



PART B — (5 × 13 = 65 marks)

11. (a) Write shortly the significance of 'Soil Suitability Analysis and Road Ecology' in highway Planning.

Or

- (b) Write in brief the history of road development in India after independence.
12. (a) Explain in brief the various classifications of rural roads with its salient components as per IRC standards with neat sketches.

Or

- (b) Explain shortly various special considerations to be given in design and construction of Hilly roads in highway design.
13. (a) Explain in brief various design principles to be adopted in flexible pavement design.

Or

- (b) Explain in detail the various design practices normally adopted in rigid pavement design as per IRC standards.
14. (a) Write in detail the different types of tests to be conducted to check the suitability of 'Aggregate Material' in highway materials.

Or

- (b) Discuss in brief the construction practice with modern material and methods to be adopted for a high type of bituminous pavement as per IRC standards.
15. (a) Explain in detail the pavement management system (PMS) with its effectiveness in pavement maintenance.

Or

- (b) Illustrate with neat sketches any four different types of pavement distress normally occur in flexible pavement with its preventive measures.

PART C — (1 × 15 = 15 marks)

16. (a) Explain in brief the modern methods of laying highway alignment being adopted at present with its merits and demerits.

Or

- (b) Write in detail the present status of highway drainage in Chennai city roads and list out the measures to be taken for effective removal of water from the pavement.