MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2011-12**
Course No.	**: ASDS 242**	**Title**	**: Livestock Breeding and Nutrition**		
Credits	**: 2 (1+1)**				
Day & Date	**: Monday, 30.04.2012**	**Time**	**: 14.00 to 16.00**	**Total Marks**	**: 40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Enlist the different systems of breeding. Write the advantages and disadvantages of crossbreeding.

Q.2 Describe the process of carbohydrate digestion in ruminant.

Q.3 State the Hardy-Weinberg law and give its application.

Q.4 What is feed additives? Enlist commonly used feed additives and comment on any one.

Q.5 Explain the term concentrate and classify it by giving suitable examples.

Q.6 Differentiate between (Any Two)

1) Composition of plant and animal body
2) Mitosis and meiosis
3) Qualitative and Quantitative traits

Q.7 Which are the different basis of selection and describe any one of them?

Q.8 What is complete feed block? Explain in brief its advantages.

Q.9 Define protein and write the general functions of protein in animal body.

Q.10 Write short notes on (Any Two)

1) Gene frequency
2) Structural chromosomal abnormalities
3) Functions of gene in animal genetics

SECTION "B"

Q.11 Define the following terms.

1) Gene mutation 2) Feeding standard 3) Animal breeding 4) TDN

Q.12 Do as directed.

1) Give one example of NPN compound.
2) Who is the founder of Animal breeding?
3) Mention the normal chromosome number of *Bos indicus.*
4) Calcium deficiency causes milk fever (State True or False).

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2010-11**
Course No.	**: ASDS 242**	**Title**	**: Livestock Breeding and Nutrition**		
Credits	**: 2 (1+1)**				
Day & Date	**: Tuesday, 26.04.2011**	**Time**	**: 14.00 to 16.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Describe in short the functions of various organs of cattle digestive system.

Q.2 Give the classification of feed-stuffs with suitable examples and write down short note on unconventional feed stuffs.

Q.3 Give the classification of systems of breeding and differentiate major points between close breeding and line breeding.

Q.4 Enlist the basis and methods of selection.

Q.5 What is meant by feeding standards? Enlist advantages of feeding standards.

Q.6 Define Nutrient. Enlist various six classes of major feed nutrients and write down importance of carbohydrates.

Q.7 Differentiate between Quantitative and Qualitative traits.

Q.8 Describe in short the Tanden method.

Q.9 Differentiate between Roughages and concentrates.

Q.10 Name various phases of Mitosis and describe anaphase.

SECTION "B"

Q.11 Define the term:

1) Chromosomes 2) Gene 3) Half sibs 4) Ration

Q.12 Match the pairs:

"A"	"B"
1) Calcium	a) Mating of unrelated animals
2) Vitamin K	b) Delayed blood clotting
3) Vitamin A	c) Mating of different breeds
4) Cross breeding	d) Mating of closely related breeds
	e) Night blindness
	f) Rickets

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	:	**IV(New)**	**Term**	:	**II**	**Academic Year** :	**2009-10**
Course No.	:	**ASDS 242**	**Title**	:	**Livestock Breeding and Nutrition**		
Credits	:	2(1+1)					
Day & Date	:	Wednesday, 28.4.2010	**Time**	:	14.00 to 16.00	**Total Marks** :	**40**

Note : 1. Solve **ANY FIVE** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Write in brief the concept of livestock breeding in India.

Q.2 Draw a neat diagram of animal cell showing internal features and functions of cellular organelles.

Q.3 Explain the Mendel's Law of phenotypic inheritances.

Q.4 Give the classification of feeds and fodder with suitable examples.

Q.5 Narrate the functions of carbohydrates and fats in animal body.

Q.6 Enlist the parts of digestive system of large ruminant and give their functions in brief.

Q.7 Write short notes on (Any two):
1) Feed supplements and feed additives. 2) Qualitative and quantitative traits.
2) Concept of preparation of complete feed block.

