Assistant Lab Technician

Assessment for LEVEL-4 Certification

(Parallel with *FC/Q7006: Assistant Lab Technician, NSQF Level 4*)

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

Theory Test

Part I: Prepare and maintain work area and machineries for production (35 marks)

1. Tick on the correct option. (2 x 6 = 12 marks)

	Cleaning workplace regularly is costly and not necessary	☐	YES	NO	☐
	Disinfection is necessary to prevent spread of germs and contamination	☐	YES	NO	☐
	Clean and bright light in workplace helps to check work area for cleanliness	☐	YES	NO	☐
	Personal hygiene and cleanliness is a prerequisite for staff before entering work place	☐	YES	NO	☐
	Insect screens and double doors to work place can help ward off insects and flies	☐	YES	NO	☐
	A wet and humid work place is better than a dry and ventilated one	☐	YES	NO	☐

2. Choose any two table top finishes for work place that are easy to clean and hygienic (2.5 x 2 = 4 marks)

	a. Coarse Cement		b. Polished granite
	c. Rusted steel		d. Stainless steel

3. Select bio-degradable objects from the list. (1 marks each for correct categorization) (1 x 6 = 6 marks)

Animal waste		Plastic bags		Leaves		Grass clippings	
Plant products		Food waste		Stapler pin		Rotten eggs	

4. Choose any two disinfectant that can be used at work place (Tick the correct answer) (2 x 2 = 4 marks)

Steam		Salt	
Sugar		Sanitizers	

5. Contaminated food with mould and fungus are best disposed of by (Tick one appropriate answer) (2 x 2 = 4 marks)

Incineration		Mixing with fresh food	
Feeding cattle		Mixing with waste and throwing out	

6. Choose any two common minor faults that you can attend with machineries at work place (Tick the correct answer) (2 x 2 = 4 marks)

Burnt Fuse		Short circuit	
Loose contact		High voltage	

Part II: Prepare for quality analysis and manage housekeeping for food lab activities

7. Identify the below shown tool:

i) Thermometer
ii) Weighing scale
iii) PH meter
iv) Calibrator

8. A primary standard is:

i) A substance dissolved in a known volume of water
ii) The mass of a substance dissolved in a known volume of water
iii) Substance that is reacted with a substance whose concentration is known accurately
iv) Pure substance that can be used to determine the concentration of other substances

9. Which of the following is a systematic error?

   i) Instrumental error
   ii) Personal error
   iii) Method error
   iv) All of these

10. Which one is a classic method for reducing matrix effects for complex samples?

    i) Radical additions
    ii) Standard additions
    iii) Complex additions
    iv) All of these

11. Which type of water should be used for lab activities?

    i) Tap water
    ii) Mineral water
    iii) Distilled water
    iv) Any of these

12. Glassware used to make 100 ml of a 12% solution is a:

    i) Volumetric flask
    ii) Beaker
    iii) Erlenmeyer cylinder
    iv) Graduated cylinder

13. A suction device used to draw up liquids is a:

    i) Beaker
    ii) Erlenmeyer cylinder
    iii) Graduated cylinder
    iv) Safety bulb

Part III: Sampling and quality analysis for food lab activities

14. To prepare a standard solution of sodium carbonate, what glassware should be used?

    i) Measuring cylinder, dropper pipette and beaker
    ii) Volumetric pipette, small funnel and conical flask
    iii) Volumetric flask, small funnel and dropper pipette
    iv) Measuring cylinder, dropper pipette and conical flask

15. What is the purpose of reagent (standard solutions)?

    i) Compounds used to bring chemical reaction
    ii) Compounds used to consume the substance
    iii) Compounds used to perform liquid chromatography
    iv) All of these

16. The difference between the expected value of a statistic and the value of the parameter being estimated is called a:

    i) Sampling error
    ii) Non-sampling error
    iii) Standard error
    iv) Bias

17. Which of the following is NOT a sampling method?

    i) Systematic sampling
    ii) Combined sampling
    iii) Cluster sampling
    iv) Simple random sampling

18. Which of the following influences sample representativeness?

    i) Sampling procedure
    ii) Sampling size
    iii) Participation
    iv) All of these

19. According to which one of the following will you dispose control sample and shelf-life sample?

    i) Supervisor
    ii) Standard disposing procedure
    iii) Other lab assistants
    iv) Any of these

20. Which physical parameters can be carried out on food samples?

    i) Colour
    ii) Texture
    iii) Weight
    iv) All of these

Part IV: Complete documentation and record keeping related to performing food lab activities

21. Select only **THREE** details regarding the raw material which should be documented. **(2 x 3 = 6 marks)**

Sampling Date	Results and findings	Microbiological standards
Sampling Point	Number of gloves used	Sampling procedure

22. 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

23. 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.

24. 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

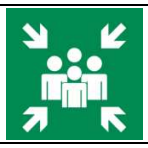
25. Identify and tick the correct name of the shown equipment used for maintaining hygiene. **(2.5 X 4 = 10 marks)**

			
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

26. 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.

27. 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

28. 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/flies 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. *Perform sampling (Any method could be used)* 2. *Perform quality analysis* *For raw material, packaging material, finished product. (As per the availability)*

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 for quality analysis (65 Marks)	Handling Tools	10 marks	
	Handling Materials & chemical	15 marks	
	Calibrate instruments	15 marks	
	Organize raw material (storing and labeling)	15 marks	
	Prepare reagents	10 marks	
Sampling and quality analysis (65 marks)	Use of correct method for sampling	15 marks	
	Step wise procedure	15 marks	
	Material Disposal according to SOP	10 marks	
	Analysis in calibrated equipments (Chemical and physical)	15 marks	
	Monitor and maintain storage	10 marks	
Recording the Test Result (40 marks)	Explanation of steps	20 marks	
	Clarity & completeness of data	20 marks	

Health, safety and hygiene (65 marks)	Housekeeping activities	20	
	Ensure personal hygiene	15	
	Follow industry standards	15	
	Apply food safety practices	15	
Total		**300 marks**	

Marking Sheet

Part	NOS Number	NOS	Theory Marks		Practical	
			Total	Obtained	Total	Obtained
Part I	FIC/N7001	**Part I: Prepare and maintain work area and machineries for production (35 marks)**	**35**		**65**	
Part II	FIC/N7002	**Part II: Prepare for quality analysis and manage housekeeping for food lab activities**	**35**		**65**	
Part III	FIC/N7003	**Part III: Sampling and quality analysis for food lab activities**	**35**		**65**	
Part IV	FIC/N7004	**Part IV: Complete documentation and record keeping related to performing food lab activities**	**60**		**40**	
Part V	FIC/N7005	**Part V: Health, Hygiene & Safety**	**35**		**65**	
		Total	**200**		**300**	