

Answer any FIVE questions

All questions carry EQUAL marks

1. (a) Explain how the subgrade is prepared?
(b) Explain in brief the construction of WBM layer?
2. (a) Explain in brief what are the various tests conducted during construction of Bituminous surface course?
(b) Write the merits and demerits of destructive and non-destructive testing of pavements
3. (a) Explain how pavement serviceability is evaluated through uses of psycho-physical and psychometric scaling techniques?
(b) Write broad classification of pavement evaluation methods and write applications of each method used for pavement maintenance management system?
4. (a) Explain the factors influencing structural and functional condition deterioration of pavements?
(b) Explain initiation and progression deterioration models with suitable examples?
5. (a) Write the frequency of sampling of materials used at various stages of construction of bituminous concrete pavement?
(b) Define (i) Design Life of Pavement and
(ii) Pavement life based on performance. Explain what is the significance of the above two parameters useful for design of new and existing pavements?
6. Define the following terms, with suitable example treatments/crust details
(a) Repair (b) Full depth reclamation (c) Rehabilitation
(d) Resurfacing (e) Restructuring (f) reconstruction
7. (a) Explain basic philosophy of evaluating alternative maintenance strategies and decision criteria by using HDM Package?
(b) List of basic components and inter related extensions as sub-components/activities of PMS?
8. (a) Explain the details of steps involved with implementation of PMS?
(b) Explain the different methods of measurement of rebound deflection bowl of pavement? State their merits and demerits?