CHAPTER - V

SUMMARY, CONCLUSION AND SUGGESTIONS
In any town or city, the proportion of the residing population brought about by migration of rural populations into towns and cities. Urbanization has played an important role in the developed and developing countries. It is believed that the developed countries of the world could achieve fast economic progress due to large scale urbanization.

Maharashtra State has seven Divisions – Amravati, Aurangabad, Kokan, Mumbai, Nagpur, Nashik, and Pune. The Nashik Division has five Districts – Nashik, Jalgaon, Nandurbar, Ahmednagar and Dhule. The Nashik city is the headquarters of both the Nashik district and Nashik division. The Nashik city is situated in the State of Maharashtra, in the northwest of Maharashtra; on Latitude coordinate 19° 58’ 59” North to 20° 04’ 30” North Latitude and Longitude coordinate 73° 41’ 30” East to 73° 52’ 0” East longitude. It is connected by road to Pune (220km) and Mumbai (185km). The city is contour line of below 2000ft and the basin is at 1960ft M.S.L. Rail connectivity is through the central railway, connected with Mumbai. Air connection is with Mumbai but the air service is not consistent and a proper airport does not exist. This geographical location, the city naturally started growing westward between the two main rivers, the Godavari and the Nasardi, towards Anandvalli, Gangapur and Satpur area. The Climate of Nashik City is favorable and Healthy for good urbanization. The annual temperature ranges between 15°C Min. and 34°C Max. The average rainfall in Nashik City is observed 53 mm. the average humidity is observed in the study area ranges between 34 % and 92 %.

Nashik City is popularly known as the “Grape City” and for its twelve yearly ‘Sinhasta Kumbh Mela’. Nashik has a personality of its own due to its historical, social and cultural importance. Geographical proximity to Mumbai (Economic capital of India) and forming the golden triangle with Mumbai and Pune has accelerated its growth.

In 1881 old Nashik was occupying 13 sq.km area. Then in 1931 it was expanded up to 20 sq. km and population increased rapidly day by day. In 1951 it was expanded up to 47 sq. km area. Nashik Municipal Corporation was formed on November 7, 1982 as a body corporate under the Bombay Provisional Municipal Corporation (BPMC) Act, 1949. NMC serves area approximately 259.10 sq. km, including the city and its peripheral areas. It is one of the oldest cities in India.
The researcher has more interest to know the pattern of its study area. The Land use pattern shall vary as per increase in population in study area. The land use pattern of Nashik city has been divided into two i.e. developed area and undeveloped area. The undeveloped areas contain 32.74 per cent area of the city. In the developed region the residential area occupies 31.86 per cent of the study area. The public and semi-public, transport and communication both account for 1.58 per cent and 10.80 per cent respectively. The commercial, Industrial, Garden and recreation occupy less area i.e. 13.94 per cent of the total area. The military occupied 943.70 hectares, CIDCO 398 hectares, and the area of water bodies 655 hectares i.e. 2.52 percent of total area. It is also observed that Undeveloped area contain 69.13 percent in the year 1985 as it reduced by 44.41 percent in the year 2014 out of the total study area, i.e. 24.95 percent of study area converts into Developed area from Non-developed area in last 3 decades.

The Nashik city is growing faster. Every day a new industry is established or developed in the city due to establishment of Railway Station in the year 1861, industrial estates in the year 1962, India security Press in the year 1924, Currency note Press during year 1928. The phenomenal growth during the decade 1941-51 could be mainly attributed to the Government policy of rehabilitation of refugees.

Nashik has good transportation network like the national highway No.3 i.e. Mumbai - Agra road connects Nashik to Mumbai and Dhule, National highway No.50 connects Nashik to Pune. Nashik also has good railway connectivity as it is situated on the main line of central railway on Mumbai-Bhusawal section. In addition to this four state highways i.e. Nashik- Aurangabad (SH-60), Nashik-Trimbak (SH-4), Nashik-Dindori-Wani (SH-11) and Nashik Peth (SH-12), also provide additional connectivity termer, these two state highways also connect Nashik to Gujarat state. One Major river i.e. Godavari flows through the city and its three tributaries i.e. Darana, Nasardi and Waldevi also flow through study region.

