1.   Details of Module and its structure

Module Detail	
Subject Name	Geography
Course Name	Geography 04 (Class XII, Semester - 2)
Module Name/Title	Introduction to Human Settlements-Rural Settlements – Part 2
Module Id	legy_20402
Pre-requisites	Basic concepts about Urban Settlements, Evolution of Urban settlements in India and classification of Urban settlements in India
Objectives	After going through this lesson, the learners will be able to understand the following: • Concepts of urban settlements • Evolution of urban settlements in India • Classification of urban settlements in India • Problems of urban settlements in India
Keywords	Metropolitan, Mega cities, Million cities, Urban agglomeration, Urbanisation, Garrison towns, Smart city mission

2.   Development Team

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This module will deal with the concept of Urban Settlements and process of urbanisation. It will deal with evolution of urban settlements in India in time periods of history. This will also discuss the process of and causes of urbanisation in India. It will deal with classification of urban settlements in India on the basis of their size and functions. In this module we will discuss the characteristics and features of Smart City Mission in India. This will also discuss the problems of urban settlements in India.

Concept of Urban Settlements

Unlike rural settlements, urban settlements are generally compact and larger in size. They are engaged in a variety of nonagricultural, economic and administrative functions. As mentioned earlier, cities are functionally linked to rural areas around them. Thus, exchange of goods and services is performed sometimes directly and sometimes through a series of market towns and cities. Thus, cities are connected directly as well as indirectly with the villages and also with each other.

An urban area is a human settlement with a high population density and infrastructure of built environment. Urban areas are created through urbanization and are categorized by urban morphology as cities, towns, conurbations or suburbs. In urbanism, the term contrasts to rural areas such as villages and hamlets; in urban sociology or urban anthropology it contrasts with natural environment. The creation of early predecessors of urban areas during the urban revolution led to the creation of human civilization with modern urban planning, which along with other human activities such as exploitation of natural resources led to a human impact on the environment. "Agglomeration effects" are in the list of the main consequences of increased

rates of firm creation since. This is due to conditions created by a greater level of industrial activity in a given region. However, a favourable environment for human capital development would also be generated simultaneously.

Urban Settlements

Source:https://upload.wikimedia.org/wikipedia/commons/3/34/Culture_Sights_Mumbai_City_India_Urban_Skyline.jpg

Concept of Urbanization

Urban areas are created and further developed by the process of urbanization. Urban areas are measured for various purposes, including analyzing population density and urban sprawl.

Urbanization refers to the population shift from rural to urban areas, the decrease in the proportion of people living in rural areas, and the ways in which societies adapt to this change. It is predominantly the process by which towns and cities are formed and become larger as more people begin living and working in central areas.

Urban areas

Source: https://cdn.pixabay.com/photo/2019/12/09/03/53/city-4682620__340.jpg

Although the two concepts are sometimes used interchangeably, urbanization should be distinguished from urban growth. Whereas urbanization refers to the *proportion* of the total national population living in areas classified as urban, urban growth strictly refers to the *absolute* number of people living in those areas. The United Nations has projected that half of the world's population will live in urban areas at the end of 2008. It is predicted that by 2050 about 64% of the developing world and 86% of the developed world will be urbanized. That is equivalent to approximately 3 billion urbanites by 2050, much of which will occur in Africa and Asia. Notably, the United Nations has also recently projected that nearly all global population growth from 2017 to 2030 will be by cities, with about 1.1 billion new urbanites over the next 10 years.

Urbanization is relevant to a range of disciplines, including urban planning, geography, sociology, architecture, economics, and public health. The phenomenon has been closely linked to modernization, industrialization, and the sociological process of rationalization. Urbanization can be seen as a specific condition at a set time (e.g. the proportion of total population or area in cities or towns), or as an increase in that condition over time. Therefore, urbanization can be quantified either in terms of the level of urban development relative to the overall population, or as the rate at which the urban proportion of the population is increasing. Urbanization creates enormous social, economic and environmental changes, which provide an opportunity for sustainability with the "potential to use resources more efficiently, to create more sustainable land use and to protect the biodiversity of natural ecosystems."

Urbanization is not merely a modern phenomenon, but a rapid and historic transformation of human social roots on a global scale, whereby predominantly rural culture is being rapidly replaced by predominantly urban culture. The first major change in settlement patterns was the accumulation of hunter-gatherers into villages many thousand years ago. Village culture is characterized by common bloodlines, intimate relationships, and communal behavior, whereas urban culture is characterized by distant bloodlines, unfamiliar relations, and competitive behavior. This unprecedented movement of people is forecast to continue and intensify during the next few decades, mushrooming cities to sizes unthinkable only a century ago. As a result, the world urban population growth curve has up till recently followed a quadratic-hyperbolic pattern.

