

**Dr. PANJABRAO DESHMUKH KRISHI VIDYAPEETH, AKOLA**  
**SEMESTER END THEORY EXAMINATION**  
**B.Sc. (Hons.) Agriculture**

BSc. (Hons.) Agriculture								
Semester	:	I (NEW)	Term	:	I	Academic Year	:	2021-22
Course No.	:	AHDS-111	Title	:	Livestock Production and Management			
Credits	:	(1+1)						
Day & Date	:	22.11.2021	Time	:	1.00 Hr	Total Marks	:	40

**NOTE :** 1) Solve ANY FOUR questions from SECTION-A  
2) Solve ANY SIX questions from SECTION –B  
3) All questions from SECTION-C are compulsory  
4) Send the PDF file of answer sheet to the email ID of respective course teacher

**MODEL ANSWER KEY**

**SECTION –A Write the answers in 4-5 sentences only. Each question carries 04 marks (16 marks)**

<b>Q.1</b>	Define breed. Give classification of Indian cattle breeds on the basis of utility with suitable examples (4)
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**Answer : Breed:** A group of animal related by descent and similar in most of the characteristics like general appearance, configuration, size, shape etc. is said to be breed. (1)

**Classification of Indigenous cattle's on the basis of utility/ purpose is as follows.(3)**

<b>A. Milch breeds</b> Eg. Sahiwal, Red Sindhi, Gir	<b>B. Dual breeds</b> Eg. Haryana, Ongole, Deoni, Kankrej, Mewathi, Tharparkar	<b>C. Drought breeds</b> Amritmahal, Krishna valley, Kangayam, Nagori, Malvii, Red Kandhar, Siri Gaolao, Hallikar, Dangi, Khillar
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<b>Q.2.</b>	<b>Describe in short origin, distinguishable phenotypic characteristics, utility and milk production of Murrah breed. (4)</b>
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**Answer:**

**Murrah buffalo** - / Delhi buffalo

**Origin :** The home of this breed is mainly Punjab, Delhi and Uttar Pradesh.

**Distinguishing characters**

Deep massive frame with short, broad back and a comparatively light neck and head.

Horns : Short, characteristics tightly curled horns

Udder : Well developed, Tail – Long with white switch reaching to fetlock

Skin : Soft, smooth with scanty hair, black colour

**Production :** Approx. 1400 lit milk production in a lactation of 9 to 10 months

**Fat contain in milk:** Approx. 7% fat

<b>Q.3</b>	<b>Explain in short care and management practices of newly born calves. (4)</b>
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**Answer: Following points are expected to cover in answer.**

**Care and management of newly born calves:**

- 1) Cleaning : Cleaning of mouth and nostrils for proper respiration and body of calves.
- 2) Naval cord treatment : Cutting of naval cord by sterilized seizer or blade at 2 inches distance from body with proper application of Tincture Iodine and boric acid /alum powder.
- 3) Feeding of colostrums @ 8 to 10 % of the live body weight
- 4) Application of proper rearing system i.e. Suckling or Weaning system.
- 5) Record the details on pedigree, eg. dam, sire, weighing, sex, date of birth, etc
- 6) Put identification mark.
- 7) Dehorning of Calves within 15 days.
- 8) Vaccination: up to 3 months- anthrax and up to 6 months BQ.
- 9) Housing of Calves: Separate pens should be providing for best management and protection.

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<b>Q.4</b>	<b>Define milk and enlist factors affecting yield and chemical composition of milk (4)</b>
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**Answer :**

**Milk :** Milk is whole, fresh, clean lacteal secretion obtained from complete milking of one or more healthy animal excluding that is obtained 15 days before or 5 days after calving or such a period as may be necessary to render milk practically colostrums free having minimum prescribed percentage of standard fat and SNF. (1)

**Factors affecting Yield and composition of milk** (3)

1. **Species :** Each species yields milk of a composition that is characteristics of the individual.
2. **Breed :** Breeds producing the largest amounts of milk yield milk of a lower fat per cent.
3. **Individuality :** Each cow tends to yield milk of a composition that is characteristic of the individuals.
4. **Interval of milking :** Longer milking interval – more milk with low fat.
5. **Completeness of milking :** If completely milked – test is normal if not – it is usually lower.
6. **Frequency of milking :** It has no great effect on the fat test
7. **Irregularity of milking :** Frequency changes in the time and interval of milking results
8. **Day to day milking :** Show variation for the individual cow
9. **Disease and abnormal condition :** Tends to alter the composition of milk.
10. **Portion of milking :** Fore milk – Low in fat, stripping – high in fat.
11. **Stage of lactation :** The first secretion after calving is very different from milk in it's composition and general properties.
12. **Yield :** For a single cow, there is a tendency for increased yields to be accompanied by a lower fat per cent and vice-versa.
13. **Feeding :** Has temporary effect only
14. **Season :** Per cent of both fat and SNF show slight but well defined variations
15. **Age :** Older cow – decreased fat per cent
16. **Condition of cow at calving :** If cow is in good physical condition at calving – it will yield milk of high fat per cent.
17. **Excitement :** Both yield and composition of milk are liable to transient fluctuations during these periods of excitement for whatever season.
18. **Administration of drugs and hormones :** Injection or feeding of hormones results in increase of both milk yield and fat per cent.

