QNo1

Ans As we know that

Determine yellow interval.

$$Y = t + \frac{1.47\,S_{85}}{2a + (64.4 \times 0.016)}$$

As

$$S_{85} = 35 + 5 = 40 \text{ mph}$$

$$S_{15} = 35 - 5 = 30 \text{ mph}$$

$$Y = t + \frac{1.47\,S_{85}}{2a + (64.4 \times 0.016)}$$

$$Y = \frac{2.0 + 1.47 \times 40}{2(10) + (64.4 \times 0.01 \times 0)}$$

$$Y = 4.94 S$$

length of all red clearence.

1) No Pedestrain

$$ax = \frac{W+L}{1.47 S_{15}}$$

2) Significant

$$ax = \frac{P+L}{1.47 S_{15}}$$

3) Some pedistrain

$$ax = \max\left(\left(\frac{W+L}{1.47 S_{15}}\right), \left(\frac{P}{1.47 S_{15}}\right)\right)$$

$S_{85} = 35+5 = 40 mph$

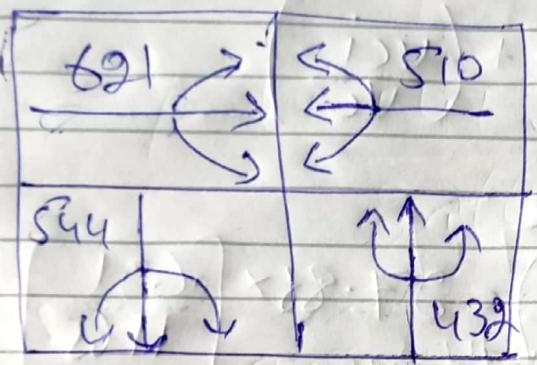
$S_{15} = 35-5 = 30 mph$

$$ax = \frac{W+L}{1.47 S_{15}} = \frac{35+15}{1.47 \times 30}$$

$ax = 1.133 sec$

$$ay = \frac{P}{1.475_{15}} = \frac{40}{1.47 \times 30}$$

$ay = 0.90$ sec



621 or 510

$V_{CA} = 621$ two/hr

544 or 432

$V_{CB} = 544$ two/hr

$V_c = 621 + 544 = 1165$ two/hr

$Y = y + ay = 4.94 + 1.133 = 6.07$ sec

$L_g = y - e = 6.07 - 2.0 = 4.07$

$t_L = L_g + L_1 = 4.07 + 2.0 = 6.07$ sec

$L = 6.07 + 6.07 = 12.14$ sec

Cycle length

$$\text{Cycles} = \frac{L}{1 - (V_c / 1615 \times PHF \times 4/6)}$$

$$= \frac{12.14}{1 - \left(\frac{1165}{1615 \times 0.92 \times 0.9}\right)}$$

$$= 94.96 \simeq 95 \text{ sec}$$

Also $g_i = g_{TOT} + \left(\frac{V_{ci}}{V_c}\right)$

$= 40 - 12.14$

$= 27.86$ sec

$g_A = g_{Tot} \times \left(\frac{V_{cA}}{V_c}\right) = 27.86 \times \left[\frac{621}{1165}\right]$

$= 14.85$ sec

$g_B = g_{Tot} \times \left[\frac{V_{cB}}{V_c}\right] = 27.86 \times \left[\frac{544}{1165}\right]$

$= 13.00$ sec

Check

$14.85 + 13.00 + 12.14 = 39.99$

is cycle length.

Q No 2:- Disscuss and Draw different types of traffic signs.

Ans:- Traffic sign:-

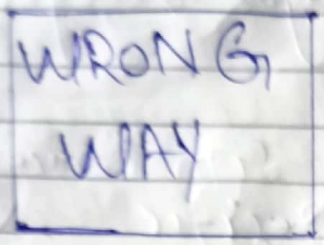
In general traffic signs fall into one of three major categories.

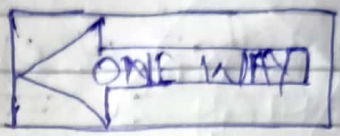
i) Regulatory sign:- Regulatory sign convey information concerning specific traffic regulation. Regulations may relate to right-of-way, speed limits, lane usage, parking, or a variety of other functions.

ii) Warning sign:- Warning sign are used to inform drivers about upcoming hazards that they might not see or otherwise discern in time to safely react.

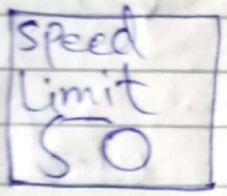
iii) Guide sign:- Guide signs provide information on routes, destinations and services the drivers may be seeking.

