

# Unit 14 - Week 12

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## Week 12 Assignment 12

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. **Due on 2020-12-09, 23:59 IST.**

- Identify the true statements from the following – 1 point
  - “Pedestrian safety refers to the level of risk to pedestrians when attempting to walk along or across the network of roads in a community.”
  - “Pedestrian safety measured by the incidence of crimes such as assault, robbery, rape, and murder against pedestrians.”

a) Both i and ii are true  
 b) i is true and ii is false  
 c) i is false and ii is true  
 d) Both i and ii are false

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- Vineet, a driver in a car on a residential street is travelling at 40 km per hour. He puts on the brakes when he sees a stop sign. The coefficient of friction between the tires and the road is  $\mu=0.60$ . Assume  $g=9.8 \text{ m/sec}^2$ . What is the stopping distance of the car (calculate to one decimal place)? 1 point

a) 11.5  
 b) 9.5  
 c) 10.5  
 d) 14.5

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 c)
- Find the entropy index for the following land-use distribution (round off to two decimal places)- 1 point

Value	Count	Landuse
1	17	Water
2	13	Agriculture
3	10	Residential
4	9	Industrial

a) 0.98  
 b) 0.89  
 c) 0.84  
 d) 0.96

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- What does AMF stands for in pedestrian safety studies? 1 point

a) Actual Modification Factors  
 b) Actual Median Factors  
 c) Accident Modification Factors  
 d) Accident Median Factors

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 c)
- Providing “Chicanes” come under which section of pedestrian safety enhancing intervention? 1 point

a) Reducing vehicle speeds  
 b) Improving the visibility of pedestrians  
 c) Reducing pedestrian exposure to vehicular traffic  
 d) Providing care for injured pedestrians

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- A three-mile section of road that has had eight crashes over five years and has a traffic volume of 5,000 vehicles per day. What is the crash frequency? 1 point

a) 2  
 b) 1.2  
 c) 0.8  
 d) 1.6

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- Which instrument is used to measure sound intensity? 1 point

a) Sound level meter  
 b) Frequency meter  
 c) both (a) and (b)  
 d) None of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- The effect of vehicular pollutants i.e. CO, NO<sub>x</sub>, SO<sub>x</sub> and CO<sub>2</sub> on human body is/are: 1 point

a) Cardio vascular disease  
 b) Respiratory diseases  
 c) Impairs vision  
 d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- Find the AMF in parallel on-street parking is present along a four-lane undivided arterial road in a commercial area. The sum of the total curb length where parking is available is 4 miles, while the total length of roadway segment as 9 miles. Use the following table to reach the correct answer.Round-off to answer to two decimal places. 1 point

**Values of  $f_p$  Used in Determining the Accident Modification Factor for On-street Parking**

Road Type	Type of parking and land use			
	Parallel parking		Angle parking	
	Residential/other	Commercial or industrial/ Institutional	Residential/other	Commercial or industrial/ Institutional
2U	1.465	2.074	3.428	4.653
3T	1.465	2.074	3.428	4.653
4U	1.100	1.709	2.574	3.999
4D	1.100	1.709	2.574	3.999
5T	1.100	1.709	2.574	3.999

a) 1.15  
 b) 1.35  
 c) 1.55  
 d) 1.31

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- What is the purpose of the “screening” step of EIA? (Select all that apply) 1 point

a) To assess the quality of the project design  
 b) To facilitate informed decision making by providing clear, well-structured, factual analysis of the effects and consequences of proposed actions  
 c) To determine whether a full EIA needed Nominal  
 d) Both (b) and (c)

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- Find the **Pedestrian crash frequency** for a two-lane undivided arterial (posted speed limit 30mph) having predicted average crash frequency without pedestrian and bicyclists as 4.32. Use the table to reach the correct answer.Round-off the answer to two decimal places. 1 point

**Pedestrian Accident Adjustment Factor for Roadway Segments**

Road type	Pedestrian Accident Adjustment Factor ( $f_{ped}$ )	
	Posted Speed 30 mph or Lower	Posted Speed Greater than 30 mph
2U	0.036	0.025
3T	0.041	0.013
4U	0.022	0.009
4D	0.067	0.019
5T	0.030	0.023

a) 0.16 crashes/year  
 b) 0.24 crashes/year  
 c) 0.32 crashes/year  
 d) 0.54 crashes/year

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- Calculate the total NO<sub>x</sub> emissions generated on a 30 Km road from a mixed traffic consisting of 15 trucks, 20 cars and 40 two wheelers. 1 point

Given emissions standards:

  - $E_{CO(Truck)} = 4 \text{ g/Km}$
  - $E_{CO(Car)} = 1 \text{ g/Km}$
  - $E_{CO(2 Wheeler)} = 0.75 \text{ g/Km}$

a) 3.3 Kg  
 b) 4.3 Kg  
 c) 2.5 Kg  
 d) 6.5 Kg

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 (d)
- EIA (Environmental Impact Assessment) for transportation projects may be conducted at which stage - 1 point

(a) Pre-construction  
 (b) Construction  
 (c) Operation  
 (d) All of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 (d)
- A three-mile section of road that has had 12 crashes over five years and has a traffic volume of 9,000 vehicles per day. What is the crash rate? 1 point

a) 24.35 crashes per 100 million vehicle miles traveled  
 b) 19.24 crashes per 100 million vehicle miles traveled  
 c) 21.61 crashes per 100 million vehicle miles traveled  
 d) 25.45 crashes per 100 million vehicle miles traveled

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- The sector having major contribution towards noise pollution is: 1 point

a) Transport sector  
 b) Industrial and construction machinery  
 c) Special events  
 d) none of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- Roadway noise can be reduced by 1 point

a) use of noise barriers  
 b) limitation of vehicles speed  
 c) alteration of roadway surface texture  
 d) all of the above

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- Using a SPF for rural two-lane roadway segments, the expected average crash frequency for existing conditions is 16 injury crashes/year (assume observed data is not available). The base condition is the absence of automated speed enforcement. If automated speed enforcement were installed, the AMF for injury crashes is 0.76. Find the expected average crash frequency. 0 points

a) 8.23  
 b) 8.65  
 c) 9.12  
 d) 9.46

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 c)
- What does “S” means in ASI approach of transport planning? 1 point

a) Sustainable  
 b) Social  
 c) Shift  
 d) Strategy

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 a)
- Which is not a potential solution for emission reduction from Urban Transport? 1 point

a) Using non-motorized transport  
 b) Cars with even-odd numbers  
 c) Car pooling  
 d) Preferring private vehicle over public transport

a)  
 b)  
 c)  
 d)

No, the answer is incorrect.  
 Score: 0  
 Accepted Answers:  
 d)
- Which of the following statements is/are correct about emission standards? 1 point

1. Bharat stage standards are based on European regulations.  
 2. Euro VI is the new EU emissions legislation that comes into force in 2014.

a) Only 1  
 b) Only 2  
 c) Both  
 d) None

a)  
 b)  
 c)  
 d)

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