NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF ARCHITECTURE AND QUANTITY SURVEYING

DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE

PART II END OF SECOND SEMESTER EXAMINATIONS – JUNE 2004
AAR 2103 – COMPUTER AIDED ARCHITECTURAL DESIGN I

Time : 4 Hours

Instructions

1)   *Each candidate to be provided one copy of question papers, Appendix I on A3 sheet, and empty floppy disk 3 ½".*
2)   *Carefully read the description of the architectural design of a residential house represented in Appendix I.*
3)   *Answer all questions.*
4)   *Marks for each question are indicated in brackets.*

Appendix I represents an architectural design of a two-bedroom residential house.
It consists of a floor plan, four elevations and a section x – x.

The plan shows the following components as indicated :

- two bedrooms
- kitchen
- study
- bathroom
- separate toilet
- lounge
- verandah

The windows and doors Codes are from standard Monarch Metal Catalogue.

Questions

1.   Indicate the dimensions on the floor plan and section x – x. Set dimension style at your own choice but in agreement with general architectural standards.   [20]

2.   Draw North, South, East, and West elevations.   [20]

3.   Label elevations and section correctly according to the North Point shown   [10]

4.   Label the rooms with floor levels and floor finishes.   [5]

5.   Annotate in the boxes on the section x-x accordingly to the construction notes provided.   [5]

6.   Use HATCH command to hatch the following:

   a)   the walls on plan and section x-x;
   b)   reinforced concrete beams, footings, the hardcore and concrete slabs on the section x –x;
   c)   roof covering in the elevations.   [15]

7.   Open the Layers Dialogue Box and assign/change the colours to the objects in the layers listed below:

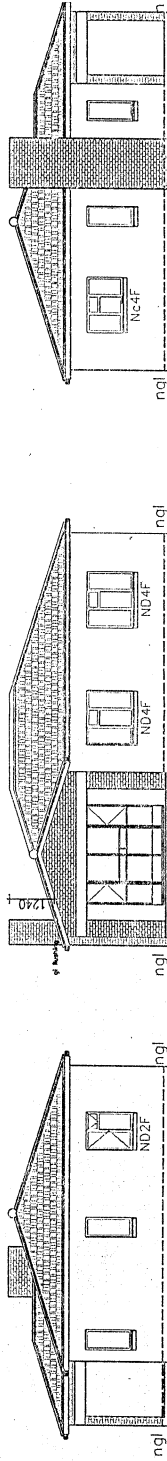| Layer Name:	Colour Required
Dimensions	White
Doors	Red
Elevation	White
Drainage	Green
Furniture	Magenta
Room	Red
Sanitary	Cyan
Text	Various
Walls	Green
Windows	Cyan

[10]

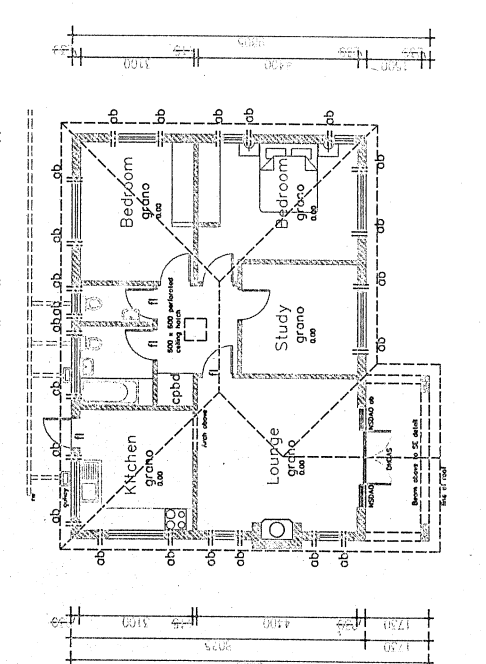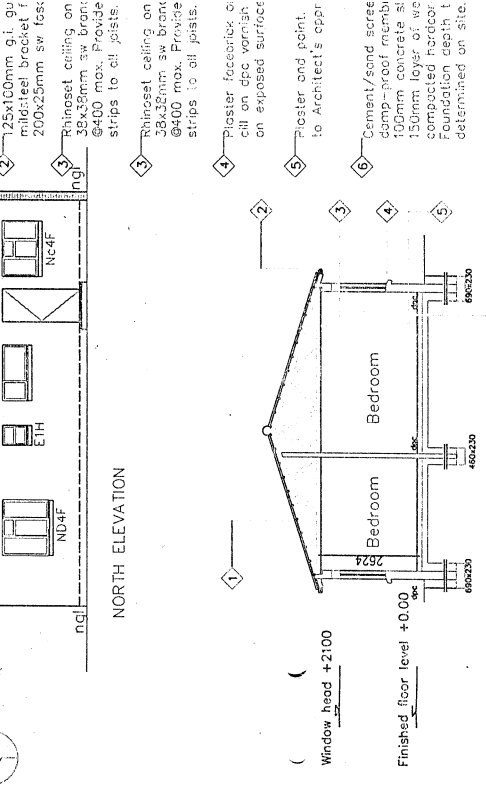8. Fill in the details in the little block (candidate number, department etc.)   [10]

