## FEDERAL UNIVERSITY OF TECHNOLOGY MINNA SCHOOL OF ENVIRONMENTAL TECHNOLOGY DEPARTMENT OF QUANTITY SURVEYING FIRST SEMESTER EXAMMINATION

COURSE CODE: QTS 415

COURSE TITLE: CIVIL ENGINEERING CONSTRUCTION 11

INSTRUCTION: ANSWER ALL QUESTION

TIME: 2hrs.

1a. In a tabular form explain the hazard and the corresponding precaution in the use of conveyor system in mucking out operation in tunnel.

1b. Briefly explain the following

- i. Dilution ventilation
- ii. Respirable duct.
- 2a. Explain the possible effect on health from exposure to noise during drilling operation in tunnel work.
- 2b. While dealing with any question asking for "Control Measure" always remember the hierarchy of control measures. Basically there are five (5) hierarchy of control measure. List and explain briefly the control measures.
- 3. Explain the following in term of Marine work:
  - a. Wharves, b. Jetties, c. Dolphins, and d. Fenders
- 4. With aid of diagram only, differentiate between open cut method of tunneling and pre deck method of method of tunneling.
- 5. With the aid of diagram only, explain the following:
  - a. Turnout with switch rails, b. Tandem turnout or threeway