

Menoufiya University
Faculty of Engineering
Shebin El-Kom
Second Semester Examination
Academic Year: 2018-2019



Department: Civil Eng.
Year: 1st Civil Date 13/6/2019
Subject/Code: CIVIL ENGINEERING
DRAWING CVE101
Time Allowed: 4 hours

Remarks: No. of pages: 2

No. of questions: 3

Allowed Tables and Charts: (--)

Answer all the following Questions [120 Marks]

Any missing data can be reasonably assumed

Question (1) [60 Marks]

1. Give clear description of the following structure. (5 Marks)

structure name: reinforced concrete bridge.

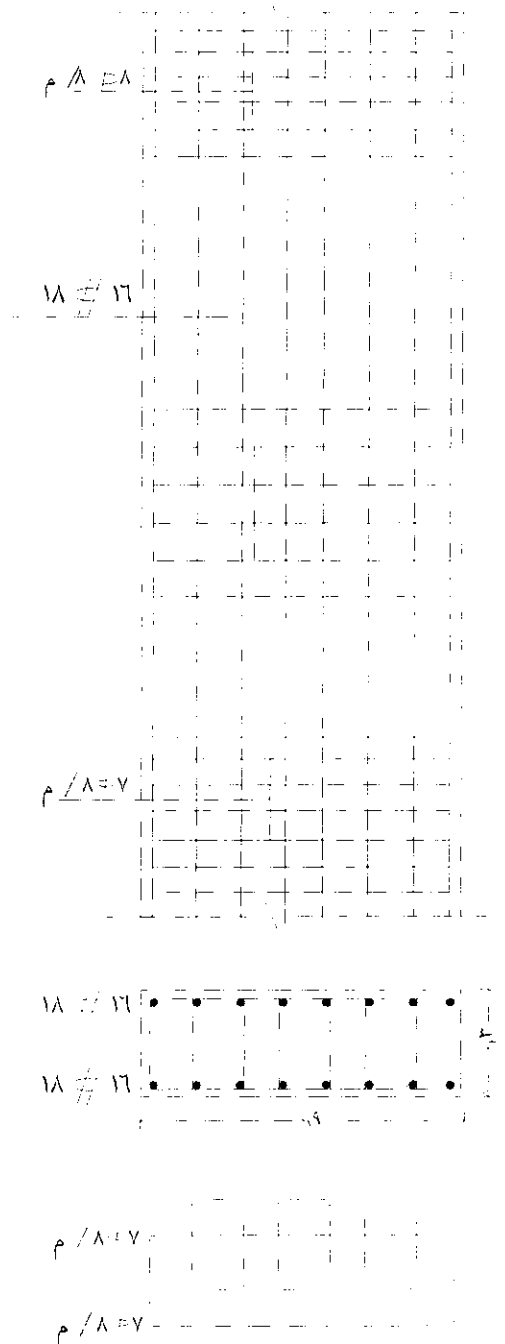
structure type : crossing up structure.

the bridge consists of two vent 5 m wide. the total length of bridge is 10 m. there are two abutments with 4.10 m high. the abutment is plain concrete type. Foundation level is (6.00). It consists of plain concrete with thickness 0.90 m. upstream and downstream wing wall is plain concrete type.

