

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B. Tech Dairy Technology 2019-20

Semester	: V (V Dean)	Academic Year	: 2019-2020
Course No.	: DM - 505	Course Title	: Quality and Safety Monitoring In Dairy Industry
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Wednesday, 08.01.2020	Time	: 11.00 to 13.00 Hrs.

Note :

- 1) All questions from **Section 'A'** are compulsory.
- 2) Solve **Any Three** questions from **Section 'B'**.
- 3) Draw neat and well labeled diagram wherever necessary.

SECTION –‘A’

Q. 1 A) Choose the most appropriate answer from the options given below. (05)

- i) ISO 22000 is a
 - a) Food Safety System
 - b) Food Safety and Management System
 - c) Quality Management System
 - d) Environmental Management System
- ii) is the indicator organism for faecal contamination.
 - a) *E. coli*
 - b) *S. typhi*
 - c) *L. monocytogenes*
 - d) *E. aerogenes*
- iii) Expand DEFT
 - a) Descrete Epifluorescent Filter Technique
 - b) Direct Epi Fluorescent Technique
 - c) Direct Epifluorescent Filter Technique
 - d) Direct Epi Fluorescent Filter Treatment
- iv) will be present in milk if aflatoxin B₁ is present in feed.
 - a) Aflatoxin B₁
 - b) Aflatoxin M₂
 - c) Aflatoxin M₁
 - d) Aflatoxin B₂
- v) Charm test is used to detect presence of residues in milk.
 - a) Pesticide
 - b) Antibiotic
 - c) Bacteriocin
 - d) Effluent

B) Define the following (05)

- i) Critical limit
- ii) Critical control point
- iii) Food Additives (as per codex)
- iv) Hazard
- v) Quality Assurance

Q. 2 A) Elaborate the following (05)

- i) ALOP
- ii) HACCP
- iii) FSSAI
- iv) PALCAM
- v) LOD

(P.T.O.)

- B) State whether True or False. If false, rewrite the statement after making necessary corrections. (05)
- i) ISO 14000 is an Environmental Management System.
 - ii) *Salmonella* spp is not involved in causing public health significance in consumers if survive in the product.
 - iii) For BOD analysis the effluent sample is incubated at 20°C/5days in BOD incubator.
 - iv) The chlorination of water is not a suitable method for water disinfection.
 - v) Optical Biosensors measures the difference in light intensity of a bioreaction including both reactant and products.

SECTION –‘B’

- Q. 3 A) Explain the enumeration principle and detection of salmonella from dairy products. (05)
- B) Enlist the direct & indirect rapid microbiological tests used to access the microbiological quality of milk and explain any one in detail. (05)
- Q. 4 A) Discuss the factors considered to setup a microbiology laboratory. (05)
- B) What is ETP? Enlist different methods of waste water treatment and discuss any one in detail. (05)
- Q. 5 A) What is quality? Differentiate between QC and QA (03)
- B) Suggest Good Manufacturing practices (GMPs) for milk processing section. (03)
- C) Explain how quality of water influences the quality of finished product. (04)
- Q. 6 A) What is risk in food industry? Explain in brief about microbial risk analysis concept. (03)
- B) Write about the historic developments of HACCP. (03)
- C) Explain the methods used to access the quality of air in dairy industry. (04)
- Q. 7 Enlist the methods of detection of drug residues in milk and explain any two in detail. (10)
