FIRST SEM 2017/2018

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME: MASTER OF SCIENCE IN FAMILY NURSE SCIENCE PRACTICE

COURSE CODE: GNS 609

TITLE OF PAPER: HEALTH ECONOMICS

TIME ALLOWED: TWO HOURS

INSTRUCTION   1. ANSWER ALL QUESTIONS
                2. EACH QUESTION CARRIES TWENTY (25) POINTS

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Question 1

True or false (explain) .

1. T/F **(5 points)** One of the reasons that health care is different from other sectors of the economy is that the public sector is not very involved with health care.

2. T/F **(5 points)** We evaluate new technologies in health by comparing the sum of consumer and producer surplus when using the technology and when not using it. If the difference is positive, we adopt the new technology.

3. T/F **(10 points)** The Grossman model of health is a model predicting that people consume more medical care if they have a taste for health care.

4. T/F **(5points)** We think that demand for treatment of lung cancer will be more price elastic than demand for treatment of acne.

Question 2

2.1.   Consider a patient with a heart problem and has 3 options to correct the problem.

Identify the cost effective treatment, given the following information (10 points)

Treatment options: Bypass surgery, angioplasty, endarterectomy
Treatment cost: Bypass surgery E50,000, angioplasty E20,000,
                    endarterectomy E18,000
Life years: Bypass surgery 10, angioplasty 5, endarterectomy 3

2.2.   Mandla fell off his bike and damaged his neck. Without treatment his quality of life (QoL) per year is expected to be 0.75 for the rest of his life (five years). Mandla has the following two treatment choices:

Neck surgery: Costs E4,000 immediately and increases Mndla's QoL to 1.0 for the remaining life (four years)

Physiotherapy: Costs E1000 per year (at the beginning of each year) and increases Mandla's QoL to 0.8 for five years. Assume a discount rate (r) of 5% per annum

Suppose that the value of one year of life (undiscounted) is 50000. Use the cost and benefit analysis to help Mandla to decide whether he should have the surgery (15 points)

Question   3

3.1. The demand of hospital care at Town A is $P = 15 - X$, where p is the price of a hospital service, and x is the quantity of services demanded by patients. Suppose there is only one hospital with the cost function $C = 20 + 5X$.

(a) Assuming that this hospital cares only the profit, compute the optimal price and quantity for hospital A. **(5 points)**

Suppose that this hospital is a nonprofit hospital which has an incentive to provide as much health care as possible.

(b) Write down the zero-profit condition for this hospital **(5 points)**

3.2.   The concept of elasticity is an important one in health economics:

    a. List three demand related elasticities. **(5 points)**
    b. Provide a definition (including the formula) of each. **(5 points)**
    c. Let's say that the price elasticity of demand of cigarettes is 0.4. if a pack of cigarettes currently costs E 20 and the government wants to reduce smoking by 20 %, by how much should it increase the price? **(5 points)**

Question 4

4.1   Government regulates the health care market.

    a. True or false   and explain? **(10 points)**

    b. Name 2 sources of market failure in the health care market and explain rigorously how does government correct it . ? Illustrate your answer with examples **(15 points)**