Nashik Municipal Corporation is spread over area of 259.10 sq.km. Such a large area in broadly divided into six distinct division geographically. Each of the division has their arterial roads and their link roads with other division. Besides these roads, inner and outer ring roads as per the sanctioned development plan of Nashik (sanctioned in 1993) are being developed by Nashik Municipal Corporation. Thus existing road network of Nashik city is based on all these roads.
In the study region, As per Nashik city R.T.O. office record total vehicle register up to 2013 years is 10,52,901 Nos. and total vehicle registered up to 2014 year is 11,54,243 Nos. Two wheeler vehicles share about 73.6 per cent of the total vehicle out of which nearly 56.50 per cent are motor cycles. Motor cycle and scooter these two maintains same percentage growth in last two years. It means that the private transportation system has been used in the study region.

The division-wise distribution of rickshaw stops in the city is uneven. Number of rickshaw stops varies from 20 to 56. In Nashik road division Bytco chowk and its surrounding area have more capacity of rickshaws per stop. The Nashik East, Nashik Road and Satpur division have more number of stops i.e.56, 45 and 44 respectively. These three divisions are cover Nashik road railway station and C.B.S. so having high frequency of transit people. The number of rickshaws at rickshaw stop varies from division to division. The Nashik Road division, which includes Nashik road railway station, has the highest number of rickshaws 466 (21.38 percent of the total). The Nashik West division ranks seconds, which has 17.80 per cent of rickshaws because this division includes the area of Central Bus Stand of the city.

The number of rickshaws and their trips have been considered and tabulated. It has observed that, the highest frequency of rickshaws has been found at C.B.S (2350) followed by Nimani bus stand (1750) and Nashik road railway station (1470). They account 25.30, 18.84, and 15.82 percent frequency of rickshaws respectively. These three divisions/nodes are very important. The Nashik West division is located on the western part of C.B.S, New Nashik division is located in the southern part and Satpur division is located in south-west of the study region, where rickshaw stops are located on the main roads of C.B.S, railways stations, Zillah Parishad, Collector’s Office, District Court and M.I.D.C area.

The frequency of buses is an important aspect of the study in intra urban transport system because the city bus links the neighborhood area and suburban areas which is newly developed. The movement of passengers through the bus has got more importance in traffic system. It has observed that, the highest frequency of Buses 155 per day is found from Nimani to Nashik Road, the second highest frequency is observed from Nimani to Kamthawade i.e. 82 Buses per day. The Deolali Camp and Ambad M.I.D.C. have same frequency of Buses i.e. 61 Buses each. The deolali gaon, Vihit gaon, Satpur gaon have same frequency of 58 Buses per day for each. the highest frequency of Buses per day (150 or 23.36%) is observed
from Nashik Road Bus stand to Nimani Bus stand because this route covers Central bus stand of Nashik City. Most of the people travel to the main area of the city for their business relations.

Analysis the structure of the transportation network has became important in the study of transport geography. “Formerly transport network tended to develop in a somewhat random and often unrelated fashion but post-war changes and developments in transport focused attention upon the analytical study of networks various measures relating to the number of vertices and edges have been developed to measure the properties such as the connectivity, sheep and complexity of networks. These measures provide bases for empirical comparison of different networks and other variables. “These indices are related to regional characteristics such as economic development, size or shape.

Cyclomatic numbers, which tell about present fundamental circuit of a given transportation, network which has observed 3 for Panchavati division. Higher the Alpha index shows greater degree of connectivity within the network but for Panchavati division it has observed only 13% which show low degree of connectivity. For the study division the Beta index is 1.14; it means that the Panchavati division has high connected by road network. Gamma index describes connectivity of networks in percent which has observed 44.44% which show quite well connectivity. If value of pi index is more than 2 then given road network is well connected, for Panchavati division it has observed 3.24, which shows high connectivity but E.T.A. index observed 2.22 km / Nos., which has shown high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers, the route Makhamlabad Naka to R.T.O has less detour index i.e. 148.00 so it has less effect of relief barrier but the route Meri-Mhasrul to Hirawadi has more detour index i.e.278.33 so it has more effect of relief barriers. The Shimbel index can be derived from the shortest-path matrix in the study division. The Nimani bus stand has lowest Shimbel index, and the associated number is 3, so it is most accessible node than the other nodes. The highest associated number 5 has observed for Amrutdham and Ramkund where accessibility has found low. For the Panchavati division the mean associated number is 54/14=3.85.

