

B.E. / B.Tech. Civil Engineering (Model Curriculum) Semester-VI  
**OEC-CE602B / METRO1 - Metro System and Engineering**

P. Pages : 1

Time : Three Hours



**GUG/S/25/13732**

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
  2. Assume suitable data wherever necessary.
  3. Diagrams and Chemical equation should be given wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Write short note on Metro Act. 8  
b) Give various impacts of metro rail system. 8  

**OR**
2. a) Give an overview of world metro system. 8  
b) Why metro system is needed in India? 8
3. a) What do you mean by traffic integration in metros? Give an approach adopted in traffic integration facilities. 8  
b) Write about the environmental and social safeguards in metros. 8  

**OR**
4. a) Write about the initial survey and investigation in metro. 8  
b) differentiate between top down and bottom of construction of underground metro station. 8
5. a) Write short note on automatic fair collection in metro. 8  
b) Write about the various signaling system in metro. 8  

**OR**
6. a) Write short note on operation control system in metro. 8  
b) What is the use of providing signaling system in metro? 8
7. a) What are the various features of rolling stock in metro? 8  
b) Write short note on air conditioning for metro station and building in metro. 8  

**OR**
8. a) Write short note on fire control system in metro. 8  
b) Write about the importance of elevators in metro. 8
9. a) What are the features of metro rail electrification? 8  
b) Write short note on overhead equipment. 8  

**OR**
10. a) Write short note on carbon credit and clean air mechanics in relation with metros. 8  
b) What are the impacts of green metro rail projects? 8

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