

**Fiji National University**  
**COLLEGE OF AGRICULTURE, FISHERIES & FORESTRY**

**AEC 501**

**Farming System Analysis**

**Trimester 1 Examination -2014**

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**TIME ALLOWED: 3 hours plus 10 minutes reading time**

**INSTRUCTIONS**

1. This paper consists of two parts and 7 pages.
  2. In the first part, there are 40 questions and you have to answer **all** questions.
  3. In the second part, there are 5 questions and you have to answer **all** questions. Answer the questions in the answer booklet provided.
  4. Printed or written materials are **NOT** allowed in the examination hall.
  5. Pencil, ruler and calculator are needed.
  6. Make sure to indicate your identification number in all pages you use.
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**Summary of Questions**

<b>Part I</b>	<b>Guidelines</b>	<b>Total Marks</b>
<b>Question no 1</b>	<b>Indicate whether the given statement is true or false</b>	<b>10</b>
<b>Question no 2</b>	<b>Match Column A with Column C and write the answer space provided in column B</b>	<b>15</b>
<b>Question no 3</b>	<b>Select the suitable solution among the answers provided</b>	<b>15</b>
<b>Part II</b>		
<b>Question no 1,2,3.4 and 5</b>	<b>Descriptive type answers expected</b>	<b>60</b>

## Question no 1 to Question 10

Indicate the given statements are true or false,

1. Fallow period is one of the important aspects in commercial farming	(.....)
2. Cooperative agricultural farms operate mostly in nations with rigidly planned economies	(.....)
3. Shifting cultivation is considered as one of the ecologically sound farming practices as it allows soil nutrients to regain	(.....)
4. Social Research is a systematic process of collecting and analyzing information in order to increase our understanding of the society to examine pre-determined conclusions about the society.	(.....)
5. Both Productivity and profitability are important indicators in socio economic research	(.....)
6. Nomadism is the practice of moving from place to place due to nonexistence of a permanent place	(.....)
7. Cropping index is measured by number of crops per year on a given field times 100.	(.....)
8. Ratooning is the roots of a harvested crop produce a subsequent crop	(.....)
9. Transhumance is the situation in which farmers with a permanent place of residence send their herds, tended by herdsmen, for long period of time to distance grazing area.	(.....)
10. Any system has their own boundaries except Farming systems	(.....)

### Question no 11 to Question 25

Match the statements of list A with list C and write the appropriate answer in the column B

Last A	Column B	Laist C
11. Basic Research		A. House hold surveys
12. Applied or Research:		B. Cluster sampling
13. Probability sampling is		C. Systematic sampling
14. In this sampling technique, the sampling frame is ordered according to some criteria and elements are selected at regular intervals through the ordered list		D. A technique in which every unit in the population has a chance of being selected in the sample, and this chance can be accurately determined.
15. This technique is used when you have a population dispersed over a wide geographic region. And there may not be feasible to conduct a simple random sampling of the entire population		E. Aiming to develop a general knowledge for the understanding of human social behavior by means of a combination of empirical enquiry and application of theory.
16. There are individuals who are deemed to have knowledge of particular issues in the population and better to interview in order to collect necessary information.		F. In this sampling technique some units of the population have zero chance of selection or where the probability of selection cannot be accurately determined
17. Group discussion		G. aims to stimulate and elicit in-depth information on the concepts, perceptions and ideas
18. Designed to gather specific information, relevant to the survey objective.		H. Aim is to provide knowledge and information that can be used to influence social policy
19. Convenience sample		I. Subsistence farming system
20. Slash and burn		J. Sequential cropping
21. Plantation		K. Relay cropping
22. Planting crops between rows of an already established crop during the growing period of the first planted crops		L. Which the sample drawn from that part of the population that is close to hand, readily available.
23. A pattern of multi cropping in which one crop follows another crop on the same land without any break.		M. Start by identifying a few respondents that match the criteria for inclusion in the study, and then ask them to recommend others they know who also meet the selection criteria
24. Nonprobability sampling		N. Key informants
25. Snowball sampling.		O. Capital intensive commercial production system.

## Question no 26 to Question no. 40

26. Sampling bias can be defined as nonrandom differences, generally the fault of the researcher, which cause the sample to over-represent individuals or groups within the population and which lead to invalid findings.
- A. Agree
  - B. Disagree
  - C. Not enough information
27. Sampling error is the chance and random variation in variables that occurs when a sample is selected from the population.
- A. Agree
  - B. Disagree
  - C. Not enough information
28. Sustainable Agriculture
- A. Protects soil fertility and enhances natural biological cycles
  - B. Optimizes management & resources
  - C. Reduces the use of nonrenewable resources
  - D. Promotes opportunities in family farming
  - E. The statements A, B and C are correct
  - F. The statements A, B, C and D are correct
29. Commercial Farming Systems – are capital intensive and characterized by the commercial production of agricultural commodities for specific markets.
- A. Which include Tropical & sub-tropical plantations like Tea, Sugarcane...etc.
  - B. Temperate zone grain production such as wheat farming
  - C. Which include large scale Livestock farms
  - D. The statements A, and B are correct
  - E. The statements A, B and C are correct
30. Subsistence farming -
- A. Which also involves gathering/ collection and hunting of food,
  - B. Requires little inputs, market access, monetary exchange, etc.
  - C. Produces only enough food and fiber for family needs.
  - D. The statements A, and B are correct
  - E. The statements A, B and C are correct

