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JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

University Examinations 2025/2026

SPECIAL/SUPPLIMENTARY EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH/ MASTER OF GLOBAL HEALTH

PPH 3106: ADVANCED OCCUPATIONAL AND ENVIRONMENTAL HEALTH

DATE: JUNE 2026 **TIME: 3 HOURS**

INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS ONLY

QUESTION ONE

(i) Discuss the health effects of dust-wind erosion (10 marks)

(ii) Discuss the mobilization mechanisms for human exposure to geogenic toxicants (15 marks)

QUESTION TWO

Discuss the four "Rs" which are followed in solid waste management (25 marks)

QUESTION THREE

Discuss any four (4) intervention strategies for reducing indoor air pollution (25 marks)

QUESTION FOUR

You consult to a construction company which has a proud history of low accident and lost time injury rates. With a recent boom in construction, the company has grown rapidly from 200 to 300 employees and has recruited a number of casuals. The Health and Safety manager approaches you with a concern about an increase in minor accidents over the last 6 months. From her visit to the sites she identified that the "safety culture" is not strong at two of the sites. She identified that some workers appeared not to be wearing PPE and that the worksite was messy. She outlines to you a number of pressures on the company, and that one of these is the time pressure associated with keeping to schedule. Discuss any six (6) factors from the description above that might contribute to the increase in accidents at the two construction sites.

QUESTION FIVE

Discuss the workers' rights as per the OSHA 2007 guidelines (25 marks)

QUESTION SIX

You are employed by an occupational health consultancy firm to design a plan to manage the health aspects of the construction phase of a pipeline project. In this project a 500-kilometre large bore pipeline will be constructed from medium carbon steel pipeline segments. The route will traverse remote countryside and construction is expected to last 18 months. The construction and support workforce will comprise about 500 ex-patriate contractors and approximately 1000 temporary employees who will be recruited from various towns and villages along the pipeline route. Discuss health issues that will need to be considered in your plan (25 marks).