

Seat No: \_\_\_\_\_

Enrollment No: \_\_\_\_\_

**PARUL UNIVERSITY**  
**FACULTY OF AGRICULTURE**  
**B.Tech. (Dairy Technology) Winter 2019 - 20 Examination**

**Semester:3**  
**Subject Code: 20104204**  
**Subject Name: Traditional Indian Dairy Products**

**Date: 27/11/2019**  
**Time: 10:30am to 12:30 pm**  
**Total Marks: 50**

Q.1

A) **Fill in the blanks (Each of 0.5 marks)** (05)

- i) Water activity of khoa at normal moisture content is.....
- ii) A product very similar to gulabjamun but having a base material of mixture of khoa and chhana is known as .....
- iii) The yield of finished rasogolla (drained) per 100 g cow milk chhana is .....
- iv) According of FSSAI (2006), the fat content of shrikhand should not be less than .....
- v) The desired fat :MSNF ratio to be kept in milk for paneer making should be .....
- vi) Chhana balls are preferably cooked in cooking sugar syrup having ..... strength for Rasogolla manufacture
- vii) ..... is the indigenous product prepared by baking process
- viii) Chhana obtained by .....coagulant is preferred for rasogolla making
- ix) Danedar khoa is used for making .....
- x) ..... is added to buffalo milk to prepare good quality chhana

B) **Multiple Choice Questions (Each of 0.5 Mark)**

- i) Buffalo milk is found suitable for manufacture of following dairy products:  
A. Rasogolla and Cheddar cheese    B. Evaporated milk and sterilized cream  
C. Mozzarella cheese and paneer    D. All of the above
- ii) The % ash in khoa is \_\_\_\_\_  
A. 25.5    B. 0.7    C. 19.5    D. 3.8
- iii) Sweetened variety of dahi popular in eastern India is  
A. Shrikhand    B. Misti Doi    C. Lassi    D. Dahi kusum
- iv) As per FSSAI, the fat content of khoa shall be  
A. Not less than 37 %    B. Not less than 40 %  
C. Not less than 20 %    D. Not less than 25
- v) The coagulants legally permitted by FSSAI for chhanna making are  
A. Lactic acid    B. Citric acid  
C. Previous day sour whey    D. All the above
- vi) Good chhanna from buffalo milk can be prepared when milk is added with  
A. Di sodium phosphate    B. Di sodium hydrogen phosphate  
C. Tri sodium citrate    D. Sodium tri silicate
- vii) Browning in rasogolla cans can be prevented by filling  
A. Sulphur dioxide in cans    B. Carbon dioxide in cans  
C. Nitrogen gas in cans    D. Hydrogen sulphite in cans
- viii) For preparation of khoa the fat level in buffalo milk is usually adjusted

- to  
A. 4%    B. 5%    C. 3.5%    D. 4.5%
- ix) The following mineral is lower in shrikhand prepared from buffalo milk compared to cow milk  
A. potassium    B. magnesium    C. calcium    D. phosphorus
- x) The concentration of sugar syrup for soaking of gulabjamun balls after frying should be  
A. 40.8    B. 62.5    C. 52.6    D. 45.2
- xi) The per cent free fat desired in a good sample of burfi is  
A. 25 - 30    B. 50 - 55    C. 67 - 69    D. 80 - 85
- xii) The ideal temperature for heat desiccation during manufacture of burfi is about  
A. 70 C    B. 80    C 90 C    D. 100 C
- xiii) Good quality kalakand is obtained by using sugar (% by weight of milk) at the rate of  
A. 5    B. 6    C. 7    D. 8
- xiv) The approximate total solids content of basundi is  
A. 20 - 25%    B. 49 - 57%    C. 39 - 45%    D. 15 - 20%
- xv) The approximate quantity of citric acid (in kg) required to coagulate 1000 litres of milk is  
A. 1.8 - 2.0    B. 3 - 4    C. 0.5 - 0.7    D. 5 - 6
- xvi) The per cent sugar content in mishti dahi is approximately  
A. 12 -13    B. 8 -9    C. 17 -18    D. 20-22
- xvii) The percentage yield of paneer manufactured from buffalo milk under optimum conditions  
A. 16 -18    B. 20 -22    C. 14 -15    D. 25 - 26
- xviii) The acidity (expressed as % lactic acid) of freshly prepared shrikhand is about  
A. 0.5-0.6    B. 1-1.1    C. 1.4 %    D. 1.8 %
- xix) Yield of the paneer is  
A. 10    B. 20    C.30    D.40
- xx) 'Kacchagolla' is a variety of following indigenous sweet meat  
A. Rasogolla    B. Kalajam    C. Rajbhog    D. Sandesh

**Q.2                      Define the following(Any five out of seven questions)                      (05)**

- A) (1) Khurchan  
(2) Payasam  
(3) Milk cake  
(4) Basundhi  
(5) Rabri  
(6) Shrikhand  
(7) Kalajamun

**B)                      Answer the following (Any five out of seven questions)                      (05)**

- (1) For Paneer manufacturing, Buffalo milk is preferred than Cow milk.  
(2) During gulabjamun manufacturing small amount of milk is added to sugar syrup.  
(3) The yield of khoa from buffalo milk is more.  
(4) Cow milk yields good quality chhana.  
(5) Scrapped surface heat exchangers are considered advantageous in terms of heat transfer rates.  
(6) Shrikhand has fairly long shelf life at 8°C  
(7) Rasogolla dipped in hot water after cooking

**Q.3                      Writes short notes (Any five out of six questions)                      (10)**

- (1) Write a short note on preservation of paneer.
- (2) What do you mean by overrun in khoa
- (3) Give the classification of Traditional Indigenous Dairy Products
- (4) Give standard for
  - A. Ghee (AGMARK)
  - B. Paneer (FSSAI).
- (5) Compare between physical quality of cow and buffalo milk khoa
- (6) Discuss in detail the factors affecting quality of chhana

**Q.4 Long Question ((Any three out of four questions) (15)**

- (1) Explain in detail the operation of continuous khoa making machine.
- (2) Explain manufacturing process of rasogolla with flow diagram.
- (3) Describe in detail the process for manufacturing of Paneer with flow diagram.
- (4) Describe the industrial method for Gulabjamun manufacture.