

Dairy Processing Equipment Operator

Assessment for LEVEL-5 Certification

(Parallel with FC/Q2002: Dairy Processing Equipment Operator, NSQF Level 5)

CANDIDATE'S DETAILS (Fill in Capital Letters only)	
CANDIDATE'S NAME	
AADHAR / IDENTITY CARD NUMBER	
SDMS ENROLMENT ID	
BATCH ID	
TRAINING CENTRE NAME	
LOCATION	
Candidate's Sign	

Assessor's Sign: _____

Instructions:

- The question paper consists of Theory and Practical paper
- Complete the theory part first and then move on to the practical part
- The Theory Paper is of 200 Marks
- All questions are compulsory
- Give a point wise answer wherever applicable
- Only use Blue/Black Ball point pens to answer the question paper
- Read the questions carefully before answering
- Put a tick Mark (✓) in the box against the right option
- Do not write anything in the section marked for the assessor
- Time allotted for theory: 2 hour

Part I: Preparation of the workplace & Equipments

1. Write the full form of the following: **(3X 3= 9 marks)**

- i) FSSAI _____
- ii) ISO _____
- iii) HACCP _____

2. Identify the SIX processes that are undertaken in dairy processing: **(2X 6= 12 marks)**

Filter	Bleaching	Pasteurizer
Homogenizer	Shanking	Blanching
Packaging	Separator	Clarifier

3. Identify the machine utilized for the process: **(2 X 4= 8 marks)**

i) Pass through a device to remove unwanted material	
ii) Process of converting two immiscible liquids into emulsion	
iii) Act of heating followed by cooling	
iv) Continuous removal of solids being deposited	

4. Select **ONLY TWO** things that should be done before using a machine? **(3 X 2 = 6 marks)**

Check if it is clean and dry	Put water in it	Spray disinfectant in it	Attend any minor faults	Clean it with broom
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Part II: Prepare for operating dairy process machineries and production of various dairy products

5. Give the full form & describe the term **(4X3 = 12 marks)** (* 1 marks for full form & 3 marks for description)

- i) **LTLT**

ii) **HTST:**

iii) **UHT :**

6. Which of the following process is used to stabilize the fat emulsion? Also explain the machine used and the process to achieve the same. **(2+ 4= 6 marks)**

- i) Filter
- ii) Pasteurizer
- iii) Homogenizer

7. What is the purpose of clarifier and separator? Also give a few advantages of using them. **(6 marks)**

8. Fill in the blanks by selecting the correct term: **(1x5 =5 marks)**

- i) The growth of micro-organism is recorded in a growth (curve/line).
- ii) Conversion of curd from milk is a desirable (funga/bacterial) activity.
- iii) Two stage homogenization is used for products with (high/low) fat content.
- iv) Basundi is an (Indigenous/ Western) dairy product.
- v) Butter is obtained by (churning/ filtration) method.

9. Select and tick **ONLY SIX** things that you will check and calculate for completing the production order? **(1X 6 = 6 marks)**

<input type="checkbox"/>	Availability of raw materials	Batch size	<input type="checkbox"/>
<input type="checkbox"/>	Waste material	Salary-slip	<input type="checkbox"/>
<input type="checkbox"/>	Manpower requirement	Bill	<input type="checkbox"/>
<input type="checkbox"/>	Equipment requirement	Machine Capacity	<input type="checkbox"/>
<input type="checkbox"/>	Availability of packaging materials	Vendors name	<input type="checkbox"/>

Part III: Operate dairy processing machines

10. Which of the following is done to sterilize the equipments? **(5 marks)**

- i) Open valves to allow milk
- ii) Pump sterilizing solution through pipes
- iii) Pump neutralizer
- iv) All of these

11. Choose any TWO process parameters to control pasteurization: **(2.5x2 =5 marks)**

Temperature	Colour
Ash	Pressure

12. Rubber parts readily absorb ____ and need to be cleaned in an alkaline detergent. **(5 marks)**

- i) Protein
- ii) Carbohydrates
- iii) Milk fat
- iv) Minerals

13. Which tool tests the added water in milk? **(5 marks)**

- i) Cryoscopy
- ii) Cryptoscopy
- iii) Metroscopy
- iv) All of these

14. What will you call the disruption of fat globules into much smaller fat globules? **(5 marks)**

- i) Chilling
- ii) Standardization
- iii) Homogenization
- iv) Centrifugation

15. What is the normal temperature applied for homogenization? **(5 marks)**

- i) 10-20°C
- ii) 30- 40°C
- iii) 60- 70°C
- iv) 90-100°C

16. Badly dented or damaged milkers unit parts are caused by? **(5 marks)**

- i) Strong chemicals
- ii) Improper design
- iii) Careless handling
- iv) Solvents

Part IV: Documentation & Record Keeping

17. Select **ONLY THREE** correct statement which suggest the information in a **log of production records: (2 X 3 = 6 marks)**

Amount of finished products stored	Quantity of ingredients used	Number of earplugs used
Type of raw materials	Number of gloves used	Information about product quality