31. Select the most suitable definition for Productivity
- A. Productivity is a common measure of how well resources are being used or a measure of the effective use of resources usually expressed as the ratio of output to input
  - B. High productivity is linked to higher total production
  - C. Higher productivity relative to the competition leads to competitive advantage in the marketplace
  - D. High productivity makes it less likely it will be supplanted by foreign dependency
  - E. Commercial farming systems are highly productive
32. Following are the measures of multifactor productivity
- A. Output per Labor
  - B. Output per Machine
  - C. Output per Capital
  - D. Output per Energy
  - E. None of the above
33. Select the correct statement
- A. MR and MC are equated to find the profit-maximizing output level.
  - B. Productivity measures are the only factors to consider farm production
  - C. The production function is a systematic way of showing the relation between different amounts of a resource or input that can be used to produce a product and the corresponding output.
  - D. Statement A only
  - E. Both the statement A and C
  - F. The statements A,B and C are correct
34. Multiple cropping – is referred to as the growing of more than one annual crop in the year, hence
- A. Sequential cropping is a sub class of multiple cropping
  - B. Ratooning is a sub class of multiple cropping
  - C. Intercropping is a sub class of multiple cropping
  - D. Statement A only
  - E. Both the statement A and C
  - F. The statements A,B and C are correct
35. Multiple cropping – is referred to as the growing of more than one annual crop in the year, hence
- A. Catch cropping is a sub class of multiple cropping
  - B. Shifting cultivation is also a sub class of multiple cropping
  - C. Cropping intensity is a measure of multiple cropping intensity multiple cropping

- D. Statement A only
- E. Both the statement A and C
- F. The statements A,B and C are correct

36. Which statement or statements correct

- A. Nomadism is one of the oldest agricultural farming system
- B. Nomadism is one of the oldest subsistence system
- C. When the pastures are sedentary to a certain area, they move to find available areas
- D. Most nomadic groups follow a fixed annual or seasonal pattern
- E. The statements A, B and C are correct
- F. The statements B, C and D are correct

37. Farming system.

- A. is a complex inter-related system in terms of input usage
- B. is an inter-dependent farming enterprises , therefore the farm is viewed in a holistic manner
- C. Refers to an ordered combination of crops grown, livestock produced, husbandry methods and cultural practices followed.
- D. The statements A, and B are correct
- E. The statements A, B and C are correct

38. Social research

- A. Relies on the application of the scientific methods of drawing conclusions.
- B. Is not considered as a scientific research as there are no lab experiments.
- C. Can use for hypothesis testing.
- D. The all statements A, B and C are correct
- E. Only the statements A, and C are correct

39. Several years of arable cropping are followed by several years of grass and legumes utilized for livestock production

- A. Lay farming
- B. Alley cropping
- C. Shifting cultivation
- D. Legume fallow
- E. Seasonal integration

40. Ranching

- A. Is an extensive livestock farming system
- B. Is a similar name for pastoral nomadism
- C. Commercial livestock farming system carried out in large land area
- D. A, B and C are correct
- E. Both A and C are correct

1. Any Farming System found in a country or region is the result of a unique combination of factors, many of which are causative or associative in nature. Name at least 8 factors impacting to decide a particular farming system. 8 Marks
  
2. 2.1 What is intercropping? 4 Marks  
2.2 Name at least 5 Advantages of intercropping practices 4 Marks  
2.3 What is mixed cropping and name advantage and disadvantage of this practice. 4 Marks  
2.4 What is cropping intensity? 2 Marks
  
3. What are the 8 important measures used to assess farming system. 8 Marks
  
4. 5.1 How do you define the productivity? 4 Marks  
5.2 What are the partial measures and multifactor measures of productivity? Give at least 3 examples for each measures. 6 Marks
  
5. Assume that you are hired to prepare a household survey questionnaire to identify the farming system in your region.
  - 5.1 What are the main components you are going to include in the socio economic survey questionnaire? (Name 5 main areas) 4 Marks
  - 5.2 Suppose, you are advised to apply a stratified sampling technique when conducting the survey. What is stratified sampling technique? 4 Marks  
How do you apply the stratified sampling technique method? 4 Marks
  - 5.4 What the steps you need to take, while sampling? 4 Marks
  - 5.5 How do you randomly select (Randomized) the units (individuals) of the sample 2 Marks
  - 5.6 Name 2 advantages and 2 disadvantages of stratified sampling technique method 2 Marks