Evolution of Urban Settlements in India

Towns flourished since prehistoric times in India. Even at the time of Indus valley civilisation, towns like Harappa and Mohan-jo-daro were in existence. The following period has witnessed evolution of towns. It continued with periodic ups and downs until the arrival of Europeans in India in the eighteenth century. On the basis of their evolution in different periods, Indian towns may be classified as:

• Ancient towns, • Medieval towns, and • Modern towns.

Ancient Towns

There are number of towns in India having historical background spanning over 2000years. Most of them developed as religious and cultural centres. Varanasi is one of the important towns among these. Prayag (Allahabad), Pataliputra (Patna), Madurai are some other examples of ancient towns in the country.

Varanasi an ancient town in India

Medieval Towns

About 100 of the existing towns have their rootsin the medieval period. Most of them developedas headquarters of principalities and kingdoms.These are fort towns which came up on theruins of ancient towns. Important among themare Delhi, Hyderabad, Jaipur, Lucknow, Agraand Nagpur.

Jaipur a medieval town in India

Modern Towns

The British and other Europeans havedeveloped a number of towns in India.Starting their foothold on coastal locations,they first developed some trading ports suchas Surat, Daman, Goa, Pondicherry, etc. TheBritish later consolidated their hold aroundthree principal nodes – Mumbai (Bombay), Chennai (Madras), and Kolkata (Calcutta) –and built them in the British style. Rapidly extending their domination either directly orthrough control over the princely states, theyestablished their administrative centres, hill-townsas summer resorts, and added new civil, administrative and military areas to them.Towns based on modern industries alsoevolved after 1850. Jamshedpur can be citedas an example.

After independence, a large number of towns have been developed as administrative headquarters, e.g., Chandigarh, Bhubaneswar, Gandhinagar, Dispur, etc., and industrial centres, such as Durgapur, Bhilai, Sindri, Barauni. Some old towns also developed as satellite towns around metropolitan cities, such as Ghaziabad, Rohtak, Gurugram around Delhi. With increasing investment in rural areas, a large number of medium and small towns have developed all over the country.

Chandigarh a modern town in India

Source: https://live.staticflickr.com/8339/8261772464_586c359db0_b.jpg

Urbanization in India

Urbanization in India began to accelerate after independence, due to the country's adoption of a mixed economy, which gave rise to the development of the private sector. The population residing in urban areas in India, according to the 1901 census, was 11.4%, increasing to 28.53% by the 2001 census, and is now currently 34% in 2017 according to The World Bank. According to a survey by UN, in 2030 40.76% of country's population is expected to reside in urban areas. As per World Bank, India, along with China, Indonesia, Nigeria, and the United States, will lead the world's urban population surge by 2050.
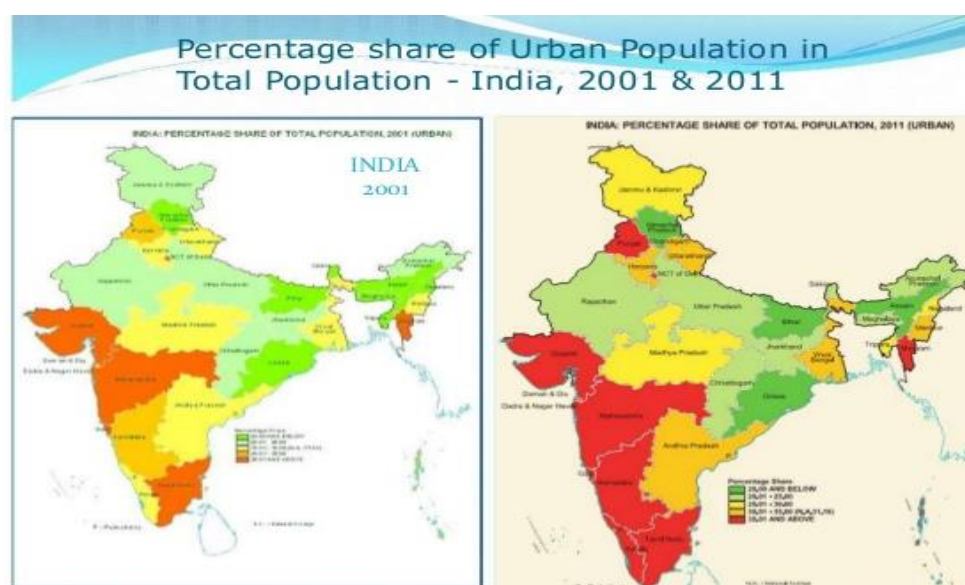
Mumbai saw large-scale rural-urban migration in the 20th century. Mumbai, in 2018, accommodates 22.1 million people, and is the largest metropolis by population in India, followed by Delhi with 18 million inhabitants. Delhi witnessed the fastest rate of urbanisation in the world, with a 4.1% rise in population as per the 2011 census.

