



ZIMBABWE

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

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL DIPLOMA

IN

CIVIL ENGINEERING DISCIPLINE COURSES

SUBJECT: Project Management

PAPER NO: 578/S11

DURATION: 3 Hours

OCTOBER/NOVEMBER 2014 EXAMINATION

REQUIREMENTS

Scientific Calculator

INSTRUCTIONS TO CANDIDATE

- 1. Answer any FIVE (5) questions.**
- 2. Show calculations.**

This paper consists of 5 printed pages.

QUESTION 1

- a) Define project management. (2 marks)
- b) Explore the following terms in project management:
- i) Goal (1 mark)
 - ii) Objective (1 mark)
 - iii) Aim (1 mark)
 - iv) Responsibility (1 mark)
 - v) Accountability (1 mark)
 - vi) Authority (1 mark)
 - vii) Delegation (1 mark)
 - viii) Departmentalization (1 mark)
 - ix) Specialisation (1 mark)
 - x) Motivation (1 mark)
- c) Briefly explain on the following:
- i) An organisational structure (2 marks)
 - ii) An organisational chart (2 marks)
 - iii) Span of control (2 marks)
 - iv) Management by objective (2 marks)

QUESTION 2

- a) Identify and describe the contract documents used in construction industry. (10 marks)
- b) Explain the following types of contracts:
- i) Based on firm bills of quantities (2 marks)
 - ii) Based on schedule of rates (2 marks)
 - iii) Drawings and specifications (2 marks)
 - iv) Target cost (2 marks)
 - v) Cost plus fixed fee (2 marks)

QUESTION 3

a) Use Fig. 1 and 2 to take-off the following items:

- | | | |
|-------|---------------------|-----------|
| i) | Clear site | (1 mark) |
| ii) | Topsoil excavation | (1 mark) |
| iii) | Trench excavation | (2 marks) |
| iv) | Trench compaction | (1 mark) |
| v) | Timbering | (2 marks) |
| vi) | Concrete footing | (1 mark) |
| vii) | Brickwork | (1 mark) |
| viii) | Brickforce | (1 mark) |
| ix) | Hardcore | (1 mark) |
| x) | Concrete slab | (1 mark) |
| xi) | DPM | (1 mark) |
| xii) | Meshwire | (1 mark) |
| xiii) | Strike-off and cure | (1 mark) |

b) Outline the parties involved in construction industry. (5 marks)