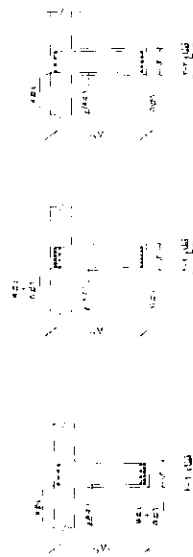
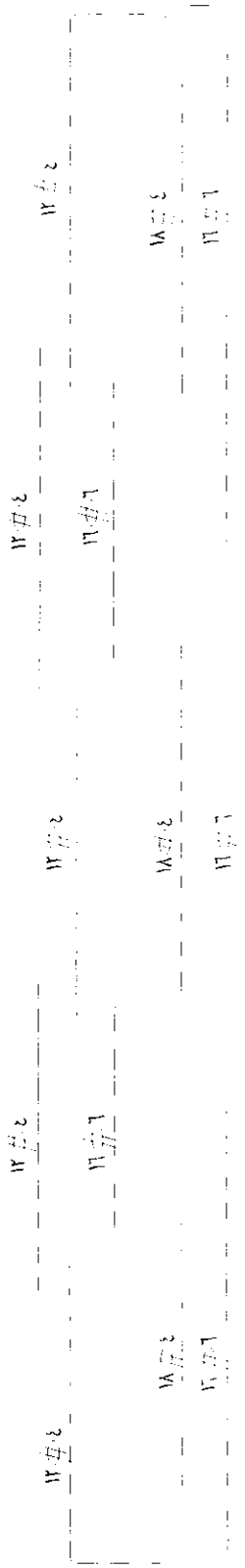
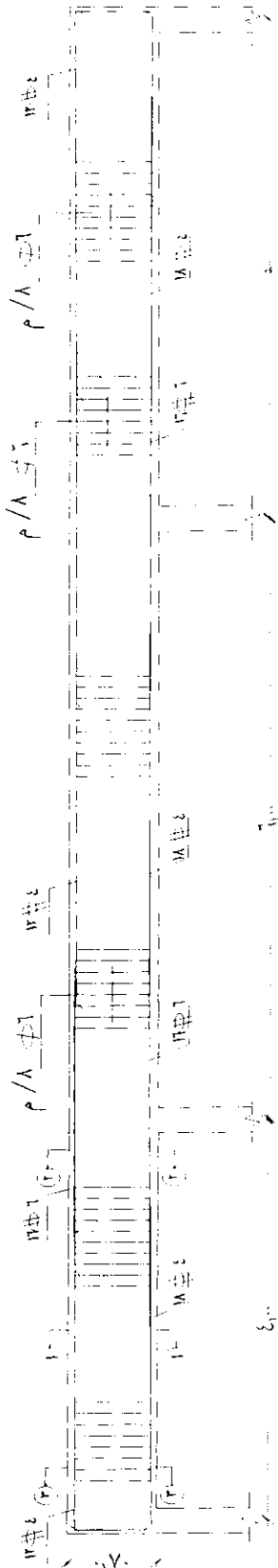
bed level is (7.40), berm level is (10.90) and road level is (12.00). side slopes are 1:1 and 2:1.

Question (2) [30 Marks]

