

UNIVERSITY OF SWAZILAND

Faculty of Health Sciences

(BSC) IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2006

TITLE OF PAPER : ENVIRONMENTAL POLLUTION AND ASSESSMENT

COURSE CODE : EHS 521

DURATION : THREE HOURS

MARKS : 100

INSTRUCTIONS : ANSWER ONLY FIVE QUESTIONS

: EACH QUESTION CARRIES 20 MARKS

: QUESTIONS ONE AND TWO ARE COMPULSARY

: NO QUESTION PAPER SHOULD BE BROUGHT INTO OR OUT OF THE EXAMINATION ROOM

: BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

QUESTION ONE

- (a) How can a stream cleanse itself of oxygen-demanding wastes? (5 marks)
- (b) Under what conditions will this natural cleansing system fail? (5 marks)
- (c) Explain why a number of countries have banned the use of phosphate-containing detergents in areas around water bodies in recent years. (10 marks)

Total 20 marks

QUESTION TWO

List four pros and four cons of storing hazardous wastes in

- (a) deep underground wells (8 marks)
- (b) surface impoundments (8 marks)
- (c) List four ways to reduce inputs of mercury into the environment from anthropogenic sources (4 marks)

Total 20 marks

QUESTION THREE

- (a) List three climatic and three topographic factors that intensify air pollution in a locality (6 marks)
- (b) List three climatic and three topographic factors that help reduce air pollution in a locality (6 marks)
- (c) Explain (use balanced chemical equations where necessary) how sulfur in coal can increase the acidity of rainwater (8 marks)

Total 20 marks

QUESTION FOUR

- (a) Describe how lichens can be used to detect air pollutants (10 marks)
- (b) List five major classes of pollutants found in indoor air and for each mention the threats associated with it (10 marks)

Total 20 marks

QUESTION FIVE

- (a) Describe the major components of a sanitary landfill (10 marks)
- (b) List five pros and 5 cons of dealing with solid and hazardous waste by sanitary landfills (10 marks)

Total 20 marks

QUESTION SIX

- (a) Describe how noise pollution can lead to hearing loss. (10 marks)
- (b) Defend the statement “ smokers have no right to smoke in public places” (10 marks)

Total 20 marks

GOOD LUCK!!!