geographical area,

b)Bhadradri Kothagudem and with their percentage share at 60.95% to the district's total geographical area

c)Komaram Bheem and with their percentage share 54.41%. to the district's total geographical area

d)All the above

Ans : d

Question: Which parts of the Telangana state have a relatively higher share of forest areas ?

Ans :The northern and eastern parts of the state have a relatively higher share of forest areas.

Question: Five districts— Bhadradri Kothagudem, Mulugu, Nagarkurnool, Komaram Bheem and Mancherial— together account for _____ of the total forest area in the Telangana state.

Ans : 51.75%

Name of the sanctuary District Area (sq.km)

Name	District
Kawal *	:Mancherial
Pranahita	: Mancherial
Siwaram	:Mancherial
Eturunagaram	:Mulugu
Pakhal	:Warangal
Kinnerasani	Bhadradi Kothagudem
Manjira	:Sangareddy
Pocharam	:Medaki
Amrabad Tiger Reserve **	: Nagarkurnool and Nalgonda

8)Ecosystem services and Livelihood

Ecosystem services are the direct or indirect positive benefits that ecosystems provide to human beings. Carbon storage, nutrient cycling, water and air purification, and maintenance of wildlife habitat are the major environmental benefits provided by forests. Another major ecosystem service from forests is the provision of goods such as timber, food, medicine, fuel and bioproducts. Timber and non-timber forest produce in turn creates livelihood opportunities particularly in rural areas. The forest produces in Telangana include timber, bamboo, firewood and charcoal, and beedi leaves.

Question: What are the major environmental benefits provided by forests ?

- a)Carbon storage,
- b)nutrient cycling, water and air purification, and
- c)maintenance of wildlife habitat
- d)All the above

Ans : d

Question: What is another major ecosystem service from forests ?

Ans : the provision of goods such as timber, food, medicine, fuel and bioproducts

What is the benefit of Timber and non-timber forest produce from forests ?

Ans : They in turn create livelihood opportunities particularly in rural areas

Question : The forest produces in Telangana include which of the following ?

- a)timber, bamboo,
- b)firewood and charcoal
- c)beedi leaves
- d)All the above

Ans : d

Question: Which of the following is correct about Beedi Leaf ?

- a)Beedi Leaf: Leaves of the tendu tree
- b)Latin Name : *Diospyros melanoxylon*
- c)Beedi Leaves are used to wrap beedi, a thin cigarette or mini-cigar filled with tobacco flake.
- d)All the above

Ans : d

9)In 2021-22, the forestry and logging sub-sector added Rs. 1,944 crore that accounted for 1.77% of the Gross Value Added (GVA) by the primary sector and 0.32% of the total Gross State Value Added (GSVA) in the Telangana state [all at constant (2011-12) prices].

10)The share of forestry and logging in Telangana in the GVA by the primary sector as well as in the total GSVA experienced an absolute decrease between 2014- 15 and 2021-22 [all at constant (2011-12) prices]. The share of this sub-sector in the primary sector GVA slightly increased between 2014-15 and 2015-16, and thereafter was on a downward trend till 2019-20. This experienced a slight increase by 0.05

percentage points between 2019-20 and 2020-21 but declined by 0.09 percentage points by 2021-22 [all at constant (2011-12) prices]. A similar trend is observed during this period in the share of forestry and logging in the total GSVA also [all at constant (2011-12) prices] (see Figure 12.3).

11)The GVA in Telangana at constant (2011-12) prices by the forestry and logging grew from Rs. 1,715 crore in 2014-15 to Rs. 1,944 crore in 2021-22, an absolute increase of 13.35%. During this period, the GVA at constant (2011-12) prices by the sub-sector experienced a Compound Annual Growth Rate of 1.81% .

12)Initiatives for Forest Health and Vitality

Telanganaku Haritha Haram: The Government of Telangana introduced Telangana Ku Haritha Haaram (TKHH, Green Garland for Telangana) that aims to increase the tree cover in the state from 24% to 33% of the total geographical area. The strategy to achieve this is two-fold:

- a)Take up extensive planting activities outside the notified forest areas like roadside, barren hills, institutional premises, housing colonies and community lands.
- b) Take up large-scale planting activities inside the notified forests to increase density and assist natural regeneration through intensive water harvesting structures in forests.