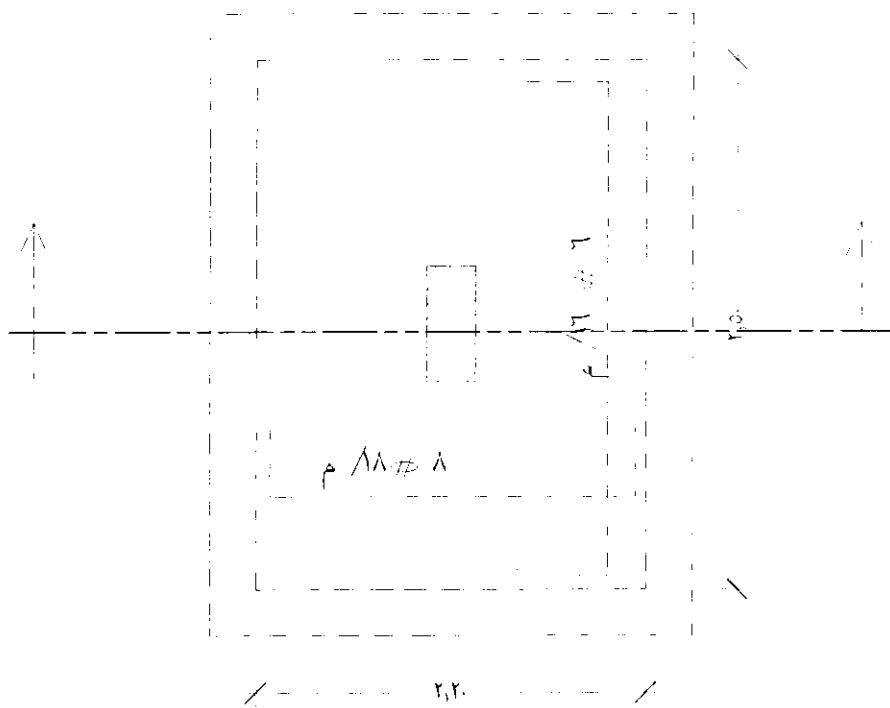
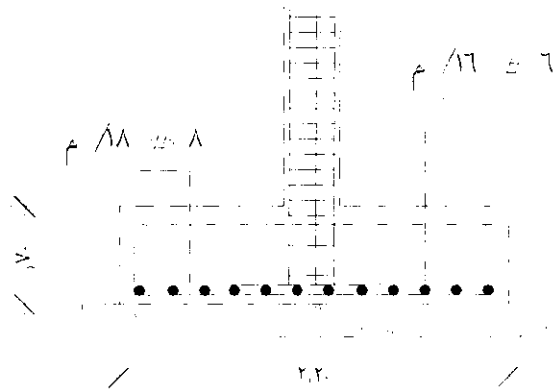
1. It is required to draw a **longitudinal section and a cross section** of rectangular column, which has dimensions of 30 * 90 cm with reinforcement 16 bars with 18 mm diameter with 7 stirrups with diameter 8 mm/m. **(5 Marks)**



2. It is required to draw a **longitudinal** and **cross sections** of unequal spans continuous beam with three spans equal 4, 6, and 5 m. the cross sections are 30*70 with reinforcement 6 straight bars with 16 mm diameter and 4 bottom additional bars with 18 mm diameter in the middle of the spans and 4 upper bars (stirrup hunger) with 12 mm diameter and 6 upper additional bars with 16mm diameter on the supports and the slab thickness 15cm with 6 stirrups with diameter 8 mm/m.(15 Marks)



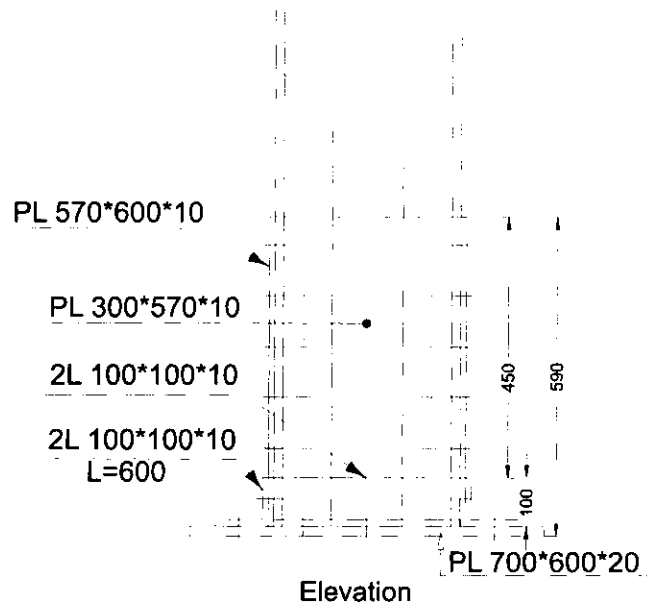
3. **It is required to draw a plan and a cross section of a footing which has section $2.2 \times 2.50 \times 0.70$ with reinforcement 8 bars with 18 mm diameter in one meter at the main direction and 6 bars with 16 mm diameter in one meter in the other direction. (10 Marks)**

