2.4 Types of Urban or Road Systems.

Following are the different system of streets or roads commonly adopted in the city:

2.4.1. Rectangular or Grid-Iron Street system.

2.4.2. Rectangular combined with Diagonal street system.

2.4.3. Concentric and Radial Street system.

2.4.4. Rectangular combined with Radial street system.

2.4.5. Organic street system.

2.4.6. Irregular Medieval street system.

2.4.7. Combination of Rectangular and Irregular Street system.

2.4.1 Rectangular or Grid-iron Street system

This system is suitable for a fairly plain country, without any predominant natural features. Here the streets have equal widths and they cross each other at right angles. See Fig. 2.7 e.g. Jaipur (India)

The advantages of this system are:

I. It is convenient to traffic and so a speedy and free traffic can be maintained.

II. The houses are constructed in rectangular blocks so convenient, economical and most suited for building construction.

III. There is no wastage of land since no irregular portions are left out.

IV. The maximum area is used for construction. It is therefore most advantageous for private land-owners.
The disadvantages of this system are:

I. This system does not provide short cuts which provide a direct access to trade and shopping centre.

II. In uneven country, this system leads to inconvenience, discomfort and moreover becomes expensive.

III. This system has too many junctions and crossings. So there are more chances for road accidents. Hence it is most unsatisfactory from traffic point of view.

IV. This system is too mathematical and produces monotonous effect since the roads are straight as a result the vistas are open, devoid of interest and variety.

2.4.2 Rectangular combined with Diagonal street system

It is an improved type of rectangular system. See Fig. 2.8, England was the first town which was designed as this type of system.
The advantages of the system are:

I. This system provides direct communication from distant parts of the town.

II. At the place where the diagonals meet, a park, garden, fountain or memorial can be up to
    add aesthetics to the town.

III. This system is most practicable as there are very few obstacles.

The disadvantages are:

I. This system gives rise to many dangerous intersections at the junctions of diagonal streets
   and rectangular streets and so most unsatisfactory from traffic point of view E.g.
   Washington, the Capital of U.S.A.

2.4.3 Concentric and Radial street system

In this system the circular or ring road are connect to radial roads. It is also called
‘Spider’s Web System’. See Fig. 2.9 (a) and (b).

This system represents the most natural growth as many cities roughly possess a part of
this feature. Here the town grows in the form of concentric Ring roads round the hub of the town
so that each growth or part is as near to the centre. E.g. Vienna, Austria.
The advantages of the system are:

Figure 2.9: Concentric and Radial street system
I. The radial roads provide direct access to the heart or central part of the town and are earmarked for fast moving traffic. Hence, these ring roads can be designed as arterial roads.

II. The circular roads function as the intermediary between diagonal roads and local roads.

III. The circular roads help to distribute the local traffic to the different thoroughfares. Hence it is most suitable from traffic point of view.

IV. This system is found to be more useful for the economic expansion of the town particularly if the town has central features such as important public buildings, market etc.

The disadvantages of this system are:

I. The plots are formed trapezoidal in shape. So a lot of space is wasted due to irregular portions left out.

II. It is not economical for the construction of houses, since maximum area is not utilized.