



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
SCIENCE AND TECHNOLOGY DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL DIPLOMA

IN

IRRIGATION/WATER RESOURCES/CIVIL ENGINEERING

SUBJECT: Computer Aided Design Practical

PAPER NO: 579/15/S09

DURATION: 4 hours

OCTOBER/NOVEMBER 2016 EXAMINATION

REQUIREMENTS

1. 2 GB flash disk.
2. Blank CD or DVD.
3. Computer with latest AutoCAD software.

INSTRUCTIONS TO CANDIDATE

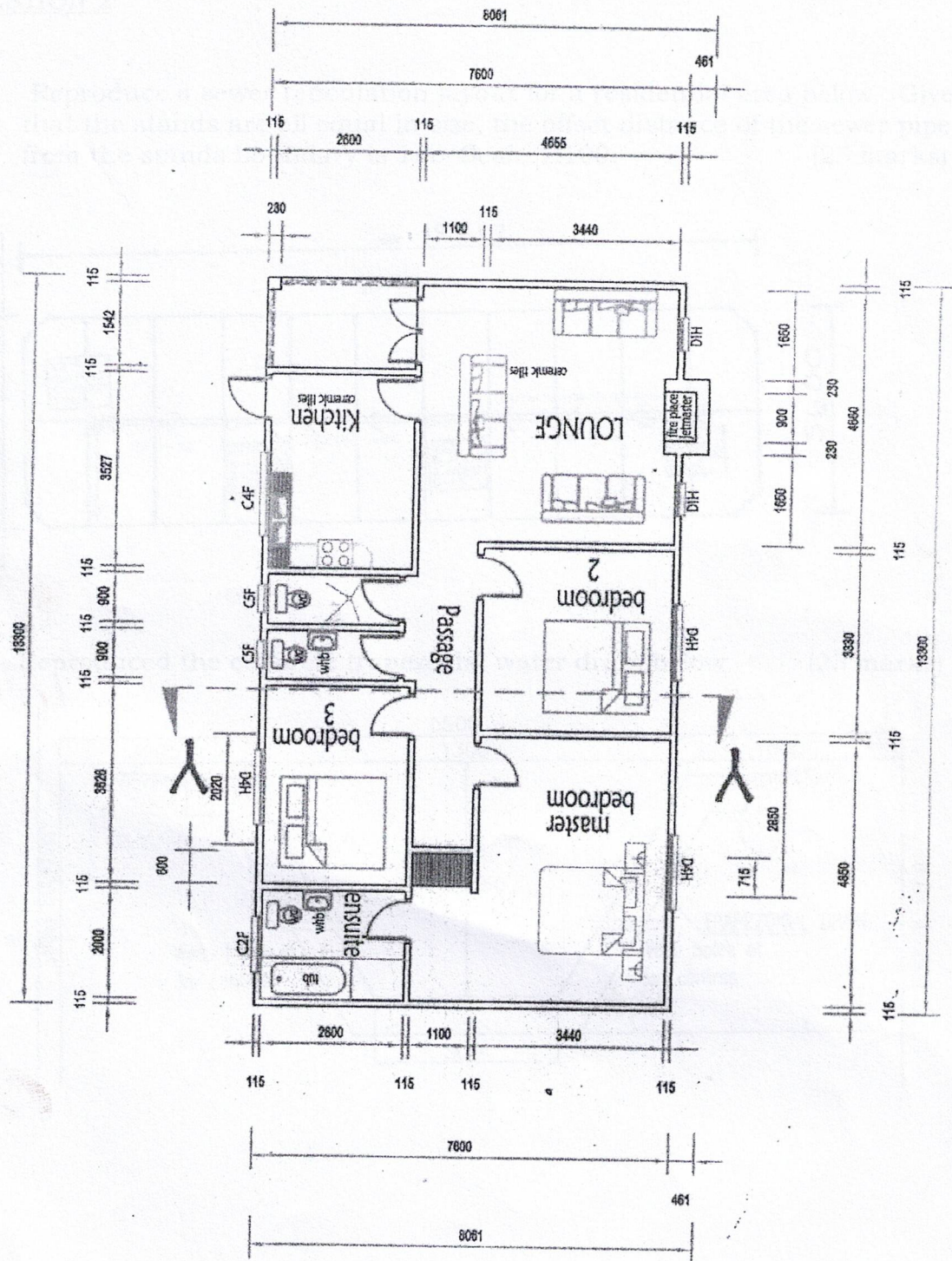
1. Answer Question 1 and either Question 2 or 3.
2. Correctly save your work on a CD/DVD or flash disk after completion of your work.