Question: The Government of Telangana introduced Telangana Ku Haritha Haaram (TKHH, Green Garland for Telangana) that aims to increase the tree cover in the state from 24% to _____ of the total geographical area
Ans : 33%

Question: What is Telangana Ku Haritha Haaram (TKHH) ?

Ans : Increasing the tree cover in the state by planting trees in outside the notified forest areas and inside the notified forest areas

13)The sixth phase of TKHH started in June 2020 from _____ district.

Ans : Medak

14) In 2020-21, around _____ lakhs were planted .

Ans : 3,346

15)To supplement and sustain the massive plantation activities by Telanganaku Haritha Haram, the Government has established Telangana Haritha Nidhi, or Telangana Green Fund that receives contributions from public representatives, government employees and civil society.

Question: To supplement and sustain the massive plantation activities by Telanganaku Haritha Haram, the Government has established which of the following ?

Ans : Telangana Haritha Nidhi, or Telangana Green Fund that receives contributions from public representatives, government employees and civil society

16) The 'urban forest blocks' are designed to provide adequate lung space to _____ limits. These forest blocks would be protected from anthropogenic disturbances.

Ans: the Hyderabad Metropolitan Development Authority (HMDA)

17)The Telangana Government has decided to establish 188 forest blocks spread over 1,60,660 acres in 129 locations of which 99 blocks are stand-alone whereas the remaining 89 fall under 30 clusters. 59 of the total 129 locations would be developed as 'urban forest parks' owing to their proximity to residential areas. This would provide healthy opportunities for recreation and entertainment to the residents. The remaining 70 that are away from habitations would be conservation blocks. 19 out of 129 locations are already developed in 7 different districts falling in the HMDA limits.

18) Geomatics

Geomatics refers to the methods and technologies used to collect, distribute, store, analyze, process, and present geographic data. It encompasses Geographic Information Systems (GIS), Global Positioning Systems (GPS), Cartography, Remote Sensing, and Surveying.

Question: What is Geomatics ?

- a) Geomatics refers to the methods and technologies used to collect, distribute, store, analyze, process, and present geographic data.
- b) It encompasses Geographic Information Systems (GIS), Global Positioning Systems (GPS), Cartography, Remote Sensing, and Surveying
- c) Both (a) & (b)
- d) None of these

Ans : c

The forest department uses Geomatics-based tools for the efficient management of its forests along with Information and Communication Technology (ICT) tools. The department has developed a modular based web-enabled Forest Management Information System (FMIS) for the public servants and other stakeholders. 20 modules have been developed and operationalized and 5 modules are at different stages of development. These systems have also helped during the COVID-19 pandemic to cope with emergencies.

Question: Expand FMIS ?

Ans : Forest Management Information System

19) Implementation of FRA 2006

The Government of India enacted the 'Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act' in 2006, also known as FRA, 2006, and subsequently in 2008 the 'Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Rules' were introduced.

FRA, 2006 granted the Scheduled Tribes and other traditional forest dwellers the right to hold and live in the forest land and the rights to "protect, regenerate or conserve or manage any community forest resource that they have been traditionally protecting and conserving for sustainable use". As of January 2022, the Government has issued title certificates to 96,676 individuals involving 3,08,614 acres and 721 community titles involving 4,54,054 acres.

Question: When The Government of India enacted the 'Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act' ?

Ans : in 2006 . It is also also known as FRA, 2006,

Question: When the 'Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Rules' were introduced ?

Ans : 2008

Question: What granted Forest Rights Act, 2006 ?

- a) FRA, 2006 granted the Scheduled Tribes and other traditional forest dwellers the right to hold and live in the forest land
- b) FRA 2006 granted the Scheduled Tribes and other traditional dwellers the rights to "protect, regenerate or conserve or manage any community forest resource that they have been traditionally protecting and conserving for sustainable use".
- c) Both (a) & (b)
- d) None of these

Ans : c

Question: As of January 2022, the Telangana Government has issued title certificates and community titles under Forest Rights Act, 2006 etc. to Scheduled Tribes and other traditional forest dwellers ?

Ans : Issued title certificates to 96,676 individuals involving 3,08,614 acres and 721 community titles involving 4,54,054 acres.

20) Implementation of CAMPA

Complying to the guidelines by the Government of India, the Government of Telangana established the Telangana State Compensatory Afforestation Fund Management and Planning Authority (TSCAMPA) in 2014.