Cyclomatic numbers, which tell about present of fundamental circuit of a given transportation, network which has observed 8 for New Nashik division. Higher
the Alpha index shows greater degree of connectivity within the network but New Nashik division it has observed only 32%, which show low degree of connectivity. For the study division the Beta index is 1.47; it means that the New Nashik division has highly connected by road network. Gamma index describes connectivity of networks in percent which has observed 56.41 % which show quite well connectivity. If value of pi index more than 2 then given road network is well connected, for New Nashik division it has observed 4.01 which show high connectivity, also E.T.A. index observed 1.51 km / Nos. which has shown high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers. The route Uttam Nagar to Shivaji Chowk has less detour index i.e. 115.79 so it has less effect of relief barrier but the route Vadner to Ranapratap chowk has more detour index i.e.208.69 so it has more effect of relief barriers. The Shimbel index can be derived from the shortest-path matrix in the study region. The Pathardi Phata has lowest Shimbel index, and the associated number is 3, so it is most accessible node than the other nodes. The highest associated number 6 has observed for Trimurti chowk, Pimpalgaon Khamb where accessibility has found low. For the New Nashik division the mean associated number is 65/15=4.33.

Cyclomatic numbers, which tell about present fundamental circuit of a given transportation, network which has observed 10 for Nashik West division. Higher the Alpha index shows greater degree of connectivity within the network but Nashik West division it has observed 66.66% which show quite well degree of connectivity. For the study division the Beta index is 1.8; it means that the Nashik West division has highly connected by road network. Gamma index describes connectivity of networks in percent which has observed 75% which is high connectivity. If value of pi index more than 2 then given road network is well connected, and for Nashik West division it has observed 3.25 which shows high connectivity. E.T.A. index observed 1.13km / Nos. which has show high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers. The route Sambhaji Chowk to Mumbai Naka has less detour index i.e. 114.28, so it has less effect of relief barrier but the route C.B.S to K.T.H.M College has more detour index i.e.200.00 and it has more effect of relief barriers. The Shimbel index can be derived from the shortest-path matrix in the study region. The College road has lowest Shimbel index, and the associated number is 2, so it is most
accessible node than the other nodes. The highest associated number 4 has observed for Savarkar Nagar, Mumbai Naka where accessibility has found low. For the Nashik west division the mean associated number is $29/10 = 2.9$.

Cyclomatic numbers, which tell about present fundamental circuit of a given transportation, network which has observed 6 for Satpur division. Higher the Alpha index shows greater degree of connectivity within the network but for Satpur division it has observed only 46.15% which show quite well degree of connectivity. For the study division the Beta index is 1.44; it means that the Satpur division is highly connected by road network. Gamma index describes connectivity of networks in percent which is observed 61.90% which is quite well connectivity. If the value of pi index is more than 2 then given road network is well connected. For Satpur division, it is observed 3.45, which shows high connectivity. E.T.A. index observed 2.04 km/Nos., which has shown high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers. The route Satpur to Shivaji Nagar has less detour index i.e. 128.12 so it has less effect of relief barrier but the route Pimpalgaon Bahula to XLO has more detour index i.e. 236.64 so it has more effect of relief barriers. The Shimbel index can be derived from the shortest-path matrix in the study division. The Satpur has lowest Shimbel index and the associated number is 2, so it is most accessible node than the other nodes. The highest associated number 3 has observed for ABB Circle, I.T.I. Signal, Pimpalgaon Bahula, Ashok Nagar, Shivaji Nagar, Gangapur, and X.L.O. where accessibility has found low. For the Satpur division the mean associated number is $25/9 = 2.77$.

Cyclomatic numbers, which tell about present fundamental circuit of a given transportation, network which has observed 8 for Nashik road division. Higher the Alpha index shows high degree of connectivity within the network but for Nashik road division it has observed 53.33% which show quite well degree of connectivity. For the study division the Beta index is 1.5; it means that the Nashik road division is highly connected by road network. Gamma index describes connectivity of networks in percent which has observed 62.50% which has shown quite well connectivity. If value of pi index more than 2 then given road network is well connected, for Nashik road division it has observed 3.83 which show high connectivity, E.T.A. index observed 2.55 km/Nos. which has high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have
affected by relief barriers, the route Vihitgaon to Chehedi has less detour index i.e. 114.81 so it has less effect of relief barrier but the route Samangaon to Eklahara P.S has more detour index i.e. 325.00 so it has more effect of relief barriers. The shimbel index can be derived from the shortest-path matrix in the study region. The Bytco chowk has lowest Shimbel index and the associated number is 2, so it is most accessible node than the other nodes. The highest associated number 3 has observed for Eklahara power station, Jail road, Upnagar, Vihitgaon and Samangaon where accessibility has found low. For the Nashik road division the mean associated number is 25/10=2.5.