QUESTION 1

Reproduce the following:

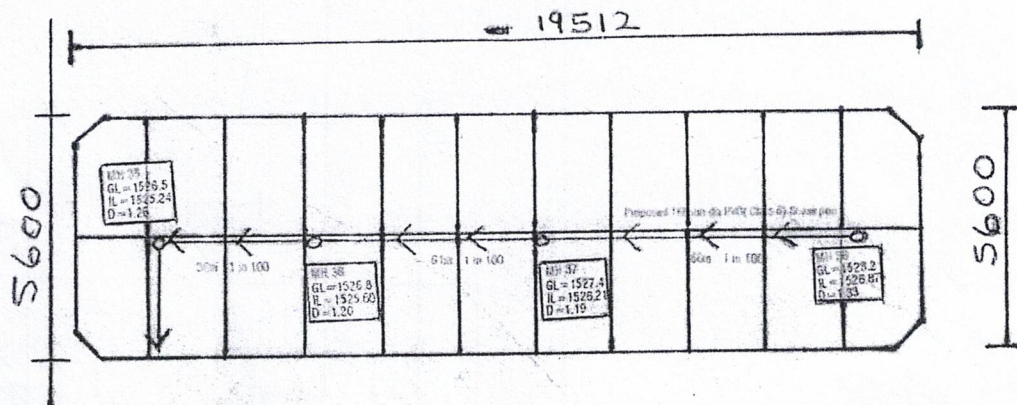
- a) Ground Floor Plan
- b) Front and Back Elevation
- c) Side Elevations
- d) Draw the section Y-Y given that foundation (Strip) depth is 700mm, footing on all walls is 690 × 230mm, roof pitch is 22.5, 25mm Screed, 100mm concrete slab and 150mm Hardcore. Scale 1:100. (50 marks)

(a) Ground Floor Plan

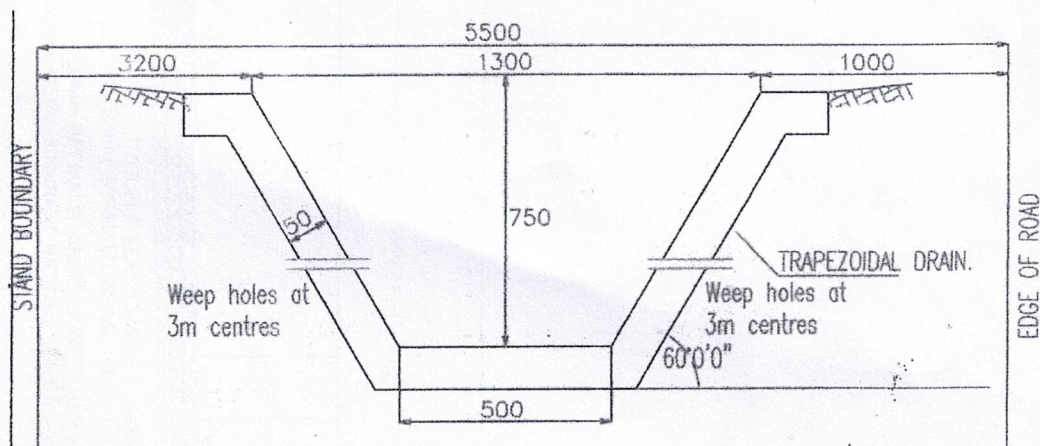


QUESTION 2

- a) Reproduce a sewer reticulation layout for a residential area below. Given that the stands are all equal in size, the offset distance of the sewer pipe from the stands boundary is 1m. Scale 1:100. (25 marks)



- b) Reproduced the concrete trapezoidal water drain below. (25 marks)



QUESTION 3

Reproduce a road cross section below.

(25 marks)

