



# SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

## Higher National Diploma in Technology (Agriculture)

First Year, Second Semester Examination - 2016

AG 1205 – Ruminant Animal Production - Cattle

Instructions for Candidates:

All questions do not carry equal marks.

Answer **part I** and **part II** on the paper itself which will be collected in **one (01) hour**.

No. of questions : 07

No. of pages : 05

Time: Three (03) hours

### PART – I

#### Question 01: (Total Marks 16)

Select the correct answer and under line it.

- (i) What is the district having the highest population of cattle in Sri Lanka?
- Badulla
  - Anuradhapura
  - Kurunegala
  - Ampara
- (ii) What are the mixes synthesizing which Australian Milking Zebu (AMZ) has been bred?
- Red sindhi, Gir and Jersey
  - Sahiwal, Red sindhi and Holstein
  - Sahiwal, Red sindhi and Jersey
  - Sahiwal, Jersey and Holstein
- (iii) What is the main function of saliva?
- Act as an acidic medium
  - Act as a base medium
  - Act as a primary medium for biochemical reaction
  - Act as a lubricant
- (iv) What is the movement that helps cattle to pass the rumen cud into mouth?
- Peristaltic movements
  - Rumen wall movement
  - Reverse peristaltic movements
  - Gut movement
- (v) What is the method used to determine of Crude Fat content in a feed?
- Fat meter
  - Soxhlet Extractor
  - Kjeldhal method
  - Caloric method

- (vi) What is the scientific name of the domestic Asian water buffalo?
- Babalus taurus*
  - Bubalus bubalis*
  - Babalus indicus*
  - Bos babalus*
- (vii) What is the permanent teeth formula of cattle?
- I** - 0/4 **C** - 0/0 **P** - 3/3 **M** - 3/3
  - I** - 4/4 **C** - 2/2 **P** - 3/3 **M** - 2/2
  - I** - 0/4 **C** - 1/1 **P** - 0/3 **M** - 3/3
  - I** - 4/4 **C** - 0/0 **P** - 3/3 **M** - 0/3
- (viii) What is the specific feature of the **Nilli-ravi** buffalo breed?
- white marking on forehead, face, muzzle, legs and switch
  - short head
  - Eyes: whitish, brown and red margins of iris
  - Skin: rough and hard
- (ix) What are the factors considered to price the cow milk in Sri Lanka?
- Fat and protein
  - Fat and Solid Non Fat
  - Lactose and Fat
  - Lactose and Solid Non Fat
- (x) What is the approximate value of milk that can be held by Teat Cistern of a cow?
- 30 - 40ml
  - 10 - 20 ml
  - 300-400 ml
  - 100-200 ml
- (xi) Which of the following is NOT a semen collection method?
- Artificial Vagina method
  - Electro ejaculation method
  - Mechanical massage method
  - Vaginal speculum method
- (xii) What is the parameter which will be checked during semen evaluation under microscopic test?
- Osmotic pressure
  - Electric conductivity
  - Viscosity
  - Motility of sperm cells
- (xiii) What is the chromosome number of river type buffaloes?
- 42
  - 44
  - 48
  - 50

- (xiv) Which of the following is a platform test done at milk collection centers?
- a) Alcohol test
  - b) Lactose test
  - c) Fat test
  - d) Protein test
- (xv) Which of the following is **NOT** a semen extender?
- a) Egg yolk
  - b) Boiled milk
  - c) Whey
  - d) Ascorbic acid
- (xvi) What is the name of the raised spots of uterus wall which connects with the fetal membrane of cattle?
- a) Caruncles
  - b) Cotyledons
  - c) Mucosa
  - d) Peritoneum

**PART II**

**Question 02. (Total Marks 12)**

- (i) Write down 4 features of European cattle breeds. (4 marks)
- .....
- .....
- .....
- .....
- (ii) Write down the names of three draught type cattle breeds. (3 marks)
- .....
- .....
- .....
- (iii) Write down two objectives of heifer management? (2 marks)
- .....
- .....
- .....
- (iv) What is steaming up or flushing up of heifers? (3 marks)
- .....
- .....
- .....
- .....

**Question 03. (Total marks 12)**

(i) What are the main six (06) aspects of clean milk production? (6 marks)

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(ii) Write down three (03) factors that influence the composition and yield of milk? (3 marks)

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(iii) What are the three (03) main objectives of dry cow management? (3 marks)

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### PART III

#### **Question 04. (Total marks 15)**

- (i) State the parts of ruminant digestive system? **(3 marks)**
- (ii) Name four (04) types of organic matters in feeds that are found by proximate analysis. **(4 marks)**
- (iii) Discuss the development of rumen in cattle. **(8 marks)**

#### **Question 05. (Total marks 15)**

- (i) Name five (05) stimulation methods of milking from a cow. **(5 marks)**
- (ii) Explain the **testis of bull reproductive system.** **(10 marks)**

#### **Question 06. (Total marks 15)**

- (i) Name four (04) major parts of the artificial vagina. **(5 marks)**
- (ii) Explain the anatomy of mammary gland of a cow (Internal arrangement of udder). **(10marks)**

#### **Question 07. (Total marks 15)**

Write short notes on the following:

- (i) Benefits of proper management of calves. **(5 marks)**
- (ii) Heat signs of cattle. **(5 marks)**
- (iii) Potential of buffaloes for working and milk production. **(5 marks)**