Cyclomatic numbers, which tell about present fundamental circuit of a given transportation, network which has observed 7 for Nashik East division. Higher the Alpha index shows high degree of connectivity within the network but for Nashik East division it has observed 41.18% which show quite well degree of connectivity. For the study division the Beta index is 1.54; it means that the Nashik East division is highly connected by road network. Gamma index describes connectivity of networks in percent which has observed 62.96% which has shown quite well connectivity. If value of pi index more than 2 then given road network is well connected, for Nashik East division it has observed 5.24 which show high connectivity, E.T.A. index observed 1.66 km / Nos. which has high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers, the route Mumbai naka to Indira Nagar has less detour index i.e. 155.00 so it has less effect of relief barrier but the route Takali Phata to Bhadrakali has more detour index i.e. 165.38 so it has more effect of relief barriers. The shimbel index can be derived from the shortest-path matrix in the study region. The Dwarka has lowest Shimbel index and the associated number is 2, so it is most accessible node than the other nodes. The highest associated number 4 has observed for Ashok Stambh, R.K, Bhadrakali, Takali Phata, Agar takali, Wadala where accessibility has found low. For the Nashik east division the mean associated number is 37/11=3.36.

Cyclomatic numbers, which tell about present of fundamental circuit of a given transportation, network which has observed 6 for All Combine division. Higher the Alpha index shows greater degree of connectivity within the network but for All Combine division it has observed 85.71% which show high degree of connectivity. For the study division the Beta index is 1.83; it means that the All
Combine division is highly connected by road network. Gamma index describes connectivity of networks in percent which has observed 91.66% which show high connectivity. If value of pi index more than 2 then given road network is well connected, All Combine division it is observed 4.98 which show high connectivity, E.T.A. index observed 4.98 km / Nos. which has shown high connectivity for study division. It has observed that the detour has found more than 100.00, it means that these places have affected by relief barriers, the route College road to Bytco chowk has less detour index i.e. 128.29 so it has less effect of relief barrier but the route College road to Pathardi Phata has more detour index i.e. 195.89 so it has more effect of relief barriers. The shimbel index can be derived from the shortest-path matrix in the all combine division. The Dwarka has lowest Shimbel index and the associated number is 1, so it is most accessible node than the other nodes. The highest associated number 2 has observed for Nimani bus stand, Bytco chowk, Pathardi Phata, Satpur, College road where accessibility has found low. For the all combine division the mean associated number is 11/6=1.83.

Central business district is a part of city, unique in its land use and distinctive function, and is thus different from all other parts of the city. The term C.B.D. originally an American term that indicates the heart of the city. For find out C.B.D. of study region, I has studied it with different aspect which results are furnished as ahead.

The Assessed land values meant the actual value/price estimated by competent private Assessors. In the Study region, the Assessed land values are ranging from Rs. 1300 to 63100 per sq. These Assessed land values are varies according to location of market. The highest Assessed land value has found near college road (Rs 63100 per sq.) These areas have highest market value because they are located near old core area of study region. The low Assessed land values are found in Vadner, Pimpalgaon Kamb because these areas are located in the peripheral parts of Study region.

The market land values meant the actual value/price of the land at the time of sale. In the Study region, the market land values are ranging from Rs. 1500 to 100000 per sq.m. These market land values are varies according to location of market. The highest market land value has found near college road (Rs 100000 per sq.m) These areas have highest market land value because they are located in new commercial hub as well as part of Town Planning scheme-2 so having proper
planning and have high end amenities. The low market land values are found in Chadegaon, Ager Takali, Pathardi, Wadala, Chehedi because these areas are located in the peripheral parts of Study region.

In the Study region, on the basis these assessed rent values of various 103 market areas or paths out of 6 divisions have been taken into consideration. The rent value is the highest for residential more than Rs. 2500 per 100 sq. feet per month beside of college road area because it is a new CBD which has been developed recently and the rent value is the highest for commercial more than Rs. 3000 per 100 sq. feet per month near Ambad and Satpur M.I.D.C and also have same highest industrial rent values more than Rs. 5000 per 100 sq. feet per month. C.B.S, Gangapur road, and the nearby college road have higher rent values Above Rs. 2000 per 100 sq. Feet per month because it is a new CBD which has been developed recently. The peripheral area of city has less rent values i.e. 100 sq. feet per month. The division and the areas along with the main street have higher rent values. Rent values in the Study region decrease from central part to outward areas. This effect is only due to influence of C.B.D. The Land, Market and Rent cost has been increased within C.B.D.