<b>Q.5</b>	<b>What is mean by organic production? Explain in short organic livestock farming standards (4)</b>
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**Answer: Organic Livestock production** The goal of organic livestock production aims at saving nature, biodiversity, free from chemical residues. It ensures strict animal welfare measure, better for environment, it is safer for human life (free from antibiotic/ chemical/ drug residues) (1)

**Organic Livestock Farming Standards:** (3)

**1)Breed and breeding:** Pure livestock breeds are preferred, breeds should be well adopted to local conditions, No crossbreeding is allowed, Selective upgrading- only choice to improve the native breeds, Reproduction techniques should be natural, ETT, MOET, etc not allowed, Hormonal heat treatment not allowed eg. Oestrus synchronisation.

**2)Feed and feeding:** Livestock should be fed 100% organically grown feed, More than 50% should be grown on farm, in the region,, Sufficient balance ration with green fodder should fed ,Sufficient clean and potable drinking water should be provided, Use of synthetic growth promoters, synthetic appetizers, preservatives, artificial colouring agents, synthetic amino acids, emulsifiers, urea, etc., is strictly prohibited.

**3)Housing:** Animals are not tethered or confined in buildings. Animals should have sufficient area to graze. Housing should allow sufficient movement, maximum amount of fresh air and daylight. Outdoor area should be 75% of indoor area. Reared the animals according to their groups. Provide soft bedding to calf's, Undertake disbudding before 3 months and bull calves castration within 4 weeks.

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**4) Disease Prevention:** Prevention is better than cure. Animals should be raised in a manner that promotes good resistance and infections. Provide good balanced quality feed. Outdoor feeding strengthens the natural immune system. Adequate space, avoid overcrowding and prevent health problems, associate with it.

**5) Animal Health and Hygiene:** Mastitis control one of major priority. Incidence of mastitis near to same as in conventional dairy farming. Hygiene and sanitation play important role. Avoid use of conventional veterinary medicines except emergency (Antibiotics, etc.), Non allopathic medicines, natural medicine, including homoeopathy and ayurvedic, herbal drugs and therapy should be emphasized.

SECTION -B	
<b>Q. 6 Write down true or False, Each question carry 02 marks</b>	<b>(Marks 12)</b>
a) National Dairy Research Institute is located at Karnal.- <b>True</b>	
b) Cows belong to species Bos – bubalis.- <b>False</b>	
c) The act of giving birth to the young one in cows is known as calving. - <b>True</b>	
d) Ability of an individual to produce large number of living young's is known as sterility. .- <b>False</b>	
e) Gaolao breed of cow is originated from Vidarbha region of Maharashtra. - <b>True</b>	
f) Sawai chal is a typical character of deoni cows. .- <b>False</b>	
g) The male parent of the calf is known as sire. - <b>True</b>	
SECTION -C	
<b>Q. 7 Choose the Correct Option. Each question carry 01 mark</b>	<b>(Marks 12)</b>
1	National Dairy Development Board is located at ____ <b>a) Anand.</b>
2	White revolution is related with <b>b) milk</b> production
3	Castrated male use for detection of cows in heat is known as ____ <b>c)Teaser.</b>
4	<b>a)Testis</b> is an important organ of male cattle reproductive system
5	Which exotic breed of cow is recommended for AI in Vidarbha region? <b>a) Jersey</b>
6	Milk obtained from Indigenous cows are grouped under <b>b)A-2</b> type of milk
7	Wallowing is commonly observed in ____ <b>a) Buffalo</b>
8	<b>b)Oxytocin</b> hormone is responsible for secretion of milk
9	The period in which milk is obtained from milking cow is known as ____ <b>a) Lactation</b>
10	____ is an important phase / period of sexual desire and conception in cattle's. <b>b) Estrus</b>
11	<b>a)Foot and mouth</b> disease is commonly observed every year in vidarbha region.
12	Which method is recommended as safe method for milking of animals? <b>c) Full hand method</b>
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