

has to overcome.

- Q-5** **Attempt all questions** (14)
- A) What are the requirements of a ventilating system? Explain briefly various methods for dust suppression during tunneling. (7)
- B) What are the basic functions of marshalling yard and state the points which should be kept in mind when designing a marshalling yard. (7)
- Q-6** **Attempt all questions** (14)
- A) Compare the characteristics of wooden sleepers and reinforced concrete sleepers used on Indian Railways. (7)
- B) State the classification of bridges based on different factors. (7)
- Q-7** **Attempt all questions** (14)
- A) Define economic span, linear waterway and afflux. Also state the guiding principle which must be kept in mind to ensure the safety of the structure while fixing the waterway of bridge. (7)
- B) What are the functions of rails? Explain the various types of rails in use. (7)
- Q-8** **Attempt all questions** (14)
- A) State the functions of bearings and also explain rocker and roller bearings. (7)
- B) Describe in brief the basic requirements of a good alignment. (7)