In the Study region, the division wise analysis has been done to find out concentrations of S.T.D. Booth, Coin-boxes, Fax Centers, Mobile shops, Computer Training Centre, Internet café, Xerox Centre, Bus stand, Rickshaws stop, Banks and Insurance Offices. It has observed that concentration of S.T.D./ Local Telephone Booth Centers highest in Panchavati Division and Lowest in Nashik West Division, Coin-Boxes Centers highest in Nashik East Division and Lowest in Satpur Division, Fax Centers highest in Panchavati Division and Lowest in Nashik West Division, Mobile Shopping Centers highest in New Nashik Division and Lowest in Nashik West Division, Computer Training Centers, Internet Cafe and Xerox Centre are highest in Nashik West Division and Lowest in New Nashik Division, Bus stands highest in Nashik Road Division and Lowest in Nashik West Division, Rickshaws stop highest in Nashik East Division and Lowest in Satpur Division, National Banks highest in Nashik West Division and Lowest in Nashik East Division, Co-operative Banks highest in Nashik East Division and Lowest in Nashik West Division, Path Sanstha Or Pedhies highest in Nashik East Division and Lowest in Nashik West Division, General Insurance offices and Life Insurance offices highest in Nashik West Division and Lowest in New Nashik Division.
In the study area total 629 numbers of Hospitals has observed out of which highest observed in Panchavati Division i.e. 180 Numbers and Lowest observed in Nashik East Division i.e. 65 Numbers. In the study area total 4523 numbers of Dispensaries has observed out of which highest observed in New Nashik Division i.e. 1050 Numbers and Lowest observed in Nashik West Division i.e. 435 Numbers.

In the study area total 5506 numbers of Doctors has observed out of which highest observed in Panchavati Division i.e. 1235 Numbers and Lowest observed in Nashik West Division i.e. 630 Numbers. According to Division wise total population and availability of total numbers of Doctors in that Division i.e. Ratio of Doctors to its Division Population Nashik East Division have Lowest Ratio i.e. 1 Doctor after 342 person and Highest Ratio observed in Panchavati Division i.e.1 Doctor after 233 person. According to total Population of study area i.e. 14, 86,053 there are total 5506 numbers of Doctors. The ratio has been observed one doctor after 270 people, which is very good as compared to ratio within India i.e. 1 doctor per 1681 person and as per WHO 1 doctor per 1000 person.

In the study area total 351 Primary Schools and 2,95,916 Students has observed out of which highest Primary Schools observed in New Nashik Division i.e. 75 Numbers and Lowest Primary Schools observed in Nashik East and Satpur Division i.e. 40 Numbers. In the study area total 254 High Schools and 1,78,901 Students has observed out of which highest High Schools observed in Nashik West Division i.e. 54 Numbers and Lowest High Schools observed in Satpur Division i.e. 34 Numbers.

In the study area total 16 Engineering Colleges and 15,050 Students has observed out of which highest Engineering College observed in Nashik West and Panchavati Divisions with 5200 and 5350 Students respectively. In the study area total 18 Medical Colleges and 9,020 Students has observed out of which highest Medical Colleges observed in Panchavati Division i.e. 11 Numbers and Lowest Medical Colleges observed in Nashik Road Division i.e. 1 Numbers.

According to Division wise Total Education Faculties to the Total Education Faculties in study area Nashik West and New Nashik Divisions has highest percentage of total Education Faculties i.e. 19.72% and 19.10% respectively. And lowest percentage has observed in Nashik East and Satpur Divisions i.e. 12.20%.

According to all observations, the Nashik road railway station in Nashik road division and C.B.S in Nashik west division with its surrounding area got more
importance because of more concentration of administrative offices and commercial activities. The Nashik road railway station in Nashik road division and College road in Nashik west division is the CBD of the Nashik city. In this division District Court, Collector office, N.M.C office, Most Educational Institute are situated due to which concentration of people for related business has been observe and so it has become C.B.D. of study region.

Nashik was seventh largest city in 1947 of Maharashtra and it is the 4th largest Industrial city. Nashik has achieved this starting from 1945 to year 2011. It has observed that the population of Nashik city has been continuously increasing from 1901 to 2011. In 2011 Nashik has become a million plus city. The growth of the population in Nashik city is considered from the decade 1901 to 2011. It has increased from 21,490 persons in 1901 to 14,86,053 persons in 2011, i.e. more than fifty fold increase.

