



UNIVERSITY OF RUHUNA
FACULTY OF AGRICULTURE



Third Examination in BSc Agribusiness Management (Part II)

March 2022

AS 3201 Ruminant Management (Compulsory)

Structured Essay-I

INSTRUCTIONS

Answer **all** questions.

Only non-programmable calculators are permitted.

Mobile phones are **NOT** permitted.

TIME: 1 (one) Hour

INDEX NUMBER

1. The following table indicates the statistics related to the composition of cattle population in Sri Lanka.

Cattle		2021		
		Local (P)	Improved (Q)	Total
Milk Cows	Milking at Present (R)	246,500	104,910	351,410
	Milking not at Present (S)	219,480	55,160	274,640
Other Cows (T)		30,960	7,860	38,820
Bulls (U)		74,060	18,170	92,230
Calves (V)		278,170	95,810	373,980
Total Cattle		849,170	281,910	1,131,080

- i. a) What is the total number of cows available in the country in 2021? (05 marks)
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- b) What is the number of cows in milk (R) as a percentage of the total number of cows? (05 marks)
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- c) What would be the ideal number of cows in milk as a percentage of the total number of cows? (05 marks)
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d) Mention the reasons for the presence of higher number of cows not in milk (S) at present (10 marks)

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e) Describe your suggestions to increase the percentage of cows in milk (R) in the country (15 marks)

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f) Mention four characteristics of local cows indicated as P (05 marks)

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g) Name the categories of cows indicated as improved cows (Q) (05 marks)

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ii. System of management mainly influence the level of production among cows

a) Name the different cattle management systems exist in Sri Lanka (05 marks)

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b) What is the management system that practiced by the majority of the local dairy farmers? (05 marks)

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c) Describe the main features of the management system you mentioned in (c) above. (10 marks)

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d) Describe how far you would recommend maintaining few more farms like Ridiyagama farm to increase the milk production in the country. (10 marks)

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iii. a). Name **three local institutes** which contribute for the dairy industry in Sri Lanka. (05 marks)

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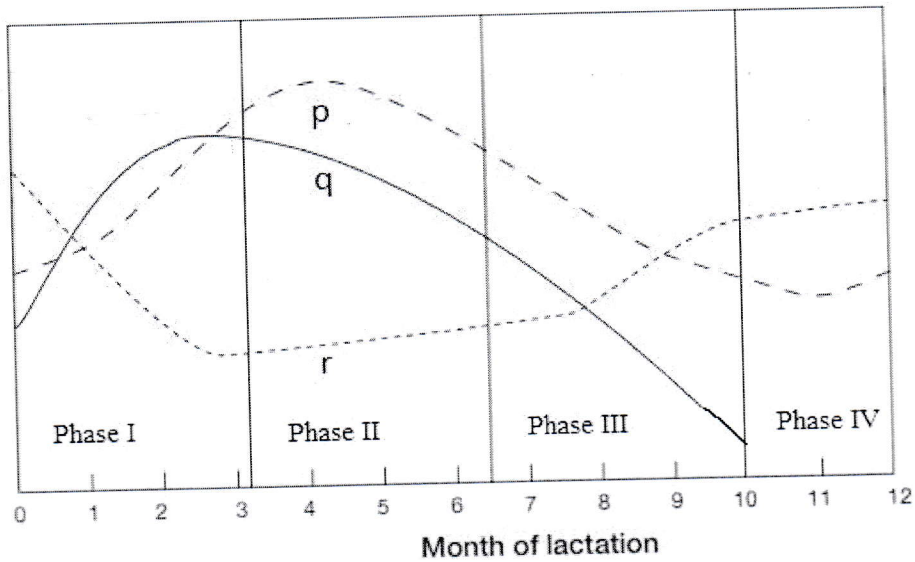
b). Mention the services provided by each institute you named in (a) above. (10 marks)

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c). List five advantages of cattle farming (05 marks)

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2. i. Use the following figure which indicates the changes in milk production, body weight and the dry matter intake of a cow during the lactation, for answer the questions



a). Label the curves denoted as p, q and r (06 marks)

p -
 q -
 r -

b). Name the phases indicated as I to IV (10 marks)

I -
 II -
 III -
 IV -

c). Curves p, q and r has their own shapes during the lactation. Describe the reasons for these p, q and r curves to take such specific shapes within the 12 months period indicated. (30 marks)

i. Curve p

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ii. Curve q

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iii. Curve r

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d). In order to maintain a good milk production and a better breeding efficiency, describe how you would manage the cow during the phase I (10 marks)

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e). Describe how the activities at phase IV would affect the cow's performance in next lactation and the quality of the calf in the next parity. (14 marks)

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f). State **two differences** between river buffaloes and swamp buffaloes (05 marks)

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g). Name **four buffalo breeds** available in Sri Lanka (05 marks)

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h). Mention the main differences between cow milk and buffalo milk. (05 marks)

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i). Why the buffaloes are poor in thermo-regulation (05 marks)

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j). What measures you would adopt to minimize the heat stress on buffaloes (10 marks)

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