

(v)

**MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE**  
**SEMESTER END THEORY EXAMINATION**  
**B. Sc. (Hons.) Agriculture**

Semester	: VI (New)	Term	: II	Academic Year	: 2022-23
Course No.	: AHDS-364	Title	: Sheep, Goat and Poultry Production		
Credits	: 2(1+1)				
Day & Date	:	Time	: 2 hrs.	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.

**Model Answer**

**SECTION "A"**

**Q. 1. Describe in short importance of sheep and goat in national economy.**

**Answer:** Discuss about following points

(04)

1. Socio economic importance
2. Goat and sheep population in India & contribution
3. Source of meat
4. Source of hair
5. Goat skin
6. Source of manure
7. Source of milk

**Q. 2. Write down in details about care and management of lamb and kid?**

**Answer: 1. Feeding from birth to three months of age**

(each point 1 mark=04)

- Immediately after birth feed the young ones with colostrum.
- Up to 3 days of birth keep dam and young ones together for 2-3 days for frequent access of milk.
- After 3 days and up to weaning feed the kids with milk at 2 to 3 times a day.
- At about 2 weeks of age the young ones should be trained to eat green roughages.
- At one month of age the young ones should be provided with the concentrate mixture (Creep feed).

**2. Colostrum feeding of kids**

- The kid should be allowed to suck its dam for the first three or four days so that they can get good amount of colostrum.
- Colostrum feeding is a main factor in limiting kid losses.
- Cow colostrum is also efficient for kids.
- Colostrum is given at the rate of 100 ml per kg live weight.
- Colostrum can be preserved with 1-1.5% (vol/wt) propionic acid or 0.1% formaldehyde. Propionic acid is preferred for preservation as it keeps the pH value low.
- The chemically treated colostrum is kept at cool place to ensure better quality.

**3. Creep feeding for kids**

- This creep feed may be started from one month of age and up to 2-3 months of age
- The main purpose of creep feeding is to give more nutrients for their rapid growth.
- The general quantity to be given to the kids is 50 – 100 gm/animal/day.
- This should contain 22 per cent protein.
- Antibiotics like oxytetracycline or chlortetracycline may be mixed at the rate of 15 to 25 mg/kg of feed.

#### 4. Feeding schedule for a kid from birth to 90 days:

Age of kids	Dam's milk or cow milk (ml)	Creep feed (grams)	Forage, green/day (gm)
1-3 days	Colostrum-300 ml, 3 feedings	-	-
4-14days	350 ml, 3 feedings	-	-
15-30 days	350 ml, 3 feedings	A little	A little
31-60 days	400 ml, 2 feedings	100-150	Free choice
61-90 days	200 ml, 2 feedings	200-250	Free choice

#### Q. 3. Explain in brief about mating systems used in improvement of sheep and goat.

**Answer: System of Mating:** - There are four system of mating in sheep and goat, (04)

- 1) **Flock system:** - Flock system in this system bucks or rams are usually let loose the female to serve at will during the mating season at the rate of 30-40 ewes per ram.
- 2) **Pen :-** The selected buck or ram are allowed to have mating at night only, those does or ewes which are kept together to make group after their return in the evening from the grazing land and the ram allowed area introduced with them. By this system does or rams are either grazed separately are stall fed.
- 3) **Hand services:** - In this system the does or ewes in oestrus are first detected by the vasectomized bucks or rams which are then picked up kept in the breeding pen and served by selected proven sizes.
- 4) **Artificial insemination:** - Artificial insemination of sheep has played a significant role in improving sheep within a short period of time in Russia and some European countries. In India this technique though taken up on an experimental basis for some years.