TSCAMPA is entrusted with the responsibility of managing the money received from the user agencies towards compensatory afforestation, additional compensatory afforestation, penal compensatory afforestation and Net Present Value to compensate for the diversion of forest land to non-forest use

The components under CAMPA include Compensatory Afforestation (CA), Catchment Area Treatment (CAT), Integrated Wildlife Management Plan (IWMP), Net Present Value (NPV), interest and others. Data shows the progress of CAMPA in Telangana as on 31st March 2021.

Question : Who framed CAMPA(Compensatory Afforestation Fund Management and Planning Authority) guidelines?

Ans : Government of India

Question:When Telangana State Compensatory Afforestation Fund Management and Planning Authority (TSCAMPA) was established

Ans: in2014

Question: What is entrusted to TSCAMPA?

- a)with the responsibility of managing the money received from the user agencies towards compensatory afforestation,
- b)additional compensatory afforestation, penal compensatory afforestation and
- c)Net Present Value to compensate for the diversion of forest land to non-forest use
- d)All the above

Ans: d

Question: The components under CAMPA (Compensatory Afforestation Fund Management and Planning Authority) include which of the following ?

- a)Compensatory Afforestation (CA),
- b)Catchment Area Treatment (CAT),
- c)Integrated Wildlife Management Plan (IWMP), Net Present Value (NPV), interest and others
- d)All the above

Ans : d

Institutions for Forest Management, Research and Training

21) TSFDC

The Telangana State Forest Development Corporation was established with the objective of raising plantations to meet the demand of wood based industries. The corporation has been raising various species such as eucalyptus and bamboo to meet the pulpwood demand of various paper mills in the state, thus relieving the natural forests from the burden of supplying the raw materials to them. TSFDC is spread across 12 districts in the state with a net area of 33,743 hectares.

Question: What is the objective of establishing Telangana State Forest Development Corporation (TSFDC)?

Ans : with the objective of raising plantations to meet the demand of wood based industries

Question: The TSFDC has been raising which species to meet the pulpwood demand of various paper mills in the state, thus relieving the natural forests from the burden of supplying the raw materials to them?

Ans : various species such as eucalyptus and bamboo

Question: TSFDC is spread across how many districts in Telangana ?

Ans : 12 districts in the state with a net area of 33,743 hectares

22) Telangana State Forest Academy: The Telangana State Forest Academy (TSFA) was formed with the objective of conducting training programmes for public service officers working in the forest and wildlife sectors. In 2020-21, TSFA organized 62 division-level and 9 state-level refresher training programmes covering 6,150 and 1,625 participants respectively. It conducted 8 division-level and 7 state-level refresher training programmes covering 2,389 and 533 participants respectively in 2021-22 (till August 2021).

Question: What is objective of forming the Telangana State Forest Academy (TSFA) ?

Ans : TSFA was formed with the objective of conducting training programmes for public service officers working in the forest and wildlife sectors.

23) FCRI Mulugu

The Government established a Forest College and Research Institute (FCRI) in 2016 in Mulugu of Siddipet district. FCRI aims to bring out qualified forestry professionals for the conservation and sustainable management of forest resources. FCRI offers bachelors-level, masters-level and doctoral degree programmes in forestry.

It also develops appropriate methods through rigorous research to propagate plantation crops to meet the domestic and industrial needs. Furthermore, FCRI provides extension training to farmers and develop agro-forestry models suitable for different agro-ecological systems.

Question: Where the Telangana Government established a Forest College and Research Institute (FCRI) in 2016 ?

Ans : in Mulugu of Siddipet district

Question: Forest College and Research Institute (FCRI) aims what ?

Ans : FCRI to bring out qualified forestry professionals for the conservation and sustainable management of forest resources. FCRI offers bachelors-level, masters-level and doctoral degree programmes in forestry. It also develops appropriate methods through rigorous research to propagate plantation crops to meet the domestic and industrial needs

24) Biodiversity

According to the Biological Diversity Act, 2002, 'biological diversity' means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and of eco-systems. The Government of Telangana has adopted both insitu and ex-situ conservation of biodiversity in the state. In-situ conservation is the way of conserving living species, especially wild and endangered species in their natural habitats and environment.

This includes biosphere reserves, national parks, wildlife sanctuaries, etc. On the other hand, *exsitu* methods involve conserving living species in artificial habitats that reflect their natural living habitats. Examples of *ex-situ* conservation are zoological parks, aquariums, botanical gardens, cryopreservation, DNA banks etc.

Question: When Biological Diversity Act was passed ?