Table 4.1: India – Trends of Urbanisation 1901-2011

Year	No. Of Towns/UAS	Urban Population (in Thousands)	% of Total Population	Decennial Growth %
1901	1827	25851.9	10.84	
1911	1815	25941.6	10.29	0.35
1920	1949	28086.2	11.18	8.27
1931	2072	33456	11.99	19.12
1941	2250	44153.3	13.86	31.97
1951	2843	62443.7	17.29	41.42
1961	2365	78936.6	17.97	26.41
1971	2590	109114	19.91	38.23
1981	3378	159463	23.34	46.14
1991	4689	217611	25.71	36.47
2001	5161	285355	27.78	31.13
2011*	6171	377000	31.16	31.08

*Source: Census of India, 2011 http.//www.censusindia.gov.in (Provisional)

India, the leading country in South Asia has shown an unprecedented increase in the urban population in the last few decades and its urban population has increased about 14 fold from 1901 to 2011. This growth is mainly uneven but not skewed and not concentrated to a single city of the country. India shares most characteristic features of urbanization in the developing countries where the rate of urbanization is faster than the developed countries. For instance, in 1971 there were only about 150 cities whose population was more than one lakh, now this figure has reached to 500. The urban population of India has increased from 25.85 million in 1901 to 377.11 million in 2011.

Urbanisation in India

Source:https://image.slidesharecdn.com/urbanisationinindiabycharujaiswal-130518174802-phpapp02/95/urbanisation-in-india-14-638.jpg?cb=1402297750

Causes of Urbanisation in India

The contribution of the agricultural sector to the GDP of India started to decline and the percentage contribution from secondary sector increased. The period after 1941, witnessed rapid growth of four metropolitan cities in India, which were Kolkata, Delhi, Mumbai, and Chennai. The nation's economy saw a rise due to industrial revolution and the invention of new technologies increased the standard of living of people living in urban areas. The growth of public sector resulted in development of public transport, roads, water supply, electricity, and hence the infrastructure of urban areas.

Maharashtra was the most urbanized major state in India in 2011, with Kerala being second, with the urban-total state population ratio. The spatial distribution of large cities in India is uneven as out of 100 most populous cities in the country more than 50 are confined to only 5 states namely, Uttar Pradesh, Maharashtra, Tamil Nadu, Kerala and Andhra Pradesh. Other than state capitals and major industrial centre, large cities are mainly concentrated in the national capital region (NCR), the western and southern part of India.

The main causes of urbanisation in India are:
- Expansion in government services, as a result of the Second World War
- Migration of people during the partition of India
- The Industrial Revolution
- Eleventh five-year plan that aimed at *urbanisation* for the economic development of India
- Economic opportunities are just one reason people move into cities
- Infrastructure facilities in the urban areas
- Growth of private sector after 1990
- Growth of employment in cities is attracting people from rural areas as well as smaller cities to large towns. According to Mckinsey India's urban population will grow from 340 million in 2008 to 590 million in 2030.
- Therefore, it is being driven by economic compulsions where people move out for economic advancements to areas offering better job opportunities.
- It is also driven by land fragmentations, villages being erased due to roads and highway constructions, dam constructions and other activities.
- Indian rural economy is primarily based on agriculture. Indian agriculture sector accounts for 18 percent of India's gross domestic product (GDP) and it is estimated that it provides employment to 50% of the countries workforce, but ground reality differs. Many farmers in different states of India are leaving farming, primarily because of high

input cost and low income from agriculture. Also on the other hand with usage of fertilizers, chemicals and hybrid seeds, land fertility is declining. Thus people (including farmers) are migrating to cities.