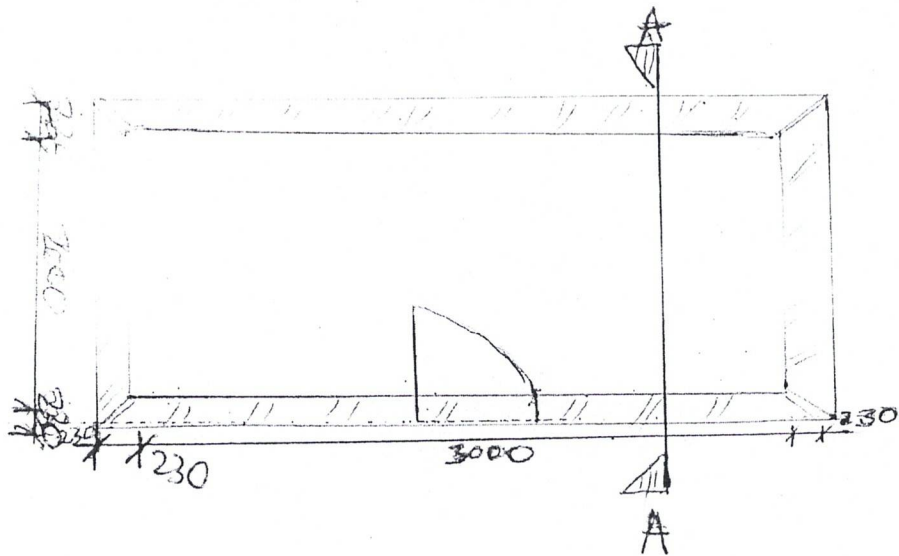


Fig. 1

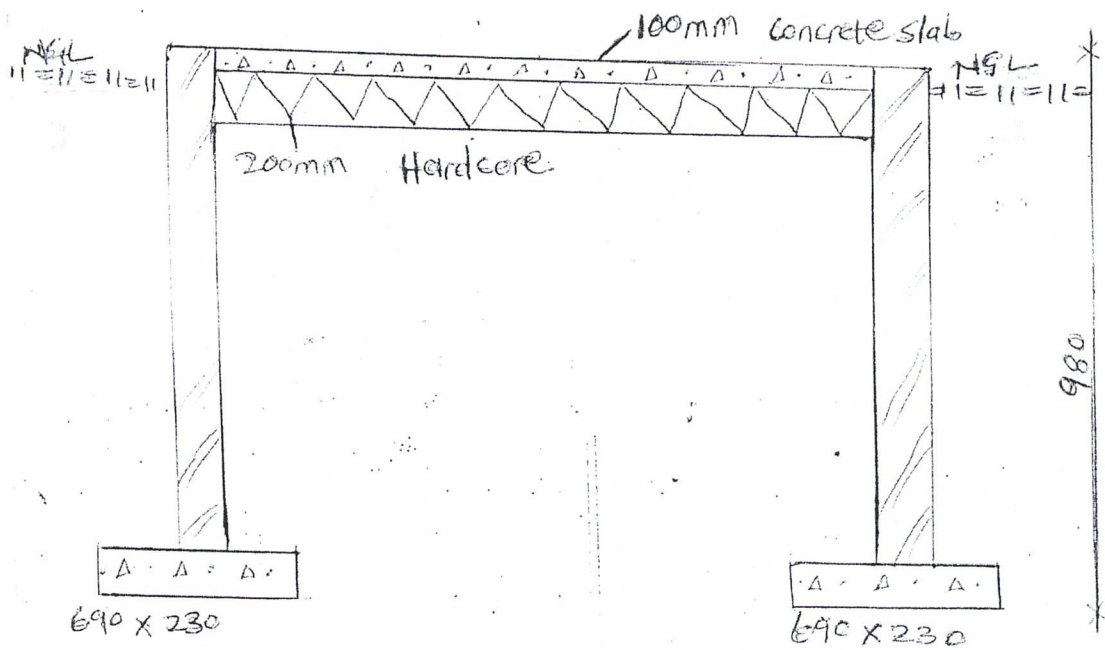


Fig. 2

QUESTION 4

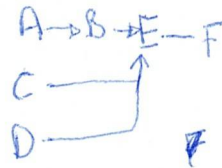
- a) Identify the four managerial functions and briefly explain them. (8 marks)
- b) The following project describes the activities and their associated times necessary to carry out the project. Draw a network plan for the project. (12 marks)

Event	Activity	Duration	Precedence Activity
1	A	5	-
2	B	10	A
3	C	3	-
4	D	1	-
5	E	1	B
6	F	4	E, C, D

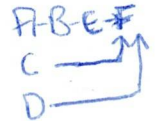
QUESTION 5

- a) Define cost control. (2 marks)
- b) Cite the objectives of cost control (8 marks)
- c) Outline the documents used to facilitate comparison between actual and estimated cost. (10 marks)

A B C D

QUESTION 6

- a) Differentiate recruitment and selection. (4 marks)
- b) Explain the following:
- Motivation of subordinates (2 marks)
 - Background checks (2 marks)
 - Physical examinations (2 marks)
- c) Outline the roles of trade union representatives. (4 marks)
- d) Briefly explain how grievances and disputes are held by different organisation. (6 marks)

QUESTION 7

- a) Identify the duties of a safety officer (16 marks)
- b) Identify the roles of a Project Manager (4 marks)

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