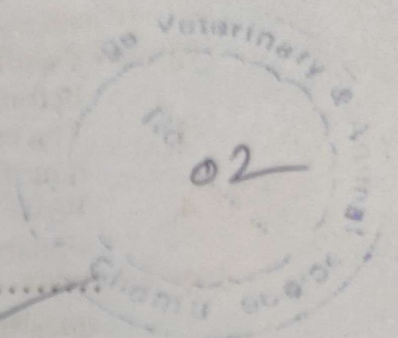


B. V. Sc. & A.H. (Second Professional) Examination – 2022

Animal Nutrition Paper –I

(MSVE 2016)



To be filled by the candidate:

Candidate's Roll Number:

In figure

In words

Candidate's Enrolment Number:

Day and date of examination:

Please see for general instructions overleaf.

Signatures of invigilators verifying the details filled by the candidate

Signature of invigilator 1: 2:

Candidate should not write anything below this line

Marks to be filled by the examiner:

Section A	
Q. No.	Marks
1.	
2.	
3.	
4.	
5.	
Total	

Total Marks obtained:

In figures: In words:

Signature of examiner:

B. V. Sc. & A.H. (Second Professional) Examination – 2022
Animal Nutrition Paper -I

Time: Three Hours

Maximum Marks: 100

Weightage: 20

Unit-1 (Principles of Animal Nutrition and Feed Technology)

Unit-2 (Applied Ruminant Nutrition-I)

Instructions:

- 1) Attempt all questions
- 2) Answer of all questions is to be written in the space provided along with the question in question-booklet.
- 3) Overwriting is not allowed in the objective type question.

Q.1 Fill in the blanks. (20x0.5 = 10)

- 1.1 Parakeratosis in pigs develop due to deficiency of element.
- 1.2 Mimosine an anti-nutritional factor present in.....
- 1.3is known as father of animal nutrition.
- 1.4 Normocytic, normochromic anaemia develops due to deficiency of
- 1.5 Precursor of Vitamin A is.....
- 1.6 White muscle disease / nutritional muscular dystrophy is due to deficiency of.....
- 1.7 ICAR stands for.....
- 1.8 Sulphur containing hormones are.....and.....
- 1.9 MFN stands for
- 1.10 The DCP value of wheat straw is%
- 1.11is required for microbial synthesis of Vitamin B₁₂ (Cyanocobalamine) in rumen.
- 1.12 Newly grown sorghum/jowar may causepoisoning in ruminants.
- 1.13 Concentrates contain CF less than.....%

- 1.14 Ether extract (Fat) content of feed is estimated by.....method.
- 1.15 interferes in digestion of cellulose and hemi-cellulose.
- 1.16 UMMB stands for.....
- 1.17 Amount of feed given to an animal for 24 hours is called as
- 1.18 enzyme is required for synthesis of vitamin C from glucose.
- 1.19 Deficiency of.....causes post-parturient haemoglobinuria in high yielding buffaloes/cows.
- 1.20 Cotton seed contains.....anti-nutritional factor in pigment glands.

Q.2 Choose the most suitable answer and write the number of the correct answer 1 or 2 or 3 or 4 in the space given against each sub question: (20x0.5 = 10)

- 2.1 Which of the following is included in ration as protein source ()
1. Ground nut cake
 2. Khejri leaves
 3. Maize
 4. Molasses
- 2.2 Thiamine is asoluble vitamin. ()
1. Water.
 2. Fat.
 3. Both.
 4. None of the above.
- 2.3 In very good silage, the pH ranges between ()
1. 4.5-4.8
 2. 3.5-4.2
 3. 4.2-4.5
 4. 4.8-5.4
- 2.4 Normal pH of rumen is.....: ()
1. 3.5-4.5.
 2. 7.5-8.5.
 3. 6.4-6.9.
 4. 8.5-9.5.
- 2.5 Dry matter intake per 100 kg body weight for buffalo is ()
1. 3kg.
 2. 1kg.
 3. 4kg.
 4. 2kg.

