

1301/313  
1304/313  
1305/313  
SITE AND WORKSHOP MANAGEMENT  
June/July 2009  
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL  
CARPENTRY AND JOINERY CRAFT CERTIFICATE  
MASONRY CRAFT CERTIFICATE  
PLUMBING CRAFT CERTIFICATE

SITE AND WORKSHOP MANAGEMENT

3 hours

INSTRUCTIONS TO CANDIDATES

*You should have the following for this examination:*

*Answer booklet  
Drawing instruments.*

*Answer any FIVE of the following EIGHT questions.  
All questions carry equal marks.  
Maximum marks for each part of a question are shown.*

**This paper consists of 5 printed pages.**

**Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**



1. (a) State the "Factories Act" requirements with regard to safety in the workshop. (2 marks)
- (b) List **three** safety precautions that should be taken to reduce accidents in each of the following situations: (6 marks)
- (i) work on the scaffold;
  - (ii) excavation of a trench.
- (c) Briefly explain how each of the following should be stored on site: (10 marks)
- (i) cement;
  - (ii) timber;
  - (iii) bricks and blocks;
  - (iv) roofing tiles;
  - (v) sand.
- (d) Distinguish between tort and crime. (2 marks)
2. (a) Explain the meaning of the term Building Team as used in a project. (2 marks)
- (b) State the duties of each of the following parties in a building project: (6 marks)
- (i) structural engineer;
  - (ii) quantity surveyor;
  - (iii) clerk of works;
  - (iv) accountant.
- (c) State **four** essential requirements for a workshop. (4 marks)
- (d) State how an approval by the local authority for erection of a structure may become null and void. (2 marks)
- (e) State **four** precautions that should be taken to minimise theft on a construction site. (6 marks)



- 3.
- (a) Outline the procedure for procurement of materials on a construction site. (5 marks)
- (b) Briefly describe any three types of contracts in building projects. (3 marks)
- (c) Explain each of the following office documents:
- pro-forma invoice;
  - payment voucher;
  - delivery note;
  - advice note. (4 marks)
- (d) The table below shows the activities and duration of a construction project.

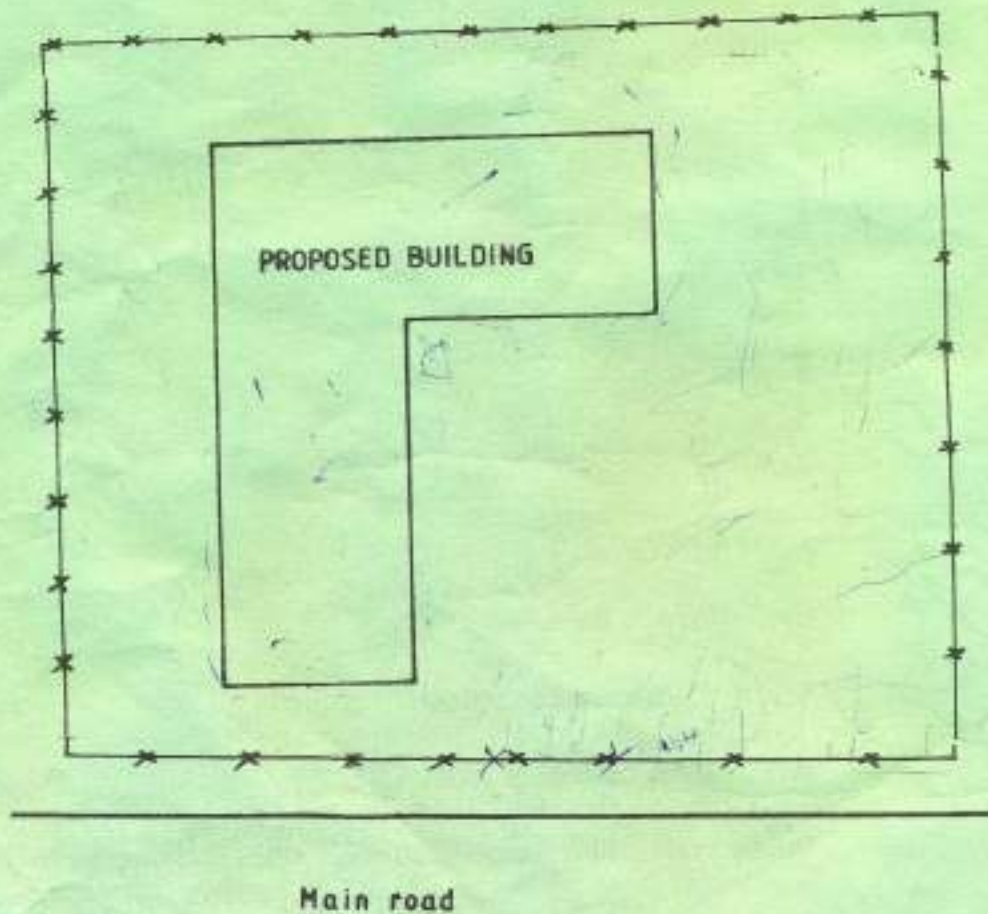
Activity	Operation	Duration (days)
1-2	A	6
1-6	B	5
2-3	C	13
2-4	D	4
3-5	E	11
4-5	F	6
6-7	G	11
5-8	H	3
7-8	I	15
4-8	J	-

Using the data:

- Prepare the network.
  - Calculate the total float.
  - Show the critical path. (8 marks)
4. (a) Briefly explain four factors to consider when planning the layout of a workshop. (8 marks)
- (b) State two advantages and two disadvantages of selective tendering. (4 marks)
- (c) Briefly describe four methods of storing tools in the workshop. (8 marks)



5. (a) State any **five** functions of trade unions. (5 marks)
- (b) Briefly explain **five** types of incentives that may be introduced in a building firm. (10 marks)
- (c) State any **five** general guidelines to be considered when disciplining an employee on a construction site. (5 marks)
6. (a) Explain the official procedure of relieving an inventory holder in a technical training institution. (4 marks)
- (b) List **four** essential services required on a construction site. (2 marks)
- (c) Figure 1 shows the plan layout of a proposed construction site for a 2-storey office block. Copy the figure and indicate the positions of the necessary amenities and different work points. (10 marks)



- (d) State **four** factors to consider when setting a site layout. (4 marks)

7. (a) Briefly explain any **two** management relationships that exist in an organisation. (4 marks)
- (b) State **four** causes of termination of employment. (2 marks)
- (c) List any **four** characteristics of a good filing system to ensure efficiency. (4 marks)
- (d) Define the term motivation and outline **four** aspects on how a supervisor can motivate workers on site. (10 marks)
8. (a) Briefly explain the following:
- (i) permanent stores;
  - (ii) consumable materials;
  - (iii) quotation form;
  - (iv) local purchase order. (8 marks)
- (b) (i) List **four** factors that influence the choice of a mechanical plant for a project.
- (ii) Briefly explain the following in relation to mechanical plant:
- operating costs;
  - owning costs. (8 marks)
- (c) State **four** objectives of planned maintenance. (4 marks)