There are different measures to determine the growth of urban population. The absolute growth of urban population shows the amount of net increasing in a particular period. It throws light on the magnitude of problems arising out of the extra number of the people in the city, for whom urban amenities will be provided. The annual change in population has found higher in the decade 1991, which has sharply decreased in the decade 2001. It has observed that the lowest annual change in population has found in the decade 1941 (i.e. 1.35 per cent) and second lowest in 1931 (i.e. 1.79 per cent). In the study region the highest growth rate found in the decade 1991 because of the growth of urban areas which is expanding into various colonies and immigration from rural areas to urban areas for the purpose of employment.

In the year 2011 population was recorded 14,86,053 and 37.95 per cent decadal growth rate. The absolute increase in this decadal observed to 17,66,469 persons. Arithmetical increase method increase in the population in these decades is predominant and it can be seen that average increase in the population shows the trend of fast development. It has due to number of reasons like Nearness to Mumbai and Pune, very good climate in all season, Holy place and Pilgrimage center, Good infrastructure, Good connectivity through road and rail, Atmosphere of industrialization, Good education center. Good cultural activities, commissioner and District head quarter, Agricultural produce market.
It has observed that the density of population has increased from 1951 to 2011. In 1951, the density was 1,665 people /sq.km, which has increased up to 4,158 people /sq.km in 2001. It has due to increase in the area of Nashik city from 58.28 sq.km to 259.10 sq. km. It has been found that density of population increased again in 2011 up to 5,736 people/ sq.km. In each decade, there is a gradual increase of population growth rate in Nashik city. The urban population increased because of migration from rural areas.

As compared to population growth rate of 1991-2001 decade to 2001-2011 decade it has observed that population growth rate of Nashik East division has increased sharply (i.e. from 02.28 per cent, 69.60 per cent). The density of population has found highest in Nashik East division and Nashik West division which are nearly double as compared to sum of density of Panchavati division, Nashik Road division, New Nashik division and Satpur division in 1991 and 2011 decade because Nashik East division and Nashik West division having the old core area of the Nashik city.

According to 2011 census the Nashik city has 52.66 per cent males and 47.34 per cent females. A comparative analysis of division wise distribution of population indicates that the per cent of male population is highest in Satpur division (i.e. 53.91 per cent) and lowest in Nashik West division (i.e. 51.57 per cent). The Per cent of females population is highest in the Nashik West division (i.e. 48.43 per cent) and lowest in the Satpur division (i.e. 46.08 per cent) of the study area.

A high level of literacy reflects the dynamic character of city population. The total literacy population of Nashik city was 67.10 per cent in 1981, which increased up to 77.10 per cent in 2011. According to 2001 census, the Nashik West division has highest total literacy rate of 79.50 per cent while lowest literacy rate has noted in Panchavati division i.e. 71.20 per cent. The highest male literacy rate of 82.87 per cent has found in Nashik West division and lowest male literacy rate 78.40 per cent has observed in Satpur division. It has also observed that Nashik West division has found highest female literacy ratio and Panchavati division has noted lowest-female literacy rate i.e. 75.89 per cent and 63.79 per cent respectively. According to 2011 census, the Nashik West division has highest total literacy rate i.e. 82.30 per cent while lowest literacy rate has noted in Nashik Road division i.e. 70.80 per cent. The highest male literate rate of 89.90 per cent has found in Satpur division and lowest male literacy rate 79.50 per cent has observed in Panchavati division. It has also observed that Nashik West division has found highest female literacy ratio and
Panchavati division has noted lowest-female literacy rate i.e. 81.25 per cent and 70.61 per cent respectively. The general increase in literacy ratio especially female literacy because of the increased provisions of educational amenities in the city, safe atmosphere for woman learning, starting of number of primary, secondary and higher education institutions out of which Some are exclusively for women during the last three decades.

It has observed that the sex ratio was very low in study region because of migration of male working population from rural to urban area. This yield of sex ratio in decade of 1971 was 898 and slightly increases up to 899 in the decade 2011. Occupational structure is perhaps the most important social characteristics influencing man’s life. The labour participation ratio for total workers is defined as the percentage of total workers to total population. For Nashik city the labour participation ratio was 28.37 per cent in 1981 and it has increased up to 48.00 per cent in 2011.