- 2.6 is also known as animal starch.: ()
1. Glucose.
 2. Glycogen
 3. Fructose.
 4. Cellulose.
- 2.7 Urea may be safely incorporated.....% in concentrate of ration in ruminants: ()
1. 1%.
 2. 3%.
 3. 2%.
 4. 4%.
- 2.8 In ruminants conventional digestion trail, collection period should be of: ()
1. 3 days.
 2. 7 days.
 3. 10 days.
 4. 12 days.
- 2.9 The colostrum should be fed to new born calf at the rate of% of body weight.: ()
1. 5%.
 2. 10%.
 3. 15%.
 4. 20%.
- 2.10 Curled toe paralysis in poultry occur due to deficiency of vitamin..... ()
1. Biotin.
 2. Thiamine.
 3. Riboflavin.
 4. Niacin.
- 2.11 Which of the following is best crop for Hay making ()
1. Lucerne
 2. Maize
 3. Sorghum
 4. Bajra
- 2.12 Normal N:S ratio should be.....: ()
1. 10:1.
 2. 1:10.
 3. 5:10.
 4. 10:5.
- 2.13 Black tongue condition is due to deficiency of.....: ()
1. Thiamine.
 2. Riboflavin.
 3. Niacin.
 4. Biotin.

- 2.14 Toxicity ofmineral causes Degnala disease. : ()
1. Fe
 2. Co
 3. Cu
 4. Se
- 2.15 Milk fever occurs in cattle due to deficiency of.....: ()
1. Calcium.
 2. Phosphorus.
 3. Sulphur.
 4. Ferrous.
- 2.16 In India feeding standard is based on : ()
1. DCP-TDN system.
 2. CF-CP system.
 3. ME-NE system.
 4. Starch Equivalent system.
- 2.17 Which fungi can be used as biological treatment of poor quality roughage: ()
1. Pleurotus.
 2. Coprinus.
 3. Gandoderma.
 4. All the above.
- 2.18 Cereal grains are deficient in: ()
1. Lysine.
 2. Arginine.
 3. Valine.
 4. Isoleucine.
- 2.19 Ratio of Roughage in feeding of ruminant should be: ()
1. $2/3^{\text{rd}}$ of Total DM.
 2. $1/3^{\text{rd}}$ of Total DM.
 3. Half of Total DM
 4. None of the above.
- 2.20 In calculation of Total Digestible Nutrients the DEE is multiplied by factor. ()
1. 3.50
 2. 3.25
 3. 2.50
 4. 2.25

Q.3 Attempt any ten out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (10x2.0= 20)

3.1 Gross energy

3.2 Top feeds

3.3 Protein rich concentrate

3.4 S.E.

3.5 Non Conventional feeds

3.6 Feed supplements

3.7 Anti-Nutritional Factors

3.8 Feed conversion ratio

3.9 Digestibility

3.10 Concentrate

3.11 Micro-mineral

3.12 Essential Fatty acids

Q.4 Attempt any six out of the following eight questions. Answer of each question should be in 8 to 10 lines. (6 x 6.0 = 36)

4.1 Total digestible nutrient (TDN)

Please write your Roll Number above this line

4.2 Balanced ration and its characteristics.

4.3 Vitamin E deficiency

Please write your Roll Number above this line

4.4 Biochemical changes during silage preparation

4.5 Losses during hay making

Please write your Roll Number above this line

4.6 NPN substance

4.7 Ideal specification of an indicator.

Please write your Roll Number above this line

4.8 Biological methods for improving the nutritive value of inferior quality roughages.

Q.5 Answer the following question in 1-2 pages (attempt any two).

(2x12.0 = 24)

- 5.1 What do you understand by feeding standards? Discuss in details with merits and demerits of them and also discuss in details about feeding standards used in India. (2+6+4)
- 5.2 Discuss in details about functions, requirements and deficiency diseases of macro minerals in livestock. (4+4+4)
- 5.3 What do you mean by harmful natural constituents/anti-nutritional factors, write there classification and discuss about Cyanogens (Cyanide) poisoning in ruminants. (2+4+6)