



**ZIMBABWE**

**MINISTRY OF HIGHER AND TERTIARY EDUCATION**

**HIGHER EDUCATION EXAMINATIONS COUNCIL  
(HEXCO)**

**NATIONAL DIPLOMA**

**IN**

**CIVIL ENGINEERING AND URBAN AND REGIONAL PLANNING**

**SUBJECT: Traffic Engineering**

**PAPER NO: 578/S08**

**OCTOBER/NOVEMBER 2012 EXAMINATION**

**REQUIREMENTS**

**Answer booklet**

**INSTRUCTIONS TO CANDIDATE**

1. Answer any five questions.
2. All questions carry equal marks.
3. Begin each question on a fresh page.

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*This paper consists of 3 printed pages.*

QUESTION 1

Write short notes on the following

- a) Origin and Destination Survey (5 marks) ✓
- b) Trip Generation (5 marks) ✓
- c) Trip Distribution (5 marks)
- d) Modal Split (5 marks)

QUESTION 2

Supply information on the stages to be undertaken in carrying out a land use traffic survey for a town, hence attach the benefits. (20 marks)

QUESTION 3

- a) Explore ways by which safety on Zimbabwean roads can be improved. (15 marks) *Asphalt roads require regular maintenance. signage removal of unroadworthy construct dual carriageway ensuring*
- b) Reinforce completely Traffic Engineering procedures that can be used to reduce national fuel consumption. (5 marks) *Boosted steep gradients less junction*

QUESTION 4

- a) Highway planning is important in transport planning for purposes of coordinating activities and reducing the possibility of costly inefficiency thus lowering activity of facilities. Remit the steps in highway planning. (12 marks) *OD survey Traffic - map*
- b) Discuss the factors that are considered in intersection design. (8 marks)

QUESTION 5

- a) Cite environmental effects arising due to construction of a new highway through an existing low density suburb. (5 marks)
- b) Explore basic principles involved in trip distribution. (9 marks) ✓
- c) Differentiate between the three methods which have been used for this purpose. (6 marks)

Quotations  
Name plates techniques  
home interviews  
Roadside interviews

existing infra-  
need for improv  
new infrastructure  
Compatibility of the project

2010

QUESTION 6

- a) With the aid of diagrams describe the types of parking bays you know. (10 marks) ✓
- b) Explain the factors that are considered in deciding on an area to carry out a parking survey. (10 marks)

...../pm

Perpendicular  
Parallel  
Angular