It has been observed that percentage of male working population has decreased up to 66.56 per cent while the female working population has found increased up to 33.44 per cent in 2011. The percentage of workers in 1981 was 30.18 per cent which was increased up to 38.45 per cent in 2011 because of various industrial units has been established in Nashik city. It has been seen that the percentage of tertiary sector has decrease because percentage of marginal workers in this sector has increased.

It shows that the result of different method of the population projection is not same. For every day city planning anticipation of future population is mean necessary. In decade 2001, out of total numbers of population i.e. 10,77,236, total number of workers in all categories including marginal workers are 3,71,423 persons out of which 3,02,851 are males and 68,572 are females. The majority of the workers are engaged in secondary and tertiary activities. The total percentage of workers in these two sectors during 2001 was 78.41 per cent. This indicates the urban character of the study area.

Occupational structure of the Nashik city in the year 2011is that the total number of workers in all categories including marginal workers are 7, 13, 305 i.e. 48.00 per cent of total population of 14, 86,053, out of which 4, 74,811 persons are males and 2, 38,494 are females. It has been observed that the male and female workers participation in which women participation is very less but it increasing
gradually. The labour participation ratio works out of 48.00 per cent as per 2011 census which is considerable good and indicates the urban character of the study area.

5.1 CONCLUSION

It is believed that the developed countries of the world could achieve fast economic progress due to large scale urbanization. The city of Nashik is the headquarters of both the Nashik district and Nashik division. The Climate of Nashik City is favorable and Healthy for good urbanization. The annual temperature ranges between 15°C Min. and 34°C Max. The average rainfall in Nashik City is observed 53 mm. The average humidity observed in the study area ranges from 34 % to 92 %. So this figure gives clear idea about Healthy atmosphere in Nashik city.

Nashik City is popularly known as the “Grape City” and for its twelve yearly ‘Sinhasta Kumbh Mela’. Nashik has a personality of its own due to its historical, social and cultural importance. Geographical proximity to Mumbai (Economic capital of India) and forming the golden triangle with Mumbai and Pune has accelerated its growth.

Nashik city itself and its population day by day increased rapidly. In last 6 decades, its area has been increased from 20 sq.km to 259.10 Sq.km. It increased 10 times than its original area.

The land use pattern of Nashik city has been divided into two i.e. developed area and undeveloped area. In last 3 decades 24.95 percent of study area converts into Non-developed area to Developed area.

Establishment of industry is cause which leads the urbanization in Nashik city. Nashik was seventh largest city in 1947 of Maharashtra and it is the 4th largest Industrial city. Nashik has achieved this starting from 1945 to year 2000. The population of Nashik city has been continuously increasing from 1901 to 2011. In 2011 Nashik has become a million plus city. In the study region the highest growth rate found in the decade 1991 because of the growth of urban areas which is expanding into various colonies and immigration from rural areas to urban areas for the purpose of employment. Transportation structure established and developed properly to lead urbanization in Nashik city. This developed transportation structure consequence on public that they have used own transportation facility. Only the visiting people used private and government transportation amenities like rickshaw
and bus. After saw a frequency of rickshaw and buses, we have an idea of visiting people in Nashik city for their related business. This frequency has been observed more near Nashik road railway station and Central Bus Stand.

The transportation system analysis within study division of study area shows better degree of connectivity within study area. This is also a considerable cause to lead urbanization. However, at the same time, this has also consequence like increased population, population density; increases land cost, setup of commercial hub. This phenomenon of cause and consequence of urbanization has been seen in study area after the analysis of transportation system.

If people have the required social amenities like Road, Hospital, School, Water, Electricity then this amenities tends to urbanization and this one cause to set up Central Business Districts (C.B.D.). The setup of C.B.D. also consequence like leading land cost, market cost, rent cost, commercial hub establishment. This phenomenon was clearly seen C.B.D. area of Nashik West division, Nashik Road Division and some parts of CIDCO division. In other words it also has positive consequences that people got business, employment within C.B.D. area with business like Xerox center, S.T.D. Booth, Mobile shops, Computer center etc.

In the study region availability of health amenities is very good. According to WHO 1 doctor needed per 1000 person but in study area it has been observed 1 doctor per 270 people, so it cause for urbanization. This has also results some consequence like population growth, density of population, cheaply availability of medical services, and unsafetyness of people.

