

Baba Banwar Das - National Institute of Technology & Management, Lucknow
B. Tech. Second Year (First Semester) 2018-19
Department of Civil Engineering

TUNNEL ENGINEERING
Assignment 1 (100%)

NOTE-ATTEMPT ALL PARTS

1. Define the tunnel & give historical development of tunnel?
2. What are the geotechnical considerations in tunneling?
3. What is tunnel? Discuss the advantage and disadvantage of tunnel as a mode of communication.
4. How tunnels are classified? Explain briefly how you would transfer the center line and grade of proposed tunnel from the ground surface to the interior of the tunnel with their neat sketches.
5. Show with sketch various types of tunnels and give the conditions when the following tunnels are used (i) segmental (ii) rectangular (iii) horse shoe (iv) elliptical.
6. What informations are collected in Geological investigations for tunnels?
7. What are the various stages when geologic and geotechnical data are collected? What type of information is taken in second stage of investigation?
8. What are different types of supports in tunnels? List the temporary and permanent types of supports.
9. Classify the tunnels according to their alignment and purposes. Also describe the tunnel construction in independent beds.
10. How will you preliminary explore the location of tunnel? Also discuss why the preliminary exploration for a tunnel is very necessary.