#### Q. 4. Define culling. Enlist important points to be considered for culling.

**Answer:** Removal of unproductive or unwanted animals from flock is called as culling. (01)

**The important points to be considered for culling are-** (03)

1. **Lambs/kid :** Lamb /kids may be culled at weaning stage on the basis of following consideration
  - Not confirming the type
  - Coloured or spotted if the objective is to maintain the single coloured fleeced flock.
  - Malformed
  - Suffering from incurable disease
  - Not attaining proper weight/slow growth
2. **Ewes/Does:** 2 to 3 weeks before mating, cull the ewes/does
  - Which did not lamb/kid successively in 2 years
  - Which did not nurse their lamb/kid
  - Which are still more ewes than required number, cull according to fleece weight and wool quality
3. **Rams/bucks:**
  - Which are not fit for breeding
  - Which are continuously used for more than 2 years in flock for breeding

**Q. 5. Discuss about preventive measures of diseases generally followed in goat and sheep.**

**Answer:**

(1+1+2=4)

**Preventive measures of diseases-**

**Hygiene:** Provide good house to protect from wild animals and against cold breeze and rains. Good ventilation and sufficient sunlight are achieved by providing chain link instead of walls. The floor should be of good mureom and must be kept dry and clean. Exercise runs are provided with sheds.

**Feeding :** Provide well balanced and nutritious food. Sufficient grazing and adequate supply of green grasses and leaves ensures health. Rotational grazing is advocated. Ample, clean and fresh drinking water must be made available to the animals.

**Vaccination:** Preventive vaccinations against common contagious diseases must be under taken to avoid their incidence.

Months	Diseases	Vaccine	Dose for adult	Dose of young
Feb/March	E.T. Anthrax	Multi component anthrax spore vaccine	5 ml s/c	2.5 ml s/c
June	FMD	Polyvalent	5 ml s/c	5 ml s/c
July	H.S.	H.S. Vaccine	5 ml s/c	2.5 ml s/c
September	Pox	Pox Vaccine	0.5 ml s/c	--
July	B.Q.	B.Q. Vaccine	5 ml s/c	2.5 ml s/c
December	E.T.	Multi compound	5 ml s/c	5 ml s/c

**Q. 6. Write down short notes on (Any two)**

**Answer:**

(02 mark each)

1. **Saanen:** Native place: valley of Switzerland.

It is famous for its high production and persistency of yield and is known as the "milk queen" of the goat world. Colour – white or light cream. Face is straight or slightly dished. Ears point upward and forward. Usually polled. Mature weight of male / female : 95/65 kg. Average milk yield ranges from 2-5 kg/day during a lactation period of 8-10 months. Fat content 3-5%.

2. **Kadakhnath:** Native place: Madhya Pradesh

The Kadakhnath is popular for its adaptability and its grey-black meat, which is believed to infuse vigour. Its colour is caused by melanin. The roosters weigh 1.8–2 kg and the hens 1.2–1.5 kg. Kadakhnath hens eggs are brown with a slightly pink tint, they are poor setters and rarely hatch their own brood. Eggs weigh an average of 30–35 g. The greyish black colour is present in the legs and toenails, beak, tongue, comb and wattles; even the meat, bones and organs have grey colouration. Annual eggs laying are 120-130 numbers.

3. **Deccani sheep:** Origin: Arid zone of Maharashtra and neighbouring areas of Andhra Pradesh.

Physical characteristics: Prominently black or black with white markings, white and brown animals are also seen, Rams are horned but ewes are polled, Ears are medium long, flat and drooping , Tail is short and thin. Fleece is extremely coarse, hairy and open. Belly and legs are devoid of wool. Reproduction:- Under farmers field: lambing percentage: 75.2 % and under farm condition: 85.5 %, Litter size: single. Wool production:- Six monthly fleece wt. (kg) 0.350 to .0.500, staple length (cm): 8 to 8.5 etc.

**Q. 7. Define brooding. Enlist brooding methods and explain about artificial brooding.**

**Answer:**

**(1+3)**

**Brooding :** It is a process of rearing young chicks from one day to 4 to 6 weeks of age during which heat has to be provided artificially to keep them warm.

**Types of brooding :**

1. **Natural brooding :** In this system broody hen is used to provide the heat to the downy chicks. One hen can brood maximum 12 to 15 chicks at a time. Therefore, on commercial poultry rearing this system is not suitable.
2. **Artificial brooding :** Artificial brooding refers to the handling of baby chicks without the aid of the hen. This has several advantages i.e. chicks can be brooded round the year. Brooding can be done in large numbers. Sanitary conditions are fully controlled, proper feeding can be done. Temperature can be regulated easily and full protection is also given in this system.

**Q. 8. Write down in short about housing of sheep and goat?**

**(04)**

**Answer:**

Sheep and goats do not require elaborate housing. Even an enclosure of thorny bushes protects them against predators. They only care one has to take is about the ground which must be murem. The resting place must be a higher level than ordinary ground level. Murem soak the urine and keeps the place dry.

