



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2017/2018
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF
MASTER OF ENVIRONMENTAL HEALTH
HEH 808: ENVIRONMENTAL HEALTH ECONOMICS

DATE: Thursday, 1st February 2018

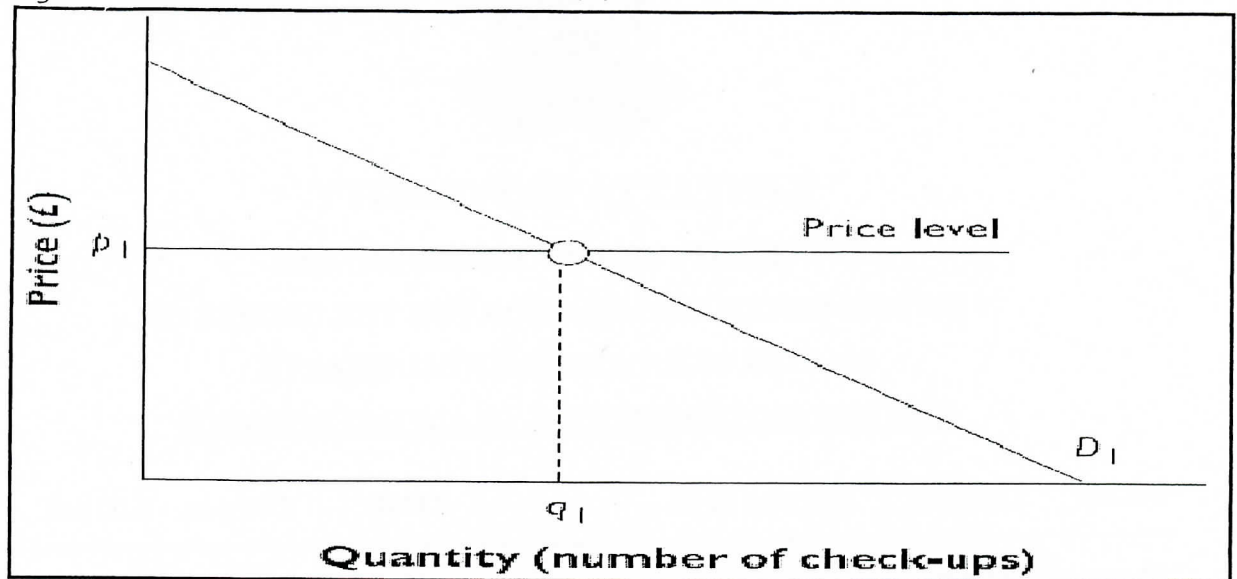
TIME: 2.00 p.m. - 5.00 p.m.

INSTRUCTIONS:

Answer Question one and any other four

1. (a) Define the following terms:
 - (i) Opportunity cost (economic cost) (3 marks)
 - (ii) Consumer surplus (3 marks)
 - (iii) Indifference curve (3 marks)
 - (iv) Income elasticity of demand (3 marks)
 - (v) Technical (operational) efficiency (3 marks)
- (b) (i) Assume that there is a health education campaign in Kiambu County to highlight to the general public the benefits of regular dental check-ups (for which people must pay directly). What do you think would be the effect on the quantity demanded for dental services? Mark this effect on Figure 1, labelling it clearly. (15 marks)
- (ii) Suppose that the dental clinic relocates to an area outside the city such that it is far from the majority of the population, thus deterring people from using the service. Mark this effect on Figure 1, labelling it clearly. (20 marks)

Figure 1. The demand for dental health checks



2. (a) Suppose that you are responsible for procuring drugs in Kenya. Assume that the Ministry of Health has made a major effort to improve drug supplies and almost doubled the drug budget over the past five years.
- Table 1.1 shows the drugs budget in Kenya Shillings (Ksh).
- (i) Calculate the total amount available in your drugs budget in US dollars for the years 2011-2016. (6 marks)
 - (ii) What has happened to the purchasing power of the kwacha in US\$ terms? (6 marks)
- (b) Suppose most of your drugs are imported from a South Africa and paid for in US dollars. Table 1.2 gives price levels in South Africa in the form of a price index for the years 2011-2016.
- (i) Calculate the deflator. (6 marks)
 - (ii) Calculate the real purchasing power of your budget. (6 marks)
 - (iii) What happens to the drug budget once you take into account overall price changes? (6 marks)

Table 1.1 National drugs budget

Year	2011	2012	2013	2014	2015	2016
Drugs budget (KSH)	3,265,793	4,021,997	3,355,807	3,453,768	5,731,221	7,500,000
Exchange rate 1KSH = US\$	1.23	1.12	0.91	0.83	0.67	0.59
Total in current US\$						