

The conflicts arising from movements of traffic in different directions is solved by time sharing principle. A traffic control signal is a signal which through its indications, directs the traffic to stop and permits to proceed alternatively.

Advantages of traffic signals

- ⇒ It provides for an orderly traffic movement.
- ⇒ It increases the capacity of an intersection.
- ⇒ It reduces the frequency of certain type of accidents.

Disadvantages

- ⇒ It may increase certain type of accidents.
- ⇒ Larger stopped delays.
- ⇒ When improperly designed it promotes disrespect.
- ⇒ It may encourage drivers to prefer alternative routes.

Classification of signals.

Traffic control signals.

- Fixed time signal (set to repeat fixed cycle of red, amber, and green light).

Traffic actuated signal (time cycle green time distribution as per the dimension of traffic flow).

Fully actuated signals (detectors are installed to sense and assign right of way)

Semi-actuated signals (detectors are installed only in minor streets)

• Speed control signal

3) Pedestrian signals

Signal systems

Synchronized system / simultaneous system
All signals along the given street shows the same indication at same time.

⇒ The division of cycle is same at signalized intersection and only one controller is used to operate set of intersections.

Alternative systems

The alternative signals or group of signals shows opposite indications at same time.

⇒ The system is ~~controlled~~ operated with single controller.

Simple progressive system

The signals controlling the streets given green indication according to predetermined schedule to permit continuous operation of group of vehicles at a planned rate of speed.

→ Flexible progressive system

It is possible at each intersection to automatically vary cycle time and division

cycle:

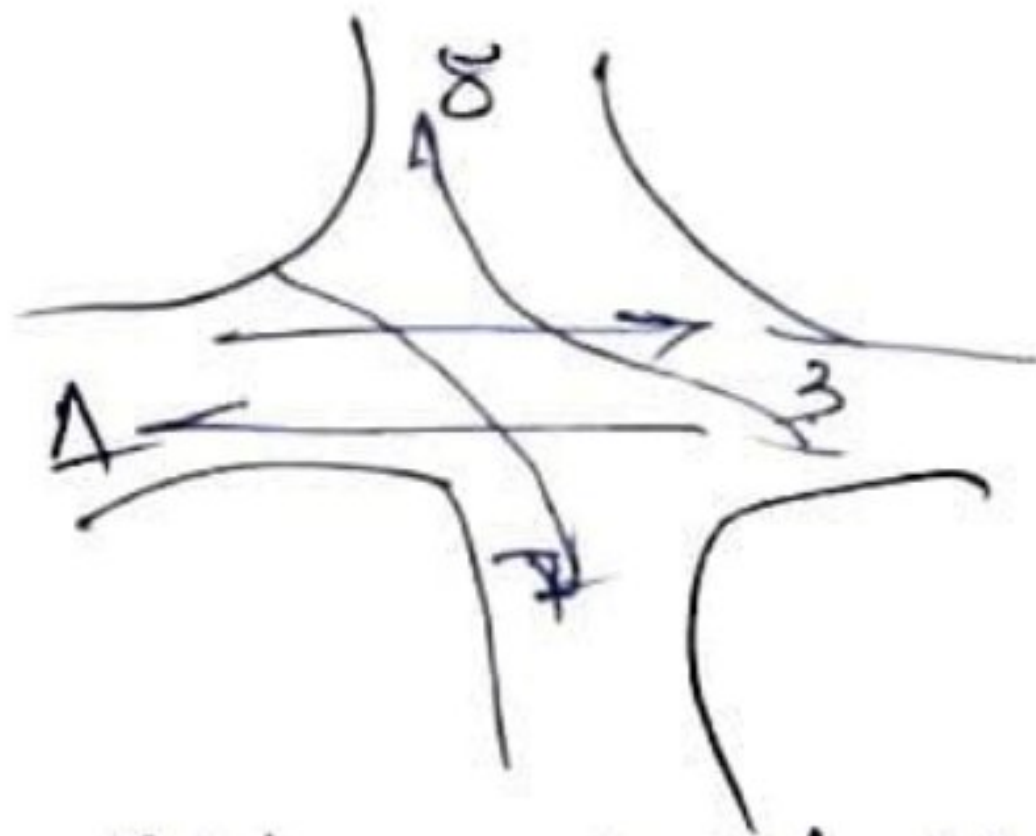
Two phase signals

Two phase system is usually adopted if through traffic is significant compared to turning movements

For example in fig, non-conflicting through traffic

3 and 4 are grouped in single phase and non-conflicting through traffic 1 and 2 grouped in 2nd

This



This phase is possible only if the turning movements are relatively low.

5) Discuss the various objectives of road markings in detail

Ans The essential purpose of road markings is to guide and control traffic on a highway

→ The road markings are defined as words, lines, patterns, except signs set into applied or attached to carriageway, for controlling, guiding and informing the users

Role of Road markings:

- To guide and control traffic on the highway
- ⇒ To serve as a psychological barrier
- ⇒ To delineate traffic path and its lateral clearance from traffic hazards

Road Marking colors

colour	uses
White	All carriageway markings except those intended for parking restrictions
Yellow	i) Markings intended for parking restrictions
Alternate bands of white and black	curb/object markings

Road Markings - classification

carriage way markings

longitudinal markings:

centre line, traffic lanes,
no passing zones,
warning lines, edge lines,
bus lane, cycle lane

Markings on intersections:

stop lines, give way lines,

pedestrian crossings,

cyclist crossings,

direction arrows,

protected right turn
lanes.

Markings on hazardous
locations:

carriageway width

transition, obstruction

approaches road-rail

level crossings, check

barriers.

Markings for parkings:

parking space limits,

parking restrictions,

bus stops

Word messages:

Stop, slow, bus, school,

exit only

object markings

= 1 object within carriageway

= 1 object adjacent to carriageway

=> Marking on kerbs

5 Safety at construction site

Most essential safety practices are

An contractor should be following

- personal protective environment (PPE)
- => Follow environmental guidelines
- => keep the work area clean
- => Ladder safety
- => No crowding inside the site perimeter
- => Lifting precautions
- => proper site planning

In any construction project for basic
= safety precautions to be implemented

- => Guard rails to be installed in open
scaffold areas, all opening in the building floor,
- => Yellow stickers with safety notes to
be pasted where necessary
- => All the work platform should be stable,
properly braced, should not be overloaded.
- => All the working areas should be free from
waste.