

Unit – 1 Road Accidents Question Bank for 16 marks

1. What are the primary causes of road accidents, and how can scientific investigations and data collection help in addressing these issues effectively?
2. How does the analysis of individual accidents help in determining the real causes, and what role do human factors, environmental conditions, and vehicle performance play in this process?
3. What statistical methods are commonly used to analyze road accident data, and how do basic concepts in road accident statistics guide safety improvements?
4. Explain the importance of conducting scientific investigations in determining the causes of road accidents. How does the collection of qualitative and quantitative data contribute to this investigation process?
5. Analyze the challenges involved in accurately determining the primary causes of an individual road accident. Discuss how these challenges can impact the effectiveness of safety measures.
6. What is the role of the Safety Performance Function (SPF) in road accident analysis, and how does it contribute to improving road safety?
7. How does the Empirical Bayes method improve the accuracy of identifying hazardous road locations compared to traditional methods?
8. How is computer analysis applied to accident data, and what benefits does it bring to road safety planning and decision-making?

Unit – 2 Safety in Road Design

1. Explain the concept of "operating the road network for safety" comprehensively. Discuss the key strategies and measures that can be implemented to enhance road safety in a network.
2. How does regular maintenance contribute to operating the road network safely?
3. Describe the principles, procedures, and best practices involved in conducting a road safety audit. Provide examples of potential safety issues that may be identified during an audit and the recommended countermeasure
4. What are some components of highway operation and countermeasure for enhancing road safety?
5. Explain the importance of a code of good practice in road safety. Provide examples of elements that are typically included in such a code and how they contribute to improving road safety.

6. Discuss the key vehicle design factors that influence road safety. Provide examples of vehicle design features that can mitigate the severity of accidents and protect occupants.
7. Explain how driver characteristics can influence road safety. Discuss various driver characteristics and behaviours that pose risks on the road and strategies to mitigate these risks.