SECTION "B"

Q.8 Define the followings:
1) Roughages 2) Heritability 3) Gene
4) Metabolizable Energy 5) Balance Ration

Q.9 Do as directed:
Give the chromosome numbers (2N) of -
1) Cattle 2) Goat 3) Sheep 4) Waterbuffaloes 5) Swine

Q.10 Answer the followings:
1) Mention three important cereal crops as best energy sources and three legume crops as a rich protein source for livestock.
2) Which plant was used by Mendel for his experiments to state the law of segregation?
3) Which mineral deficiency causes the milk fever?
4) Write names of two text books or reference books with their author, used for this course.
5) What is energy value of 1.0 gm of lipid?

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B. Sc. (Agri.)

Semester	: IV (New)	**Academic Year**	: 2008-09
Course No.	: **ASDS 242**	**Title**	: **Livestock Breeding and Nutrition**
Credits	: 2 (1+1)		
Day & Date	: Monday, 11.5.2009	**Time**	: **14.00 to 16.00** **Total Marks: 40**

Note:
1. Solve ANY FIVE questions from **SECTION "A"**.
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Draw a neat diagram of digestive system of ruminants, label it and explain about breakdown of protein in it.

Q.2 Define chromosomal abnormality and explain its different types found in animals.

Q.3 Explain in brief the functions of carbohydrates and fats.

Q.4 Compare (Any Two).

1) Plant and animal body composition.

2) Mitosis and meiosis

3) Feed supplements and feed additives

Q.5 Write in brief (Any Two).

1) Quantitative and qualitative traits

2) Pedigree method of selection

3) Method of measuring feed value

Q.6 What do you mean by gene mutation. Explain its types and state the significance of mutation.

Q.7 Explain in brief different systems of mating with suitable example for each.

SECTION "B"

Q.8 Define.

1) Atavism 2) Aneuploidy 3) Gametogenesis
4) Roughages 5) Heritability

Q.9 Answer in one sentence.

1) Which base is present in RNA instead of thymine in DNA?
2) Which concentrates will be used as energy source? ⇒ Roots & Tubers, Cereal grain
3) Which plant was used by Mendel for his experiments? ⇒ Pea Plant
4) Which are the essential fatty acids? ⇒ Lipid
5) Which mineral's deficiency causes Osteomalcia and Osteoporosis in adult? ⇒ Phosphorus.

Protein source concentrate: Blood meal, meat meal oilseed cake.

(P.T.O.)

Q Fill in the blanks. Mitochondria

1) In cell_____ are responsible for generating energy for functions of cell.
2) Excess carbohydrates are stored in the form of_____ in animal body.
3) The traits affected by many genes are called as Polygenes (Quantitative trait)
4) Frequency of desirable/undesirable gene is increased in_____ system of mating.
5) Structural protein, which is present in nail, hair and hoof, is known as_____.

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Quantitative trait

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2012-13**
Course No.	: ASDS 242	**Title**	**: Livestock Breeding and Nutrition**		
Credits	: 2 (1+1)				
Day & Date	: Thursday, 25.04.2013	**Time**	: 14.00 to 16.00	**Total Marks**	**: 40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define feeding standard. State advantages of feeding standard.

Q.2 Differentiate between quantitative and qualitative traits.

Q.3 What is meiosis? Describe in short the stages of meiosis.

Q.4 Give classification of feed stuffs with suitable example.

Q.5 State the systems of breeding. Write in short grading up in development of nondescript buffalo to Pandharpuri buffalo breed.

Q.6 What is nutrient? Enlist different nutrient and explain function of water in animal body.

Q.7 Describe the digestion and absorption of carbohydrates in ruminants.

Q.8 Enlist the methods of selection. Explain independent culling level.

Q.9 Enlist different parts of alimentary canal of large ruminant and explain in short rumen.

Q.10 Write short notes on:
1) Urea feeding (NPN) through dry roughages in live stock
2) Hardy and Weinberg Law

SECTION "B"

Q.11 Fill in the blanks.
1) In animal cell _____ organelles removes foreign material from cell.
2) Deficiency of vitamin _____ causes night blindness.
3) The phenomenon causing sudden discrete and heritable change in the genotype of organism is called _____.
4) In animal body at embryonic stage _____ % of water is present.

Q.12 Match the pairs.

"A"		"B"	
1)	Cow	a)	Rickets
2)	Vitamin K	b)	Bomb calorimeter
3)	Gross energy	c)	60 (2n)
4)	Calcium	d)	Delayed blood clotting

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Agri.)