Various social amenities like Hospital, Education, and Garden etc. also cause for urbanization. Generally, the people attract towards these things and set up lives over there. As above we saw development of Hospital amenities in study area. Now education amenities have also seen well developed in study area. Development in education amenities effects on population of study areas. This leads to improve population in study area. This also provides bulk workers within study areas. Education sector provide lot of employment within study area.

Nashik road railway station in Nashik road division and C.B.S in Nashik west division with its surrounding area got more importance because of more concentration of administrative offices and commercial activities. The Nashik road railway station in Nashik road division and C.B.S in Nashik west division area is the CBD of the Nashik city. In this division District Court, Collector office, N.M.C
office, Most Educational Institute are situated due to which concentration of people for business are observe and it’s so became C.B.D. of study region.

It has been seen that average increase in the population shows the trend of fast development. It may be due to number of reasons like Nearness to Mumbai and Pune, very good climate in all season, Holy place and Pilgrimage center, Good infrastructure, Good connectivity through road and rail, Atmosphere of industrialization, Good education center, Good cultural activities, commissioner and District head quarter, Agricultural produce market.

Increase of population is said to be a cause of urbanization as well as consequence of urbanization. In all decades there is a gradual increasing of population growth rate in Nashik city and Nashik district in urban population because of migration from rural areas.

This cause may reflect consequence like population increases, density of population increases. It hit directly to the service provider authority to provide urban need services. If service provider authority would have short fall of income to provide a services then they would increase taxes like house tax, water tax etc. This would also increase land cost and other related cost within the study area. This phenomenon has seen in study area.

Good education amenities in study area cause to set up good literacy structure but this has been also consequences in terms of economy, Female strength, and Technical development within study areas. However the general increase in literacy ratio especially female literacy because of the increased provisions of educational amenities in the city, safe atmosphere for woman learning, starting of number of primary, secondary and higher education institutions out of which Some are exclusively for women during the last three decades.

The sex-ratio was very low in study region, because of migration of male working population from rural to urban area. This yield of sex ratio in decade of 1971 was 898 and slightly increases up to 899 in the decade 2011.

A developed occupational structure is also the cause of urbanization. This is most important social characteristics influence on man’s life. Total working population increased day by day in the study area which showing a good urban character of city. Especially female working population increased rapidly due to various industrial units has been established in the Nashik city. This developed occupation structure consequence in the form of economy and social infrastructure.
within the study area. The majority of the workers have been seen in secondary and territory activities nearly about 76 percent of total working population. The labour partition ratio is observed 48 percent in which comparative female working participation is less but increasing gradually. It is the good sign of urban character of the study area.

5.2 SUGGESTIONS:

Any program for the development of a town has to take into consideration its socio-economic as well as physical factors within its broad framework. All these factors put together in the most desirable combination in an urban set up would yield the necessary environment for a pleasant human habitation. In the Indian context, life in town, right from smaller towns to metropolitan cities has been described as one of “Chaos” or of “despair”. One of the major causes for such a state of affair seems to be lack of proper understanding and co-ordination among physical, social and economic planners in charge of urban planning. The purpose of this brief note is to present a diagnostic view of the development of Nashik city which is one of the several hundreds of towns/cities sharing all the ills of the urbanization.

- Land use should be adopted as per sanctioned development plan.
- Efforts should be made to reduce temperature within the city by Plantation of trees and by introducing green building concept.
- Strom water drainage should be established in the low lying area of the city.
- Basic urban amenities should be established within peripheral area of the city to generate affordable houses, to lowering population density, Land cost, Market cost and Rent Value within specific area of city.
- Lower budget educational facility should be provided for poor people to achieve better literacy rate.
- Awareness camp should be taken for improvement of sex ratio within the Nashik city.
- Government transportation amenities should be improved to lowering vehicle density of citizen’s vehicle.
- Proper planning should be done for routes, Trips, Stops of Rickshaws and Buses to avoid traffic congestion.
- All ring roads should be developed as per Sanctioned Development Plan of Nashik city.
• All commercial or business premises should have more parking than as per requirement mostly at the back side of the project area.
• The most traffic congestion point like C.B.S, R.K, Collector office, District Court should be reduced by constructing fly over in this area and constructing multi-story parking within the premises.
• Hawker’s zone should be specified within city.

I hope that the findings of this Research verify the objectives of “Causes and Consequences of changing urbanization patterns in Nashik Municipal Corporation, Maharashtra”.

▪ Analysis and findings of present study should be help to provide valuable information for further studies, planning and application.
▪ Making a plan is not important but implementation of that plan is most important.