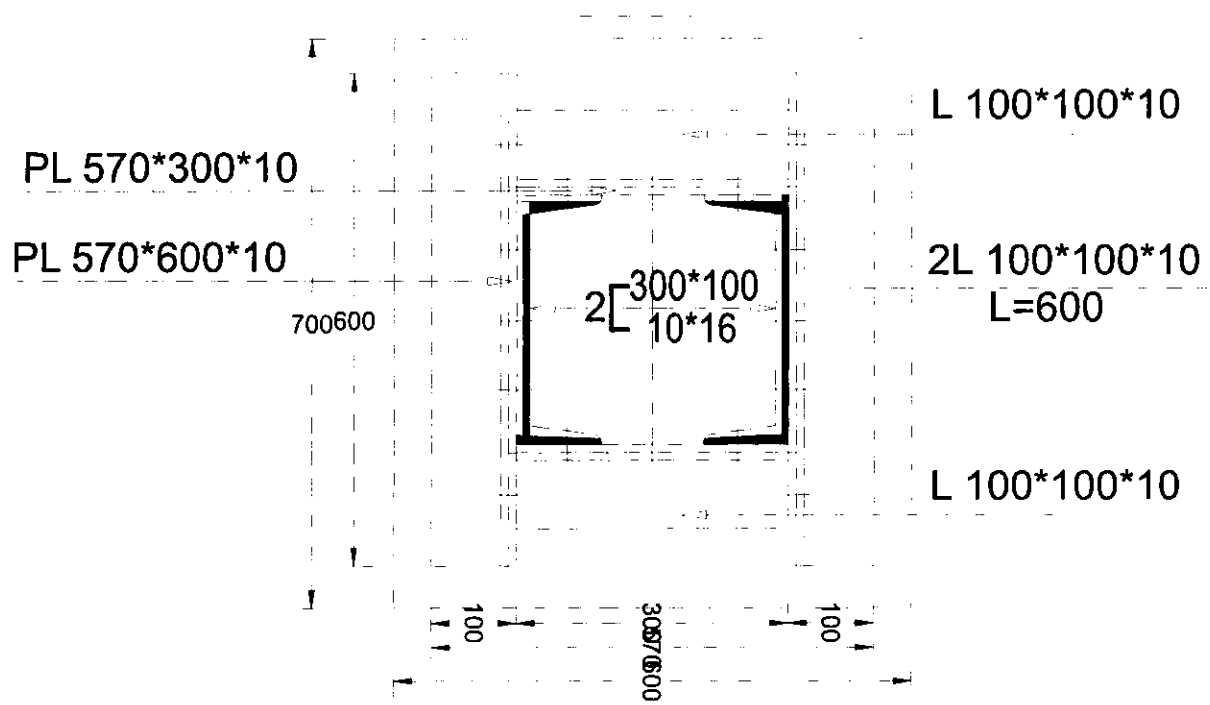


Question (3) [30 Marks]

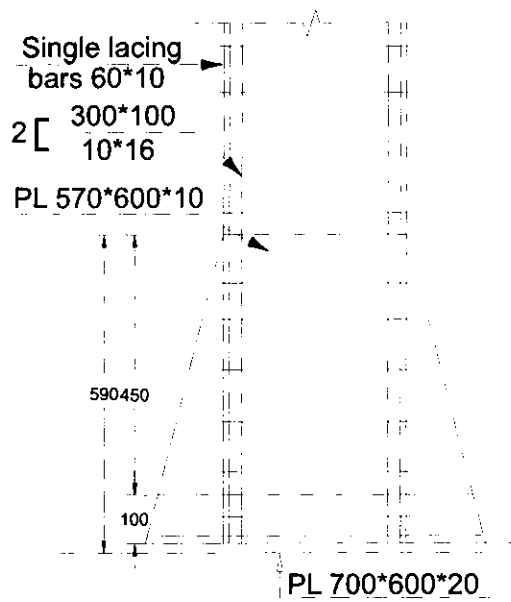
For the following figure it is required to draw:-

- 1. Plan (10 Marks)**
- 2. ELE (10 Marks)**
- 3. S.V (10 Marks)**





Plan



S.V