Classification of Urban Settlements in India

Urban settlements in India can be classified on the following basis:

    (i) Population Size

    (ii) Functions of Towns

(i)   Classification of Towns on the basis of Population Size

Census of India classifies urban centres into six classes. Urban centre with population of more than one lakh is called a city or class I town. Cities accommodating population size between one to five million are called metropolitan cities and more than five million are mega cities. Majority of metropolitan and mega cities are urban agglomerations. An urban agglomeration may consist of any one of the following three combinations: (i) a town and its adjoining urban outgrowths, (ii) two or more contiguous towns with or without their outgrowths, and (iii) a city and one or more adjoining towns with their outgrowths together forming a contiguous spread.

Table 4.2: India - Class-wise number of towns and cities and their population, 2011

Class	Population Size	Number of Cities	Total Urban Population (in thousands)	% of Total Urban Population
I	100000 and more	468	227899	60.45
II	50000-99999	474	41328	10.96
III	20000-49999	1373	58174	15.43
IV	10000-19999	1683	31866	8.45
V	5000-9999	1749	15883	4.21
VI	Less than 5000	424	1956	0.51

*Source: Census of India – 2011 and India, 2017, Ministry of Information and Broadcasting, Government of India

It is evident from Table 4.2 that more than 60 per cent of urban population in India lives in Class I towns. Out of 468 cities, 53 cities/ urban agglomerations are metropolitan cities. Six of them are mega cities with population over five million each. More than one-fifth (21.0%) of urban population lives in these mega cities.

Among them, Greater Mumbai is the largest agglomeration with 18.4 million people. Delhi, Kolkata, Chennai, Bengaluru and Hyderabad are other mega cities in the country.

Table 4.3 India: Population of Million plus Cities/Urban Agglomeration, 2011

S.No.	Name of Urban Agglomeration	Population
1	Srinagar UA	1,273,312
2	Ludhiana (M Corpl)	1,613,878
3	Amritsar UA	1,183,705
4	Chandigarh UA	1,025,682
5	Faridabad (M Corp.)	1,404,653
6	Delhi UA	16,314,838
7	Jaipur (M Corp.)	3,073,350
8	Jodhpur UA	1,137,815

9	Kota (M Corp.)	1,001,365
10	Kanpur UA	2,920,067
11	Lucknow UA	2,901,474
12	Ghaziabad UA	2,358,525
13	Agra UA	746,467
14	Varanasi UA	1,435,113
15	Meerut UA	1,424,908
16	Allahabad UA	1,216,719
17	Patna UA	2,046,652
18	Kolkata UA	14,112,536
19	Asansol UA	1,243,008
20	20. Jamshedpur UA	1,337,131
21	Dhanbad UA	1,195,298
22	Ranchi UA	1,126,741
23	Raipur UA	1,122,555
24	Durg-Bhillainagar UA	1,064,007
25	Indore UA	2,167,447
26	Bhopal UA	1,883,381
27	Jabalpur UA	1,267,564
28	Gwalior UA	1,101,981
29	Ahmedabad UA	6,352,254
30	Surat UA	4,585,367
31	Vadodara UA	1,817,191
32	Rajkot UA	1,390,933
33	Greater Mumbai UA	18,414,288
34	Pune UA	5,049,968
35	Nagpur UA	2,497,777
36	Nashik UA	1,562,769
37	Vasal Virar City (M Corp.)	1,221,233
38	Aurangabad UA	1,189,376
39	Hyderabad UA	7,749,334
40	GVMC (MC)	1,730,320
41	Vijayawada UA	1,491,202
42	Bengaluru UA	8,499,399
43	Kochi UA	2,117,990
44	Kozhikode UA	2,030,519
45	Thrissur UA	1,854,783
46	Malappuram UA	1,698,645
47	Thiruvananthapuram UA	1,687,406
48	Kannur UA	1,642,892
49	Kollam UA	1,110,005
50	Chennai UA	8,696,010
51	Coimbatore UA	2,151,466
52	Madurai UA	1,462,420
53	Tiruchirappalli UA	1,021,717

(ii)   Functional Classification of Towns

Apart from their role as central or nodal places, many towns and cities perform specialized services. Some towns and cities specialize in certain functions and they are known for some specific activities, products or services. However, each town performs a number of functions. On the basis of dominant or specialized functions, Indian cities and towns can be broadly classified as follows:

Administrative towns and cities

Towns supporting administrative headquarters of higher order are administrative towns, such as Chandigarh, New Delhi, Bhopal, Shillong, Guwahati, Imphal, Srinagar, Gandhinagar, Jaipur, Chennai, etc.

