



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF AGRICULTURAL AND FOOD SCIENCES

**FOURTH YEAR SECOND SEMESTER UNIVERSITY EXAMINATION FOR THE
DEGREE OF BACHELOR OF MASTER OF SCIENCE IN AGRICULTURE
EDUCATION AND EXTENSION**

2016/2017 ACADEMIC YEAR

REGULAR

COURSE CODE: AAB 5112

COURSE TITLE: Research Methods

EXAM VENUE:

STREAM: MSc. Agric & Extension

DATE:

EXAM SESSION:

TIME: 2 HOURS

Instructions:

1. Answer ALL the questions in section A and any TWO in section B.
 2. Candidates are advised not to write on question paper.
 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.
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SECTION A [30 MARKS]

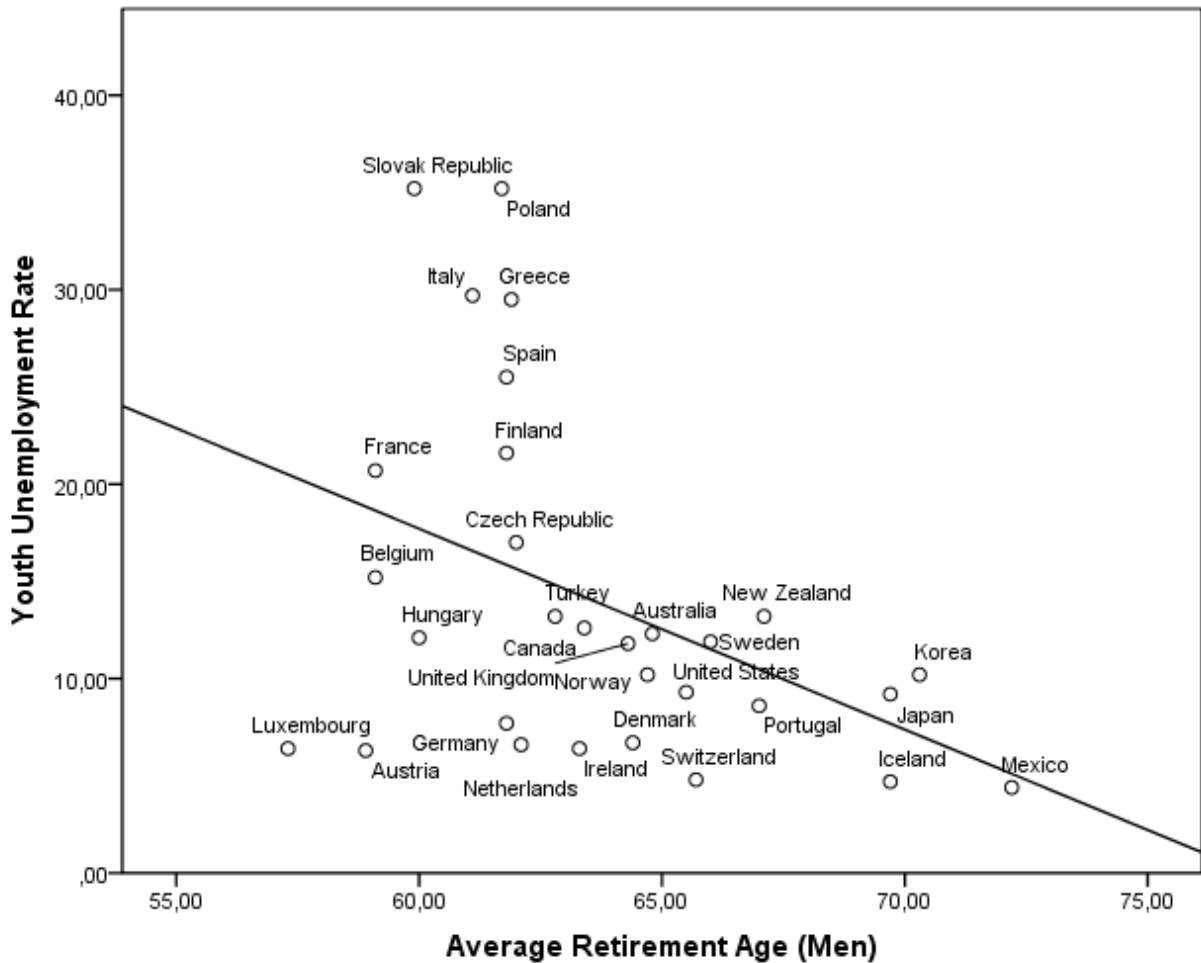
Answer ALL questions from this Section.

Q1. (a) State the merits and demerits of focus groups as a research tool (3 marks)

(b) The log of *Youth Unemployment Rate* is plotted through a Box Plot. How do we interpret this graph? (3 marks)



Looking at the following scatter plot, what is the sign of the correlation between *Average Retirement Age (Men)* and *Youth Unemployment Rate*? (3 marks)



(c) Differentiate between Type 1 and Type 2 error? (1 mark)

Q2. (a) Briefly explain FOUR factors to consider in developing a sampling design. (5marks)

(b) Compare and contrast questionnaires and interviews as instruments of collecting primary data. (5marks)

Q3. (a) Briefly explain five factors that should be taken into consideration by a researcher in selecting an appropriate method for data collection. (5 marks)

(b) Explain the terms randomization, replication and roles of replication as used in data collection process during research implementation (5 marks)

SECTION B [30 MARKS]

Answer any TWO QUESTIONS in this Section.

Q3. Discuss the various probabilistic sampling techniques that a researcher may use to select a sample from the population giving an advantage and disadvantage for each. (15 marks)

4. Q4. A section questionnaire used to collect data on farmers' preferences for extension training methods is reproduced below. Study it carefully and then answer the questions following.

A: From the listed provide, indicate any FIVE extension training methods you consider effective for farmers
First [-----] **Second** [-----] **Third** [-----] **Fourth** [-----] **Fifth** [-----]

Codes for training methods

- | | |
|--|---|
| 1=Field days | 9=Leaflets |
| 2=Farmer field Schools | 11=Farmer champions |
| 3=Agricultural training Centre (ATC) | 12=Championing through churches |
| 4=Training workshops | 13=Through schools to pupils and students |
| 5=One-on-one by extension agents | 14=Radio or TV |
| 6=Farmer-to farmer extension | 15= Agricultural shows |
| 7=On-farm Demonstration | 16=Others (specify)----- |
| | ----- |
| 8=Visits by farmer groups to farmers practicing the technology | |

- a). List the variables defining the data to be collected with this questionnaire and for each variable indicate the type of measurement scales appropriate (**5 marks**)
- b). Develop a template for entering the data from this questionnaire into an electronic database, clearing showing all the variables and indicate whether a string or numeric. (**5 marks**)
- c). Explain the importance of database in research process. (**5marks**)

Q5. Psychologists are interested in helping people overcome their fears, anxieties and phobias. One way about finding out about these is to ask people to fill out a questionnaire. In this way they can write about their fears, anxieties and phobias and how they can overcome them without having to talk about them.

- (a) Outline one advantage and one disadvantage of using a questionnaire in this study. (**5 marks**)
- (b) Give strength and a weakness of using an interview instead of a questionnaire in this study. (**4 marks**)
- (b) Describe what is meant by a semi structured interview. (**2 marks**)
- (c) What is strength of using a semi structured interview over a structured interview? (**2 marks**)
- (d) Why has an unstructured interview not been chosen to carry out this study? (**2 marks**)