Semester	: **IV (New)**	**Term**	: **II**	**Academic Year**	: **2012-13**
Course No.	: ASDS 242	**Title**	: **Livestock Breeding and Nutrition**		
Credits	: 2 (1+1)				
Day & Date	: Thursday, 25.04.2013	**Time**	: 14.00 to 16.00	**Total Marks**	: **40**

Note :
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2)	Vitamin K	b)	Bomb calorimeter
3)	Gross energy	c)	60 (2n)
4)	Calcium	d)	Delayed blood clotting

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2013-14**
Course No.	**: ASDS 242**	**Title**	**: Livestock Breeding and Nutrition**		
Credits	**: 2 (1+1)**				
Day & Date	**: Monday, 05.05.2014**	**Time**	**: 14.00 to 16.00**	**Total Marks**	**: 40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Enlist methods of animal breeding and explain grading up in detail.

Q.2 Write in detail about care and management of breeding bull.

Q.3 What do you mean by mutation? Enlist characteristics of mutation.

Q.4 Draw a neat diagram of male reproductive system and give the functions of scrotum.

Q.5 Classify feed stuff and explain in brief the role of feed additives and supplements in animal nutrition.

Q.6 Enlist digestive organs of cow and write their functions in detail.

Q.7 Explain in detail the complete feed block for ruminant.

Q.8 What is silage? Give advantages and disadvantages of silage.

Q.9 Explain the structure of animal cell with suitable diagram.

Q.10 Describe the methods of feed processing and enlist its objectives.

SECTION "B"

Q.11 Define the following terms.

1) Species
2) Nutrition
3) Livestock
4) Animal Husbandry

Q.12 Fill in the blanks.

1) Law of inheritance was postulated by_____.
2) _____ part of stomach is fully developed in a suckling calf.
3) The period of estrus cycle of ewe is _____.
4) The deposition of semen in the female genetalie rather than natural service is called as _____.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2014-15**
Course No.	**: ASDS 242**	**Title**	**: Livestock Breeding and Nutrition**		
Credits	**: 2 (1+1)**				
Day & Date	**: Tuesday, 12.05.2015**	**Time**	**: 14.00 to 16.00**	**Total Marks**	**: 40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Enlist various phases followed during cell division under Mitosis and Meiosis. Describe in short various events followed at Mitosis.

Q.2 What is mean by chromosomal aberration? Explain in short and give the classification of chromosomal aberrations.

Q.3 What is Hardy-Weinberg law? Enlist four steps of proof of Hardy-Weinberg law with constancy of gene frequency and give the properties of Hardy-Weinberg law.

Q.4 Enlist the basis and methods of selection and write down advantages and limitations of Pedigree selection.

Q.5 Give the classification of feed stuffs with suitable examples and write down short note on unconventional feed stuffs.

Q.6 Define Nutrient. Enlist various six major feed nutrients and write down functions of carbohydrates in animal body.

Q.7 What is mean by feeding standards? Enlist advantages of feeding standards.

Q.8 Describe in short functions of various organs of cattle digestive system.

Q.9 Write short notes on (Any two).
1) Spermatogenesis
2) Urea Molasses Mineral Blocks (UMMB) Licks
3) Advantages of Silage making

Q.10 Differentiate between (Any two).
1) Qualitative and Quantitative trait
2) Roughages and Concentrates
3) Plant cell and Animal cell

SECTION "B"

Q.11 Define the following terms.
1) Half sib
2) Balance Ration
3) Repeatability
4) Selection

Q.12 Select proper answer.
1) Sudden change in the structure of gene is known as (migration/mutation/selection).
2) (Silage / Molasses / Brains) is the byproduct obtained from sugar industry.
3) (Mendal/Mullar/Khurana) is known as father of genetics.
4) Milk fever is cause due to deficiency of (calcium/copper/cobalt).

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Agri.)

Semester	**: IV (New)**	**Term**	**: II**	**Academic Year**	**: 2014-15**
Course No.	**: ASDS 242**	**Title**	**: Livestock Breeding and Nutrition**		
Credits	**: 2 (1+1)**				
Day & Date	**: Tuesday, 12.05.2015**	**Time**	**: 14.00 to 16.00**	**Total Marks**	**: 40**

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