New Delhi an Administrative Town

Source:https://upload.wikimedia.org/wikipedia/commons/8/81/Presidential_Estate-New_Delhi-India.jpg

Industrial towns

Industries constitute prime motive force of these cities, such as Mumbai, Salem, Coimbatore, Modinagar, Jamshedpur, Hugli, Bhilai, etc.

Transport Cities

They may be ports primarily engaged in export and import activities such as Kandla, Kochchi, Kozhikode, Vishakhapatnam, etc., or hubs of inland transport, such as Agra, Dhulia, Mughalsarai, Itarsi, Katni, etc.

Commercial towns

Towns and cities specialising in trade and commerce are kept in this class. Kolkata, Saharanpur, Satna, etc., are some examples.

Mining towns

These towns have developed in mineral rich areas such as Raniganj, Jharia, Digboi, Ankaleshwar, Singrauli, etc.

Garrisson Cantonment towns

These towns emerged as garrisson towns such as Ambala, Jalandhar, Mhow, Babina, Udhampur, etc.

Educational towns

Starting as centres of education, some of the towns have grown into major campus towns, such as Roorkee, Varanasi, Aligarh, Pilani, Allahabad, etc.

Religious and cultural towns

Varanasi, Mathura, Amritsar, Madurai, Puri, Ajmer, Pushkar, Tirupati, Kurukshetra, Haridwar, Ujjain came to prominence due to their religious/cultural significance.

Tourist towns

Nainital, Mussoorie, Shimla, Pachmarhi, Jodhpur, Jaisalmer, Udagamandalam (Ooty), Mount Abu are some of the tourist destinations.

The cities are not static in their function. The functions change due to their dynamic nature.

Even specialized cities, as they grow into metropolises become multifunctional wherein industry, business, administration, transport, etc., become important. The functions get so intertwined that the city cannot be categorized in a particular functional class.

Problems of Urban Settlements in India

Rapid rise in urban population, in India, is leading to many problems like increasing slums, decrease in standard of living in urban areas, also causing environmental damage.

This has greatly increased housing issues: with overcrowded cities, many people are forced to live in unsafe conditions, such as illegal buildings. Water lines, roads and electricity are lacking in quality, resulting in a decline in living standards. It is also contributing to the issues presented by pollution.

Urbanization also results in a disparity in the market, owing to the large demands of the growing population and the primary sector struggling to cope.

It could be argued that urbanization impacts the migrants themselves on multiple levels. Networks of friends and family become support systems during the initial transformation phase and the struggle to find work in a fast-paced environment. Their struggles may take months, or even years, to adjust to the new surrounds in order to find a stable job. Migrants are responsible for supporting both themselves in the city and the family left at home.
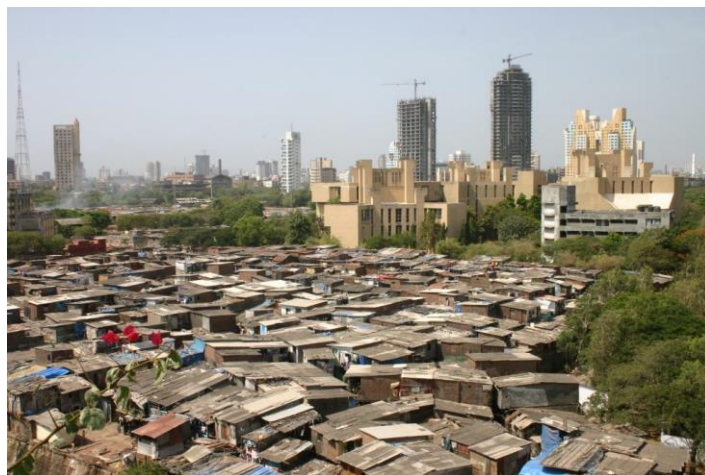
Slum area in India

Source:https://upload.wikimedia.org/wikipedia/commons/8/85/Mumbai_India_slum_June_2005.jpg

Some of the positive effects resulting from rural to urban migration occur in the agrarian communities from which migrants came. Family members left at home, usually the elderly and young are eased out of financial pressures as their relatives work to provide higher standards of living for their dependants. Their quality of life is often additionally improved by the provisions that the migrant sends back.

On the other hand, rural to urban migration poses a big challenge for developing cities due to migrant populations flocking in. How will cities support it in terms of resources, land and space?