Regulatory signs Affecting Right-of-way

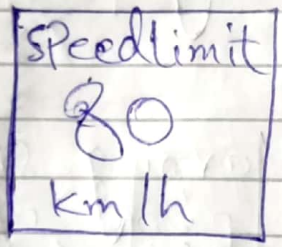




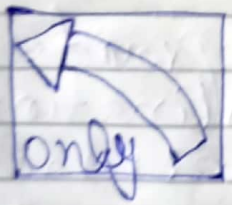
Regulatory sign (Speed Limit sign)



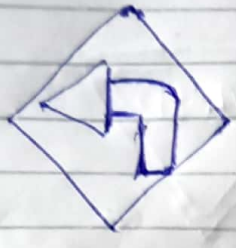
OR

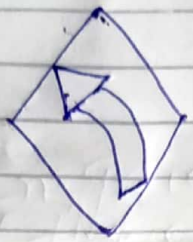


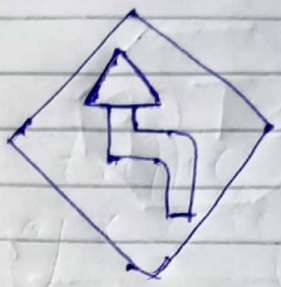
Regulatory sign (Turn prohibition sign)

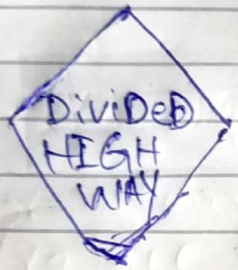


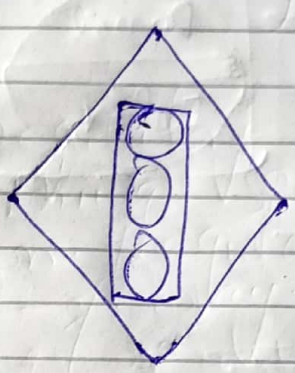
Warning signs :-



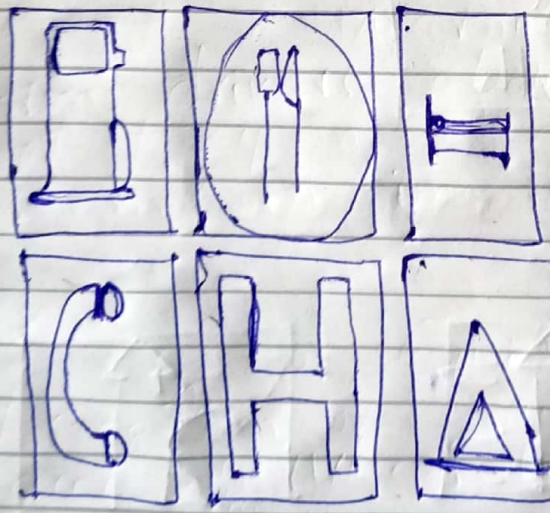


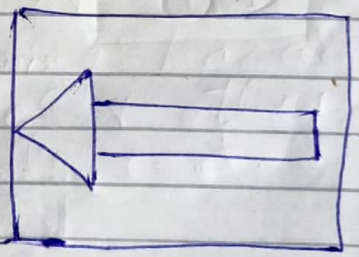






Guide signs





Q.No3 # "Discuss Road Margins"

Ans:-

The portion of the road beyond the carriageway and on the roadway can be generally called road margin various elements from the road margins

1. Shoulders:- Shoulders are provided along the road edge and is intended for accommodation of stopped vehicles serve as an emergency lane for vehicles and provide lateral support for base and surface courses. A minimum width of 2.5m is recommended for rural highways.

2. Parking Lane:- Parking lanes are provided in urban roads for side parking Parallel parking is preferred because it is safe the vehicles moving on road The parking lane should have a minimum of 3.0m width in the case of parallel parking

3. Bus-bays :-

Bus bay are provided by recessing the kerbs for bus stops. They are provided so that they don't obstruct the moment of vehicles in the carriage way. They should be at least 75 meters away from the intersection so that the traffic near the intersection is not affected by the bus-bay.

4. Service roads :-

Service road or frontage roads give access to controlled highway and will be usually isolated by a separator and access to the highway will be provided only at selected points.

5. Cycle track :-

Cycle track are provided in urban areas when the volume of cycle traffic is high. minimum width of 2 meter is required, which may be increased by 1 meter for every additional track.

6. Foot Path :-

Footpaths are exclusive right of way to pedestrians. Espcially in urban areas. They are provided for the safety of the pedestrians

when both the pedestrain traffic and vehicular traffic is high. minimum width is 1.5 meter and may be increased based on the traffic.

7. Guard rail

They are provided at the edge of the shoulder usually when the road is on an embankment. They serve to prevent the vehicles from running out of the embankment. Specially when the height of the embankment exceed 3m. They also give better visibility of curves at night under headlights of vehicles.