



12. (a) (i) Explain the different situations where valley curves are used. (8)  
(ii) What are the various design factors controlling the vertical alignment on highways. (8)

Or

- (b) (i) What is illumination sight distance? State its importance. (8)  
(ii) Explain the factors to be considered in deciding the stopping sight distance at intersections. (8)
13. (a) (i) Explain how design traffic may be computed for flexible pavements. (8)  
(ii) How is edge temperature stress calculated for the design of rigid pavement? (8)

Or

- (b) (i) Discuss the merits and demerits of CBR method of flexible pavement design. (9)  
(ii) How is the load stress in the corner region obtained for the design of rigid pavements? (7)
14. (a) Explain how the following tests are carried out in laboratory.  
(i) Impact test (8)  
(ii) Crushing test. (8)

Or

- (b) Explain how drainage in hill roads is provided. (16)
15. (a) Describe various methods of controlling reflection cracks in bituminous concrete pavements. (16)

Or

- (b) (i) What is called pavement evaluation? (7)  
(ii) Explain the contents of technical appraisal report. (9)