Cities offer solutions in terms of high rise buildings (affordable housing), metros (affordable transport), affordable schooling, established local clinics, water ATMs and many new initiatives. However, the problems include:

1. National Institution for Transforming India [NITI Ayog], has released report 'Composite Water Management Index' in June 2018 and stated that 21 cities (including Delhi, Mumbai, and Chennai) in India would run out of groundwater by 2020.

2. The latest database of Numbeo lists three Indian cities among the top 10 cities of the world for having worst traffic conditions. These cities include Mumbai, Pune and Kolkata.

3. Population growth and rapid urbanization are combining to create huge challenges for Indian cities. According to McKinsey, the country's cities are expected to grow from 340 million people in 2008 to a whopping 590 million in 2030 and this growth will be very rapid. Meeting demand for urban services in these cities will require US$1.1 trillion in capital investment over the next 20 years. Without the right design and planning, this massive urban growth could exacerbate existing problems of congestion, pollution, and traffic safety.

4. Delhi is now considered the most polluted city in the world, according to the Brookings Institution, while at least two-and-a-half million premature deaths are blamed on poor air quality across the country as a whole.

5. The Economic Survey Report of India 2017-18 estimated that percentage of agricultural workers of total work force would drop to 25.7 per cent by 2050 from 58.2 per cent in 2001. The main cause of this decline is People migrating to cities and adding to the unemployment in cities. It is interesting to know that because of migration from rural to urban, unemployment in cities is increasing and in rural areas it's decreasing. As per Centre for Monitoring Indian Economy (CMIE) overall unemployment rate of India as on 18 October 2018 is 6.9% , whereas for urban India its 7.5% and for rural India its 6.6%.

Smart Cities Mission

The objective of the Smart Cities Mission is to promote cities that provide core infrastructure, a clean and sustainable environment and give a decent quality of life to its citizens. One of the features of Smart Cities is to apply smart solutions to infrastructure and services in order to make them better. For example, making areas less vulnerable to disasters, using fewer resources and providing cheaper services. The focus is on sustainable and inclusive

development and the idea is to look at compact areas, create a replicable model, which will act like a lighthouse to other aspiring cities.
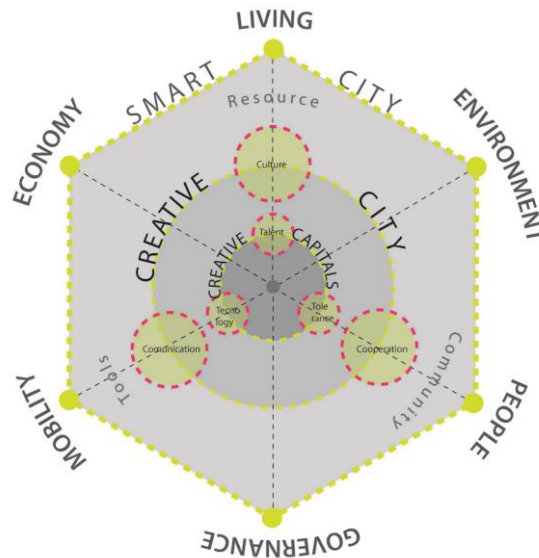
Some typical features of comprehensive development in **Smart Cities** are described below.

1. Promoting mixed land use in area based developments–planning for 'unplanned areas' containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The States will enable some flexibility in land use and building bye-laws to adapt to change;

2. Housing and inclusiveness - expand housing opportunities for all;

3. Creating walkable localities –reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance;

4. Preserving and developing open spaces - parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;

5. Promoting a variety of transport options - Transit Oriented Development (TOD), public transport and last mile para-transport connectivity;

6. Making governance citizen-friendly and cost effective - increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce cost of services and providing services without having to go to municipal offices. Forming e-groups to listen to people and obtain feedback and use online monitoring of programs and activities with the aid of cyber tour of worksites;

7. Giving an identity to the city - based on its main economic activity, such as local cuisine, health, education, arts and craft, culture, sports goods, furniture, hosiery, textile, dairy, etc;

8. Applying Smart Solutions to infrastructure and services in area-based development in order to make them better. For example, making Areas less vulnerable to disasters, using fewer resources, and providing cheaper services.

Conclusion

In this module we have discussed the Concept of Urban settlements and process and urbanisation. We have discussed the evolution of urban settlements in India in time periods of history. We also discussed the process of and causes of urbanisation in India. We have dealt with classification of urban settlements in India on the basis of their size and functions. We have also discussed the problems of urban settlements in India. And in last we have discussed the characteristics and features of Smart City Mission in India initiated by the Government to improve the conditions of urban settlements in the country.