Ans : 2002

Question: What is 'biological diversity'?

Ans : 'Biological diversity' means the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and of eco-systems.

Question : The Government of Telangana has adopted which type of conservation of biodiversity in the state ?

Ans : Both insitu and ex-situ conservation of biodiversity in the Telangana.

Question: What is 'in-situ conservation' ?

Ans : In-situ conservation is the way of conserving living species, especially wild and endangered species in their natural habitats and environment. In-situ conservation includes biosphere reserves, national parks, wildlife sanctuaries, etc.

Question: What is 'ex-situ' conservation ?

Ans : 'Ex-situ' methods involve conserving living species in artificial habitats that reflect their natural living habitats.

Question: What are the examples of 'ex-situ' conservation ?

Ans : Examples of *ex-situ* conservation are zoological parks, aquariums, botanical gardens, cryopreservation, DNA banks etc.

25) In-situ Conservation: Protected Areas in Telangana

To protect its rich biodiversity, the Government of Telangana declared a network of 12 protected areas that includes 9 wildlife sanctuaries and 3 national parks covering an area of 5,692 sq.km. All the three national parks fall within the Hyderabad Metropolitan Development Authority (HMDA) area and ensure that the city stays habitable for the people.

26) Project Tiger

Telangana has two tiger reserves with the objective to ensure the survival and propagation of tigers.

The Amrabad Tiger Reserve located in the Nallamala hill tracts and spreads over Mahabubnagar and Nalgonda districts to a total area of 2,611 sq.km.

The Kawal Tiger Reserve with a total area of 2,015 sq.km has forest areas which are contiguous to Tadoba-Andheri Tiger Reserve in Maharashtra and Indravati Tiger Reserve in Chhattisgarh. Tigers are observed to migrate between Kawal and the other two reserves. The All- India tiger estimation carried out in 2018 indicated the presence of 16 tigers in Amrabad and 10 in Kawal.

Under the Swadesh Darshan initiative of Government of India an eco-tourism circuit in Mahabubnagar district has been developed. Encompassing the Nallamala Hills and the Eastern Ghats, this circuit covers rivers and waterfalls, temples, and natural caves, with the Srisailem temple anchoring the whole package. The revenue generated through the eco-tourism projects in Mannanur, Farhabad, Mallelatheertham and Domalapenta with the involvement of local communities is deposited in the Tiger Conservation Foundation and utilized for the development and conservation of wildlife, particularly tigers.

Question: Where the Amrabad Tiger Reserve is located ?

Ans : It is in the Nallamala hill tracts and spreads over Mahabubnagar and Nalgonda districts to a total area of 2,611 sq.km. (Presence of 16 tigers in Amrabad)

Question: Where the Kawal Tiger Reserve is located ?

Ans : It is with a total area of 2,015 sq.km of forest areas which are contiguous to Tadoba-Andheri Tiger Reserve in Maharashtra and Indravati Tiger Reserve in Chhattisgarh. Tigers are observed to migrate between Kawal and the other two reserves. The All- India tiger estimation carried out in 2018 indicated the presence of 10 in Kawal.

Question: Amrabad and Kawal Tiger Reserves are called as what ?

Ans : in-situ conservation

Question: Give details of Swadesh Darshan (Eco-tourism circuit)?

a) Under the Swadesh Darshan initiative of Government of India an eco-tourism circuit in Mahabubnagar district has been developed.

b) Encompassing the Nallamala Hills and the Eastern Ghats, this circuit covers rivers and waterfalls, temples, and natural caves, with the Srisailem temple anchoring the whole package.

c) The revenue generated through the eco-tourism projects in Mannanur, Farhabad, Mallethachertham and Domalapeda with the involvement of local communities is deposited in the Tiger Conservation Foundation and utilized for the development and conservation of wildlife, particularly tigers

d) All the above

Ans : d

27) Ex-situ Conservation

The Government of Telangana has adopted ex-situ conservation methods to facilitate the breeding of endangered species and their rehabilitation in the natural habitat. For this purpose, the Government manages two zoos in the state—in Hyderabad and Warangal .

The Government has also set up deer parks to conserve antelopes including black buck (*Antelope cervicapra*), Sambhar deer (*Rusa unicolor*), Chousingha deer (*Tetracerus quadricornis*) and Spotted deer (*Axis axis*) at four locations. In addition, there are two private deer parks in the state.

Question: The Government of Telangana has adopted 'ex-situ' conservation methods for which purpose ?