18. Select **ONLY ELEVEN** items from the table which is a reason for **why documentation is done.(4 X 11= 44 marks)**

It gives detailed knowledge about running of the business	It helps to clean the food handling equipment and machineries	It helps to set an appropriate product price.
It helps in raw material storage	It helps to control product quality.	It helps in theft
It helps to keep track of the money invested in the business.	It works as an evidence for legal procedures.	It helps to take corrective measures at the right time.
It helps to identify the separate costs of raw material or product ingredients	It helps in tracking what material was used in which product	It helps in sending the produce to the market
It helps to identify the production cost of a particular process.	It helps to ensure that quality assurance procedures are followed.	It helps to ensure that the production unit is running smoothly/effectively

19. Select **ONLY TWO** correct option which suggest the reason of why the **stock rotation method is used (2 X 2 = 4 marks)**

Ensure market demand	Ensure there is a minimum chance of food spoilage	Ensure continuous income	Help to retain the taste of processed foods.
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20. Which of the following information has to essentially written on milk packet? (2 X 3 = 6 marks)

Best Before Date	Dimension of packet	Date of Manufacture
Color of packaging	Lot /Batch Number	Company supplying packets

Part V: Health, Hygiene & Safety

21. Identify and tick the correct name of the shown equipment used for maintaining hygiene. (2.5 X 4 = 10 marks)

			
i. Head mask ii. Hair Restraint	i. Single use gloves ii. Rubber gloves	i. Ear plugs ii. Ear enhancers	i. Nose and Mouth Mask ii. Smell & Odor retardant

22. Tick the correct option from the two given options: (1 X 11= 11 marks)

Step 1: Wet hands & (arms / legs) with (mild/ warm) water

Step 2: Apply (soap / surf)

Step 3: Use enough to build a good (bubbles / lather)

Step 4: Vigorously (scrub / rub) hands & arms for (4-5 / 10-15) seconds.

Step 5: Clean under finger (nails / tips) and (inside / between) finger

Step 6: (Rinse / Wash) under running water and (rinse/wash) thoroughly.

Step 7: Dry using a (single use / wet) paper towel.

23. Identify and tick the correct name of the following safety equipments/signage (1.5 X 4 = 6 marks)

			
i. Don't use hands ii. No Entry	i. Assembly point ii. Refreshment point	i. Hot, don't touch. ii. Thorns, don't put hands	i) Air Extinguisher ii) Fire Extinguisher

24. Tick on the correct option: (1 X 8 = 8 marks)

- i) You should be aware about any potential physical/chemical/biological hazard that can occur at the work place. **(YES/ NO)**
- ii) It is alright if rodents/pest/flyes etc are present in the baking area. **(YES/ NO)**
- iii) Periodic audits should be conducted to ensure safety and hygiene. **(YES/ NO)**
- iv) Documenting what has been used for which product may help for future reference, in case required **(YES/ NO)**
- v) The quality of food can be determined by its aroma, appearance, taste and best before date. **(YES/ NO)**
- vi) Storing raw food with cooked ones can result in cross-contamination. **(YES/ NO)**
- vii) Labeling material can help in avoiding confusion while identification? **(YES/ NO)**
- viii) FIFO means First in First Out. **(YES/ NO)**

Practical Test

Perform ANY ONE for the following:

1. *Homogenization of milk*
2. *Pasteurization of milk*
3. *Separation*

Also perform the **packaging** of the dairy products produced

Note:

Milk produced should be **fat free**(Or minimum)

Marking Sheet:

Criteria	Parameters	Marks	Marks Obtained
Preparation of workplace (65 Marks)	Preparation of Work Area	20 marks	
	Preparation Of Tools & Equip.	25 marks	
	Adherence to food safety norms	20 marks	
Preparation of Machinery (65 Marks)	Handling Tools	10 marks	
	Handling Materials & chemical	15 marks	
	Plan equipment utilization	15 marks	
	Organize raw material	15 marks	
	Adherence to safety standards	10 marks	
Use of machinery (65 marks)	Use of correct method	15 marks	
	Stepwise work	25 marks	
	Correctness of reading/observation	25 marks	
Recording the Test Result (40 marks)	Explanation of steps	20 marks	
	Clarity & completeness of data	20 marks	
Total		235 marks	

Part V:

Viva Sheet: Ask the candidate for the explanation of the various procedure that they have used in the test.

Factors	Technical Knowledge	Ability to explain	Correctness & completeness of answer	Attitude & Behavior	Total
Marks	20	15	15	15	65
Obtained Marks					

Theory Marking Sheet

Part	NOS Number	NOS	Theory Marks		Practical	
			Total	Obtained	Total	Obtained
Part I	FIC/N2005	<u>Part I: Preparation of the workplace & Equipments</u>	35		65	
Part II	FIC/N2006	<u>Part II: Preparation for operating machinery</u>	35		65	
Part III	FIC/N2007	<u>Part III: Operation of dairy processing machinery</u>	35		65	
Part IV	FIC/N2008	<u>Part IV: Documentation & Record Keeping</u>	60		40	
Part V	FIC/N9001	<u>Part V: Health, Hygiene & Safety</u>	35		65	
Total			200		300	