

**Civil Engineering Department**  
**Guru Nanak Dev Engineering College, Ludhiana**  
1<sup>st</sup> House Test

**M.Tech 1<sup>st</sup>**

**MTST-502 Bridge Engineering**

Date: Sat 21 Feb 15

Time: 10:30 a.m. to 12:00 noon

Max. Marks 30

Don't write anything on question paper except your Roll No. \_\_\_\_\_

- 1 Sketch components of a slab type bridge to be constructed over a drain; Write down purpose / function of each component. 10
- 2 For a decision to be taken by an Engineer for the site for a bridge and appropriate bridge type, what type of information / data he needed? How required data is collected? 10
- 3(a) Write in detail traffic requirements of Highway Bridges. 10  
or
- 3(b) What do you understand by waterway of a bridge, and how it is calculated. What will be linear waterway required for a bridge to be constructed across the river, having catchment area 600 hectares, 10 mm per hour is the maximum rainfall intensity, 1.2 m/s is the permissible velocity, 1.8 m is the average depth of flow. Take runoff coefficient as 0.60. 10