Ans : To facilitate the breeding of endangered species and their rehabilitation in the natural habitat

Question: Telangana Government manages which two zoos in the state ?

Ans : Hyderabad and Warangal

Question: The Telangana Government has also set up deer parks to conserve antelopes including which of the following ?

a) black buck (*Antilope cervicapra*),

b) Sambhar deer (*Rusa unicolor*),

c) Chousingha deer (*Tetracerus quadricornis*) and Spotted deer (*Axis axis*) at four locations

d) All the above

Ans : d

Question: There are two private deer parks in the Telangana state?

Ans : Yes

27) BIOSOT

The Government of Telangana constituted the Biodiversity Conservation Society of Telangana (BIOSOT) as per the orders of the Honourable Supreme Court of India to implement the conservation measures in the wildlife sanctuaries. An amount of Rs. 25.36 crore is deposited in the BIOSOT account pertaining to the Srisailem Left Bank Canal Project. The interest accrued to the principal amount is utilized for the protection and management of sanctuaries and tiger reserves. This includes initiatives such as habitat improvement, installation of solar pump-equipped bore wells and purchase of camera traps to monitor the movement of wild animals etc.

Question: Expand BIOSOT ?

Ans : Biodiversity Conservation Society of Telangana (BIOSOT)

Question: The Government of Telangana constituted the Biodiversity Conservation Society of Telangana

(BIOSOT) as per the orders of the Honourable Supreme Court of India for which purpose ?

Ans : To implement the conservation measures in the wildlife sanctuaries

Question: An amount of Rs. 25.36 crore is deposited in the BIOSOT account pertaining to the Srisailem Left Bank Canal Project. Give details ?

a) The interest accrued to the principal amount is utilized for the protection and management of sanctuaries and tiger reserves.

b) This includes initiatives such as habitat improvement, installation of solar pump-equipped bore wells and purchase of camera traps to monitor the movement of wild animals etc.

c) Both (a) & (b)

d) None of these

Ans: c

28) Implementation of Biodiversity Act, 2002

The Government of India enacted the Biological Diversity Act, 2002 (BDA, 2002) to provide for the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources and knowledge. To implement this in the state, the Government of Telangana created the Telangana State Biodiversity Board (TSBB) as a statutory and autonomous body corporate under section 22 of the BDA, 2002.

TSBB is entrusted with the responsibility to advise the Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources.

TSBB also performs the regulatory functions like managing the requests for commercial utilization of biological resources.

Question: The Government of India enacted the Biological Diversity Act, 2002 (BDA, 2002) for which purpose ?

Ans : To provide for the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources and knowledge

Question: Government of Telangana created the Telangana State Biodiversity Board (TSBB) as a statutory and autonomous body corporate under which Section of BDA, 2002?

Ans : Section 22 of the BDA, 2002.

Question: TSBB is entrusted with what ?

Ans : The responsibility to advise the Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources.

Question : TSBB also performs which regulatory functions?

Ans : Regulatory functions like managing the requests for commercial utilization of biological resources

29) Biodiversity Management Committees: TSBB constituted Biodiversity Management Committees (BMCs) in the state under Section 41 of the Biological Diversity Act, 2002. The major functions of BMCs are (i) promoting the conservation of biological diversity, (ii) documentation of biological diversity (iii) preservation of habitats, (iv) conservation of land-races, folk varieties and cultivars, domesticated stocks and breeds of animals, and microorganisms, (v) chronicling of knowledge relating to biodiversity and (vi) facilitating the preparation of people's biodiversity registers. Currently, there are 13,426 BMCs in the state covering 538 out of 540 mandals.

Question: TSBB constituted Biodiversity Management Committees (BMCs) in the state under which Act?

Ans : As per Section 41 of the Biological Diversity Act, 2002

Question: What are the major functions of Biodiversity Management Committees (BMCs)?

a) promoting the conservation of biological diversity,

b) documentation of biological diversity

c) preservation of habitats; conservation of land-races, folk varieties and cultivars, domesticated

stocks and breeds of animals, and microorganisms ; chronicling of knowledge relating to biodiversity and ; facilitating the preparation of people's biodiversity registers

d)All the above

Ans : d

Question: Currently, how many Biodiversity Management Committees (BMCs) are there in Telangana State ?

Ans : Currently , there are 13,426 BMCs in the Telangana state covering 538 out of 540 mandals.