Sheep are always raised in flock. The goats can be raised single, in few numbers of flocks. When single or few goats are kept in a shelter near human house.

A shed with 1.5 m high wall around and chain link above it till the roof would be ideal. The roof may be thatched one or made of light cement sheets. The central height must be 3.0 to 3.5 m while sides 2.0 to 2.5 m high. The floor space require per adult sheep is 1 to 2 sq. m and for goat 1.5 to 2.0 sq. m. Kids and lambs are required to be kept in separate shed which are in close vicinity of the sheds females. Separate boxes or stalls are provided for each male for avoid fighting. A unit of 50 females and one male requires approximately shed of 100 square m or 20 m length and 5 meter width. Loose housing is more advantageous as compared to conventional/stall-fed sheds because it is suitable for semi-arid regions and large-sized flocks. It involves less expenditure, it provides more comfort to the animals. It is less labour-intensive, and it provides freedom of movement and gives the benefit of exercise. Stilted housing is common in areas with heavy rainfall.

**Q. 9. Classify the poultry breeds according to their utility with suitable examples.**

**Answer: Classification of poultry birds on the basis of utility:**

**(04)**

- a. **Eggs Purpose ( Laying birds) :** Light body, active , good eggs producer, More than 200 eggs per year, eg. White leg horn, Minorca, etc.
- b. **Dual purpose :** Medium body, average eggs production (150 to 180 eggs/year), eg. Rhode Island Red, Australorp, etc.
- c. **Meat purpose :** Large body, plenty of flesh on breast, eggs production 100 to 150 eggs/year. eg. Sussex Plymouth Rock, Jersey Black Glant, Brahma. Cornish, Orpington, etc.
- d. **Game purpose :** Powerful built, up body, tall birds egg production is 80 to 100 eggs/year. Eg. Assel

- e. **Local or Deshi** : Small and light birds, egg production is below 100 /eggs., eg. Kadaknath, Vanraj, Giriraj, All deshi non-descript breeds.
- f. **Ornamental / Fancy** : Delicate in built, bright, plumage, small size, varied mixed colours, possesses unique features intended for pleasure or fancy. eg, Japanese white bantam, Andalusian, Spanish fowl, Silky, Frizzy.

**Q. 10. Enlist the slaughtering methods and explain about halal methods of slaughtering.**

**Answer:** There are two main types of slaughter methods.

(2+2)

1. **Scientific or Human slaughter**
2. **Ritual slaughter**
  - a. **Jhatka or sikh method**
  - b. **Neck stab method**
  - c. **Jewith method**
  - d. **Halal Method:** - This is the method followed in Muslim countries. In this method neck of the animal is severed by cutting the four major blood vessels carotid arteries and jugular veins with a sharp knife spinal cord is left intact. So the nerve centers controlling the heart and lungs remain functional and an efficient bleeding is ensured. It also enhances the keeping quality of meat.

#### SECTION "B"

Q. 12) **Q. 11. Fill in the blanks**

(1 mark each)

1. Sheep is also called as weed killer animal.
2. Act of mating in goat is called as Serving.
3. According to NBAGR, 19 numbers of poultry breeds are found in India.
4. 3 to 5 meters length of roap is require in tethering method.

Q. 11) **Q. 12. Define the following**

(1 mark each)

- a) **Tupping:** Act of mating in sheep is called as tupping.
- b) **Gestation:** It is the condition of female when developing foetus in the uterus.
- c) **Docking:** Removal of tail from the body in sheep/goat is called as docking
- d) **Layer:** An eggs laying female chicken, up to one year after starting the laying of eggs.

\*\*\*\*\*

Signature

Name of Course Instructor: Dr. P. A. Kahate

Designation: Assistant Professor

College of Agriculture, Akola

Mob. No. 8275039512

Email: [pakahate@rediffmail.com](mailto:pakahate@rediffmail.com)

Signature

Name of Head: Dr. S. D. Chavan

Designation: Professor & Head

Dept. of A.H. & D.S, Dr. PDKV, Akola

Mob. No7588961089

Email: [hdahdspdkv@gmail.com](mailto:hdahdspdkv@gmail.com)