

## Unit 6 - Week 4

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## Week 4 Assignment 4

The due date for submitting this assignment has passed. **Due on 2020-10-14, 23:59 IST.**  
As per our records you have not submitted this assignment.

- Which ones among the following are considered as operational aspects for public transit services? 1 point
  - a) Capacity
  - b) Reliability
  - c) Speed
  - d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- What should be the service reliability to obtain the maximum capacity of transit services? 1 point
  - a) 100%
  - b) 80%-100%
  - c) Not defined
  - d) None of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: a)
- What are the major components of transit speed? 1 point
  - a) Running time
  - b) Passenger service time
  - c) Delay
  - d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- How many major types of guideways are used in transit services? 1 point
  - a) 4
  - b) 3
  - c) 5
  - d) 6

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: a)
- Delays associated with bus stops include factors such as- 1 point
  - a) Bus stop failure
  - b) Boarding lost time
  - c) Both (a) and (b)
  - d) None of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- What are the locations where bus transit capacity is calculated? 1 point
  - a) Loading areas
  - b) Bus stops
  - c) Bus facilities
  - d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- What is/are key components of rail transit capacity? 1 point
  - a) Line capacity
  - b) Person capacity
  - c) Both (a) and (b)
  - d) None of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- Rail transit person capacity depends on which of the following factors - 1 point
  - a) Train length
  - b) Train car passenger capacity
  - c) Peak hour factor
  - d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- For a bus transit service, compute the average dwell time if maximum passenger flow time (all door channels) ( $t_{pf,max}$ ) = 6 secs, has no boarding lost time ( $t_{bl}$ ), and door opening-closing time ( $t_{oc}$ ) = 4 secs. 1 point
  - a) 2 secs
  - b) 10 secs
  - c) 4 secs
  - d) Cannot be computed

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- For a bus transit service, compute the operating margin ( $t_{om}$ ) of bus stop capacity if the coefficient of variation of dwell time ( $c_v$ ) = 0.60, standard normal variable corresponding to failure rate ( $Z$ ) = 1.04, and average dwell time ( $t_d$ ) = 20 secs. 1 point
  - a) 16.48 secs
  - b) 12.84 secs
  - c) 12.48 secs
  - d) Cannot be computed

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- For a bus transit service, compute the bus stop capacity ( $B_s$ ) if the green time ratio ( $g/C$ ) = 0.60, traffic blockage adjustment factor ( $I_b$ ) = 0.90, clearance time ( $t_c$ ) = 10 secs, effective loading area ( $N_{ei}$ ) = 1.75, operating margin ( $t_{om}$ ) = 15 secs and average dwell time ( $t_d$ ) = 20 secs. 1 point
  - a) 91 bus/h
  - b) 92 bus/h
  - c) 90 bus/h
  - d) 100 bus/h

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- For a rail transit service, compute the non-interference headway ( $h_{ni}$ ) if the train control separation ( $t_{cs}$ ) = 58 secs, average dwell time at controlling station ( $t_{d,ctrl}$ ) = 40 secs, and operating margin ( $t_{om}$ ) = 25 secs. 1 point
  - a) 73 secs
  - b) 7 secs
  - c) 98 secs
  - d) 123 secs

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)
- For a rail transit service, compute the person capacity ( $P$ ) if the maximum design load per car ( $P_c$ ) = 120 per/car, line capacity ( $I$ ) = 15 trains/h, no. of cars per train ( $N_c$ ) = 10 cars/train and peak hour factor (PHF) = 0.40 1 point
  - a) 7000 persons/h
  - b) 7200 persons/h
  - c) 6200 persons/h
  - d) 8400 persons/h

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- Which of the following pedestrian space corresponds to LOS C? 1 point
  - a) > 13 sq ft per person
  - b) 7-10 sq ft per person
  - c) 3-7 sq ft per person
  - d) None of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: b)
- Determine the stairway width for LOS C (7-10 persons/ft/min) if the peak hour rush volume = 1120 people 1 point
  - a) 9 ft.
  - b) 10 ft.
  - c) 7.5 ft.
  - d) Cannot be computed

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: c)
- Determine the total passenger travel time (PT) if access time, both to and from the station, ( $PT_a$ ) is each equal to 15 minutes, and travel time on the transit line ( $PT_l$ ) = 40 minutes 1 point
  - a) 50 minutes
  - b) 15 minutes
  - c) 45 minutes
  - d) 70 minutes

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
Score: 0  
Accepted Answers: d)