30)People's Biodiversity Register: People's Biodiversity Register (PBR) is a legal document that contains the details of the biological resources occurring within a BMC. It has comprehensive information on the availability and knowledge of local biological resources, medicinal or any other use or traditional knowledge associated with them. It also acts as a legal evidence of prior knowledge and a useful tool in the management and sustainable use of bioresources. 213 PBRs have been prepared to date. Ameenpur lake is recognized as a Biodiversity Heritage Site.

Question: What is People's Biodiversity Register (PBR)

Ans: People's Biodiversity Register is a legal document

Question: People's Biodiversity Register (PBR) contains what ?

a)PBR contains the details of the biological resources occurring within a BMC.

b)It has comprehensive information on the availability and knowledge of local biological resources, medicinal or any other use or traditional knowledge associated with them.

c)It also acts as a legal evidence of prior knowledge and a useful tool in the management and sustainable use of bioresources

d)All the above

Ans : d

Question: How many People's Biodiversity Registers (PBRs) have been prepared to date in Telangana ?

Ans : 213 PBRs have been prepared to date

Question: Which lake is recognized as a Biodiversity Heritage Site ?

Ans : Ameenpur lake

Pollution Control

31) Air Quality

Air Quality Index (AQI) is a composite measure of air pollution. Based on the ambient concentration values of air pollutants and their likely health impacts, AQI categorizes pollution levels into Good, Satisfactory, Moderate, Poor, Very Poor, and Severe. No monitoring station in the state recorded AQI level worse than 'moderate' between 2016 and 2021.

The Government established an Air Quality Monitoring Committee to prepare an action plan for Air Quality. The Telangana State Pollution Control Board (TSPCB) targets a 30% reduction in Particulate Matter of size less than 10 microns (PM 10) by 2025-26.

The Government has also decided to increase the number of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) from 5 to 13. TSPCB has also introduced the TSAIR mobile application through which the public can register complaints related to air pollution in the cities in the state.

Question: What is AQI ?

Ans : Air Quality Index (AQI) is a composite measure of air pollution.

Question : AQI categorizes pollution into what ?

Ans : Based on the ambient concentration values of air pollutants and their likely health impacts, AQI categorizes pollution levels into Good, Satisfactory, Moderate, Poor, Very Poor, and Severe

Question: The Telangana Government established an Air Quality Monitoring Committee for which purpose ?

Ans : To prepare an action plan for Air Quality.

Question: The Telangana State Pollution Control Board (TSPCB) targets a 30% reduction in Particulate Matter of size less than what ?

Ans: less than 10 microns (PM 10) by 2025-26.

Question: The Telangana Government has also decided to increase the number of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) from 5 to _____.

Ans : 13.

Question: Telangana State Pollution Control Board (TSPCB) has also introduced the TSAIR mobile application through which the public can register complaints related to what ?

Ans : Related to air pollution in the cities in the state

According to the 'India: Health of the Nation's States' Report 2017, the Disability Adjusted Life Years (DALY) Rate attributable to air pollution (per 1 lakh population) is 2,710 in Telangana compared to the national average of 3,469. This implies that markedly fewer persons suffered from deaths and diseases on account of air pollution in Telangana than in the country as a whole.

Question: What is DALY Rate ?

Ans : Disability Adjusted Life Years (DALY) Rate attributable to air pollution (per 1 lakh population)

Question: According to the 'India: Health of the Nation's States' Report 2017, the Disability Adjusted Life Years (DALY) Rate attributable to air pollution (per 1 lakh population) is how much ?

Ans: 2,710 in Telangana

Question: Disability Adjusted Life Years (DALY) Rate attributable to air pollution (per 1 lakh population) is 2,710 in Telangana compared to the national average of 3,469. It implies what ?

Ans : This implies that markedly fewer persons suffered from deaths and diseases on account of air pollution in Telangana than in the country as a whole.

Question: Which of the following is correct about DALY ?

a) DALY stands for 'Disability Adjusted Life Years', and is a time-based measure that combines years of life lost due to premature mortality (YLLs) and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (YLDs).

b) One DALY represents the loss of the equivalent of one year of full health

c) Both (a) & (b)

d) None of these

Ans : c

32) Water Quality

TSPCB monitors water quality under the National Water Quality Monitoring Programme (NWMP) in the water bodies in the Telangana state using 244 stations covering rivers, lakes, groundwater and sewage treatment plants.

