

**B.Tech IV sem. Leather Technology**

**Mid semester examination-2019**

**Subject: Introduction to Leather technology Code: LT-071402**

**Max. mark:20**

**Time :2 Hours**

**Note: Question -1 is compulsory. Attempt any other three questions. All questions have equal marks. Assume any missing data.**

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**Q.1 Answer the following objective question -**

**(I) What is the value of pH in liming process?**

- (a) 7    (b) 9    (c) 10    (d) 12

**(II) Which chemical is used for unharing process?**

- (a) NaCl    (b) CH<sub>3</sub>COOH    (c) Na<sub>2</sub>S    (d) Ca(OH)<sub>2</sub>

**(III) What is the value of pH of soaking process?**

- (a) 7    (b) 9    (c) 10    (d) 12

**(IV) Water content of hide and skin is**

- (a) 20-30%                          (b) 40- 50 %    (c) 60-70 %    (d) 80- 90 %

**(v) Protein content of hide and skin are-**

- (a) 2-8%    (b) 8-14%    (c) 19-32%    (d) 34-50%

**Q.2** Describe the any five ante- mortem defects in hide and skin while preparing leather for different purposes.

**Q.3** Discuss in detail the chemical constituents of hides and skins.

**Q.4** State in detail the present scenario of livestock population of animal in India?

**Q.5** What is current status of leather industries in India.

**Model answer.**

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Ans. 1

I. D

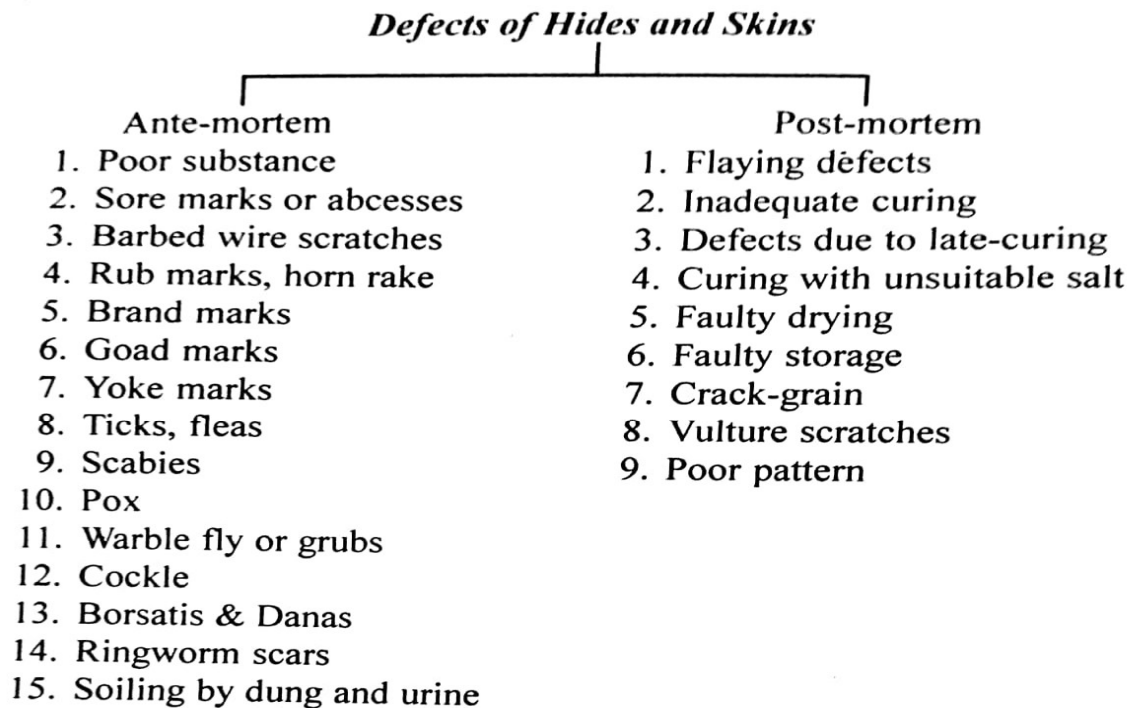
II. C

III. A

IV. C

V. c.

Ans. 2



Ans. 3

Composition of hides and skins :—

(1) Water	... 60% to 70%	on the green wt.	..	..
(2) Proteins	... 19.2% to 32.75%		..	..
(3) Fats	... 1.5% to 12.25%		..	..
(4) Mineral matters	... 0.36% to 0.5%		..	..
(5) Colouring pigments	... Traces.			

The percentage of these materials vary from skin to skin depending upon the age, species, breed and health of the animals.

Water :—

The water is present in hides and skins in two forms :—

- (a) Free water and
- (b) Bound water.

ans. 4

Cattle <sup>(19th)</sup> → The total cattle contribution is around 37.28% of the total livestock population. → The total no of cattle in the country as per 2012 Census is 190.90 million numbers.

Buffalo → The total buffalo contributes around 21.23% of the total livestock population. → The total 108.7 million

Sheep → 12.71%, 65 million

Goat → 26.40%

135.17 million

Goat → 26.40% of the total livestock.

→ 2012 — 135.17

Livestock

	World	India	India's share%	Rank
Cattle	1367	190.90	14%	1
Buffalo	171	95	56.0%	1
Goat	770	127	16.0	2
Sheep	1022	51	5.0	14
		65		

→ The major species of livestock that supply hides and skins are cattle, buffalo, goat and sheep.

Production of Hides and skins

	World	India	India's share
Cattle Hides	274	23	8%
Buffalo	36	28	78%
Goat	347	82	24%
Sheep	460	30	7%

The above data clearly show that India commands sizeable global share in buffalo hides and goat skins. In terms of area, India produces 2 billion sq.ft of leather which roughly accounts for about 10% of global production.

Ans. 5

### Statistical Analysis of Leather Industries.

According to CERI survey on capacity utilization there are 2091 tanneries in the country out of which 1803 units are in the small scale sector and 288 are DGTD units.

Tamil Nadu	→ 934 unit	} accounts for 89 percent of tanneries in the country.
West Bengal	→ 538 "	
Uttar Pradesh	→ 378 "	

→ A survey of the growth of the leather industry over the past four decades has revealed that —

→ 1803 units under SSI sector

— only 234 (13%) were set up before 1950.

126 (7%) , between 1951-60

325 (18%) , " 1961-72

451 (25%) — 1973-80

667 (37%) — 1981-88

— In other words 62% of the existing units were set up after 1973.