9. Save the drawing file as AAR 2103/Candidate number on the floppy disk provided.   [5]

EAST ELEVATION

SOUTH ELEVATION

WEST ELEVATION

NORTH ELEVATION

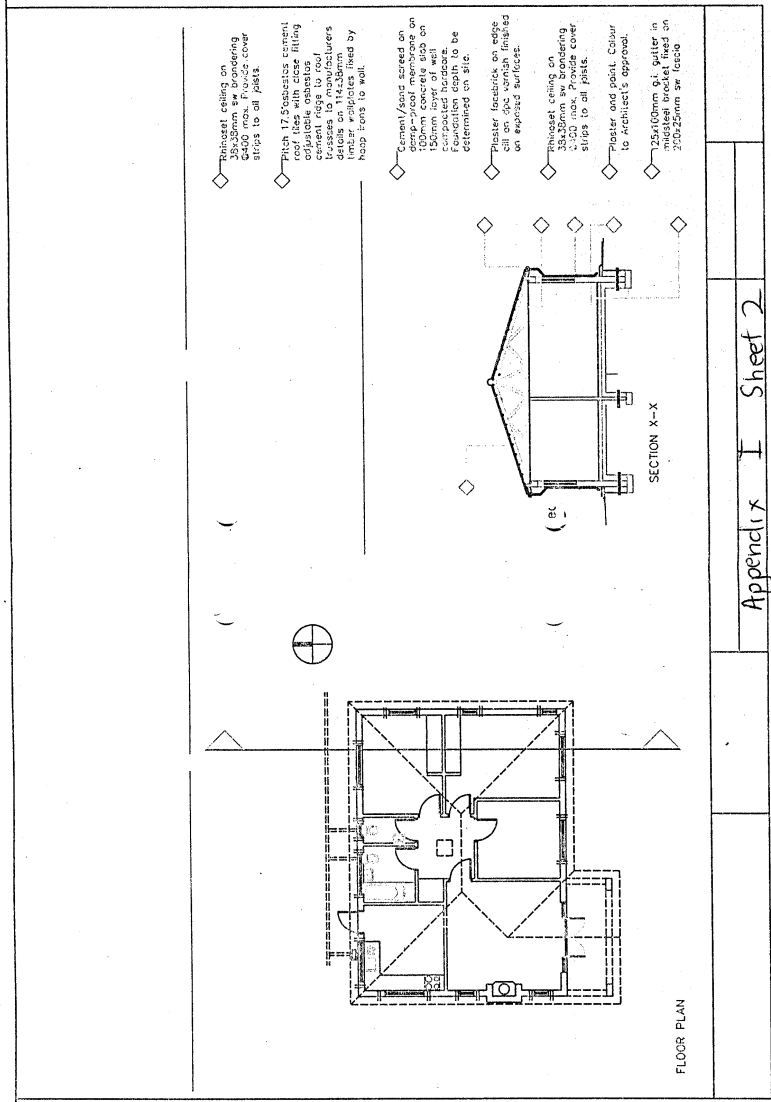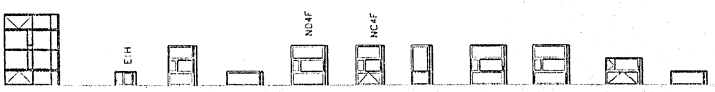SECTION X-X

FLOOR PLAN

Window head +2100

Finished floor level +0.00

Bedroom

Bedroom

Bedroom grano

Bedroom grano

Study grano

Lounge grano

Kitchen grano

① Pitch 17.5° asbestos roof tiles with clos adjustable asbesto cement ridge to ro trusses to mronuf details on 114x38m timber wallplates fi hoop irons to wall.

② 125x100mm g.i. gu mild-steel bracket f 200x225mm sw fas.

③ Rhinoset ceiling on 38x38mm sw brand @400 max. Provide strips to all joists.

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④ Plaster faceorick G oil on dpc varnish on exposed surface

⑤ Plaster and paint. to Architect's appr

⑥ Cement/sand scree damp-proof membi 100mm concrete sl 150mm layer of we compacted hardcor Foundation depth t determined on site.

Rhinoset ceiling on 38x38mm sw brandering @400 max. Provide cover strips to all joists.

Pitch 17.5 asbestos cement roof tiles with close fitting adjustable asbestos cement ridge to roof trusses to manufacturers details on 114x38mm timber wallplates fixed by hoop irons to wall.

Cement/sand screed on damp-proof membrane on 100mm concrete slab on 150mm layer of well compacted hardcore. Foundation depth to be determined on site.

Plaster facebrick on edge cill on dpc varnish finishes on exposed surfaces.

Rhinoset ceiling on 38x38mm sw brandering @400 max. Provide cover strips to all joists.

Plaster and paint. Colour to Architect's approval.

125x100mm g.i. gutter in m/steel bracket fixed on 200x25mm sw fascia

SECTION X-X

FLOOR PLAN

Appendix I Sheet 2

NC4F

NC4F

E/H