Question: Who monitors water quality under the National Water Quality Monitoring Programme (NWMP) ?

Ans: Telangana State Pollution Control Board (TSPCB) monitors water quality under the National Water Quality Monitoring Programme (NWMP) in the water bodies in the Telangana state using 244 stations covering rivers, lakes, ground water and sewage treatment plants.

29 Sewage Treatment Plants (STP) are operational in the state accounting for a total capacity of 885.5 million litres per day (MLD) and utilization of 735.8 MLD. Two Real-Time Water Quality Monitoring Stations (RTWQMS) are installed in Hussain Sagar Lake and Fatehnagar in Hyderabad. There are 4 Common Effluent Treatment Plants in Telangana under operation with a total capacity of around 6,850 kilolitres per day .

TSPCB has developed a GPS-based automatic effluent tanker tracking and reporting system in 167 vehicles transporting effluents to the Common Effluent Treatment Plants (CETPs).

Question: Which of the following is correct ?

- a)STP : Sewage Treatment Plant
- b)MLD : Million Litres per day
- c)RTWQMS : Real – Time Water Quality Monitoring Stations
- d) All the above

Ans : d

Question: How many Sewage Treatment Plants (STP) are operational in the Telangana state accounting for a total capacity of 885.5 million litres per day (MLD) and utilization of 735.8 MLD

Ans : 29

Question: Where two Real-Time Water Quality Monitoring Stations (RTWQMS) are installed?

Ans : Hussain Sagar Lake and Fatehnagar in Hyderabad

Question: How many Common Effluent Treatment Plants (CETPs) in Telangana under operation with a total capacity of around 6,850 kilolitres per day .

Ans : 4

33)Waste Management in Telangana

Solid Waste: In 2016-17, the collection rate of solid waste in the state was only 89.9%. With the persistent efforts of the Government, the collection rate of solid wastes has reached 100% by 2020-21. The percentage of waste treated out of the total waste generated also increased during this period (from 61.4% in 2016-17 to 75.56% in 2020-21)

Question: With the persistent efforts of the Government, the collection rate of solid wastes has reached _____ by 2020- 21.

Ans : 100 %

There are 5 waste-to-energy plants in Telangana; four with a capacity of 35.6 MW each and one with a capacity of 19.8 MW. An Integrated Municipal Solid Waste Management project with a capacity of 6,275 Tonnes Per Day is established in Jawaharnagar, Hyderabad. This location also has an electricity generation plant using solid waste, established by GHMC. 140 Urban Local Bodies (ULB) in the state have identified lands for establishing processing facilities. 113 ULBs have established 279 dry resource collection centres to process dry waste. 102 ULBs have established wet processing facilities like vermicomposting yards.

Question: Which of the following is correct about Waste-to-energy plants in Telangana ?

- a) There are 5 waste-to-energy plants in Telangana; four with a capacity of 35.6 MW each and one with a capacity of 19.8 MW.

b) An Integrated Municipal Solid Waste Management project with a capacity of 6,275 Tonnes Per Day is established in Jawaharnagar, Hyderabad. This location also has an electricity generation plant using solid waste, established by GHMC

c) Both (a) & (b)

d) None of these

Ans : c

Question: How many Urban Local Bodies (ULBs) have established wet processing facilities like vermicomposting yards ?

Ans : 102 Urban Local Bodies (ULBs) have established wet processing facilities like vermicomposting yards.

Question: 113 ULBs have established 279 dry resource collection centres to process _____

Ans : dry waste

34) Bio-Medical Waste: The Telangana Government ensures that 100% of the Bio-Medical Waste generated in the state is treated either through incineration or autoclave. In all years from 2016-17 to 2020-21, the ratio of BMW incinerated to that processed in autoclaves remained around 3:1 .

The treated BMWs are also disposed of, through authorized recyclers. TSPCB has permitted 11 Common Bio-Medical Waste Treatment Facilities (CBWTFs) in Telangana State for collection and safe disposal of the Bio-Medical Waste. 51 Bio-medical waste-carrying vehicles are equipped with GPS tracking.

Question: The Telangana Government ensures that 100% of the Bio-Medical Waste (BMW) generated in the state is treated through which method ?

Ans : Either through incineration or autoclave

Question: TSPCB has permitted how many Common Bio-Medical Waste Treatment Facilities (CBWTFs) in Telangana State for collection and safe disposal of the Bio-Medical Waste.

Ans : 11

Question : The treated BMWs are also disposed of, through _____.

Ans : Authorized recyclers

Question: How many types of solid waste is there ?

Ans : Prominently two types i.e., Solid wet waste and Solid dry waste

Question: Bio-medical waste mainly comes from where ?

Ans : Hospitals and dispensaries ; biological laboratories, medical diagnostic centers etc.

35) e-Waste Management Policy in 2017

The e-Waste Management policy in 2017 envisions creating an aware society that plays an active role in managing e-Waste by segregating and channelizing end-of-life products to the right avenues. The Telangana Government earmarks industrial space or shed for dismantling or recycling e-waste in the upcoming industrial parks, estates and clusters. Personnel working on-ground with the dismantling and recycling of e-waste would undergo this registration process so that they would not experience lack of personal protective equipment or unethical work practices. e-waste workers would be provided with the necessary skills through the Telangana Academy for Skill and Knowledge (TASK) and the Skill Council for Green Jobs.

Question: When e-Waste (electronic-Waste) policy was prepared ?

Ans : 2017

Question: The e-Waste Management policy in 2017 envisions what ?

Ans : Creating an aware society that plays an active role in managing e-Waste by segregating and channelizing end-of-life products to the right avenues

36) Other Measures taken to prevent pollution

Steps taken by the Telangana Government to combat other kinds of pollution in the state include:

1)54 vehicles that carry hazardous waste to the Hyderabad Waste Management Project, Dundigal and 11 vehicles to GEPIL, a hazardous waste processing facility, are equipped with GPS-tracking.

2)Two Construction and Demolition waste processing plants are commissioned at Jeedimetla and Fathullaguda, with a capacity of 500 TPD each.

Question: Where Construction and Demolition waste processing plants are commissioned?

Ans : Jeedimetla and Fathullaguda

Question: 54 vehicles that carry hazardous waste to the Hyderabad Waste Management Project,_____.

Ans : Dundigal

37)Conservation and Climate Action

Telangana is vulnerable to climate-induced natural disasters, predominantly, droughts, heat waves and flash floods. The frequency, intensity, and patterns of these disasters has been changing on account of climate change, and leading to unprecedented loss of human life as well as wealth.

The Telangana State Heatwave Action Plan, 2020 provides a framework to the state administration for heatwave response.

The Government also developed the Telangana State Action Plan for Climate Change (TSAPCC) in 2015. TSAPCC provides a framework to undertake actions that deliver benefits for growth and development while mitigating and adapting to climate change.

Question: When Telangana Government also developed the Telangana State Action Plan for Climate Change (TSAPCC) ?

Ans : in 2015.

Question: Telangana State Action Plan for Climate Change (TSAPCC) provides what ?

Ans : A framework to undertake actions that deliver benefits for growth and development while mitigating and adapting to climate change

Question: The Telangana State Heatwave Action Plan, 2020 provides a framework to the state administration for _____.

Ans: Heatwave response

Question: Which of the following is correct?

a) climate-induced natural disasters, predominantly, droughts, heat waves and flash floods.

b)The frequency, intensity, and patterns of these disasters has been changing on account of climate change, and leading to unprecedented loss of human life as well as wealth

c)Both (a) & (b)

d) None of these

Ans : c

Way Forward

The Government of Telangana is led by the constitutional vision to protect its natural environment. It has also aligned its programmes on forest, environment, biodiversity and climate change with four interconnected goals under the 2030 Sustainable Development Goals (SDG) Agenda- Clean Water and Sanitation (SDG 6), Responsible Production and Consumption (SDG 12), Climate Action (SDG 13) and Life on Land (SDG 15). In pursuing this, the policy frameworks such as the Telangana State Climate Action Plan, 2015, and initiatives such as Telangana Ku Haritha Haram would take the lead on achieving the target of 33% forest cover in the state even in the coming years. This would be supplemented with the ongoing initiatives of the Telangana State Pollution Control Board, rural and urban local bodies and the Telangana State Biodiversity Board.

Question: The Government of Telangana is led by the constitutional vision to protect its natural environment. It has also aligned its programmes on forest, environment, biodiversity and climate change with four interconnected goals under the 2030 Sustainable Development Goals (SDG) Agenda. Which of the following is correct ?

- a) Clean Water and Sanitation (SDG 6),
- b) Responsible Production and Consumption (SDG 12),
- c) Climate Action (SDG 13) and Life on Land (SDG 15)
- d) All the above

Ans : d