

KATHMANDU UNIVERSITY  
End Semester Examination  
27 December 2023

Marks Scored:

Level : B.Tech.

Year : IV

Exam Roll No. :

Registration No.:

Time: 30 mins.

Course : BIOT 403

Semester : I

F. M. : 20

Date :

SECTION "A"

[20Q. × 0.75 = 15 marks]

*Encircle the most appropriate alternative from each set of choices.*

1. Scatter diagram reveals
  - a. Defects in decreasing order
  - b. Improvement in increasing order
  - c. Correlation between the values of two variables
  - d. Distribution of observed values
2. Risk management policy option excludes
  - a. Risk comparison policies
  - b. Risk balancing policies
  - c. Risk threshold policies
  - d. Risk communication policies
3. Good personal hygiene includes
  - a. Using hand sanitizers instead of hand washing
  - b. Keeping hands and cloths clean and sanitary
  - c. Wearing attractive uniforms
  - d. Cleaning and sanitizing food contact surfaces
4. Who developed "Fishbone diagram"?
  - a. Deming
  - b. Juran
  - c. Ishikawa
  - d. Crosby
5. Surveillance audit is conducted
  - a. Before certification
  - b. After three months of certification
  - c. One in six months
  - d. One in six months till the certification period is over
6. Which one of the following standard you recommend for internal quality assurance?
  - a. ISO 9000
  - b. ISO 9001
  - c. ISO 9004
  - d. ISO 14000
7. Which of the following ISO 9000 standard is not used for certification?
  - a. ISO 9001
  - b. ISO 14001
  - c. ISO 17025
  - d. ISO 22000
8. Continuous improvement is the buzzword in
  - a. Inspection
  - b. Quality control
  - c. ISO 9000 QMS
  - d. Quality assurance
9. A quality control circle (QCC) in Japan normally consists of the following number of members
  - a. 5-10
  - b. 10-15
  - c. 15-20
  - d. 20-25
10. Integrated model does not embody
  - a. Continuous improvement
  - b. Cross-functional style
  - c. Strategic planning
  - d. Evaluation
11. Which one is the weakness of individuals?
  - a. Patience
  - b. Singing
  - c. Love for possessions
  - d. Listening

12. Which one of the following statement is **NOT CORRECT** in laboratory analysis?
  - a. No quality without quality control
  - b. No quality control without measurement
  - c. Measurement without calibration
  - d. No calibration with accredited laboratories
13. Deming Award will be decided by
  - a. UNIDO
  - b. ISO
  - c. UNCTAD
  - d. JUSE
14. The portion of defectives (fraction rejected) is given by
  - a. P chart
  - b. NP chart
  - c. C chart
  - d. U chart
15. Who developed company-wide quality control?
  - a. Joseph Juran
  - b. Shewart
  - c. Kaoru Ishikawa
  - d. Fiegenbaum
16. In analytical determination, the Measured Value is equivalent to
  - a. The True Value
  - b. The Random Error
  - c. The Systematic Error
  - d. Summation of all them
17. Which one is irrelevant to laboratory accreditation?
  - a. ILAC
  - b. APLAC
  - c. UKLAS
  - d. CODEX
18. Which one is parasite?
  - a. Hepatitis
  - b. *Trichenella spirates*
  - c. *Listeria monocytogens*
  - d. *Shigella spp.*
19. Audit conducted by purchaser is called
  - a. First Party Audit
  - b. Product Audit
  - c. Second Party Audit
  - d. Third Party Audit
20. In Nepal, the SPS Notification Authority is located in
  - a. Department of Health Services
  - b. Department of Livestock Services
  - c. DFTQC
  - d. MOALD

**SECTION "B"**

[10Q. × 0.5 = 5 marks]

**Fill in the blanks.**

21. The safe limit of pesticide is determined by \_\_\_\_\_
22. HACCP is preventive and not \_\_\_\_\_
23. In Nepal, the best performing industries deserve \_\_\_\_\_
24. Foolproof preventive technique is known as \_\_\_\_\_.
25. SPS Enquiry Point in Nepal is \_\_\_\_\_
26. TBT Enquiry Point is \_\_\_\_\_.
27. U chart is used to analyze \_\_\_\_\_
28. Quality is defined as 'fitness for use' by \_\_\_\_\_
29. Business engineering concept was introduced by \_\_\_\_\_
30. American companies have an annual training duration of about \_\_\_\_\_ per person

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F.M. : 55

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SECTION "C"  
[3Q. × 7 = 21 marks]

Attempt *ANY THREE* questions:

1. Discuss the QMS requirements of ISO 9001 certification for export-oriented enzyme industry.
2. Explain the role, function and application of QCC as an important problem solving and quality improvement mechanism within the organization.
3. Elaborate the general features of ISO 22000: 2015 standard and its compatibility with FMEA for resolving safety issues of biotech enterprise.
4. Discuss the significance and use of quality improvement tools for identifying major issues and constraints in manufacturing industries.

SECTION "D"  
[6Q. × 5 = 30 marks]

Attempt *ANY SIX* questions

5. How does 'TQM Integrated Model' help implement QI scheme in the organization?
6. Justify the significance and impact of five principles of TPM Programs in manufacturing industries.
7. What are the basic requirements of MRA and Equivalence Agreement for promoting international agro-food trade?
8. Why ISO 17025 standard is a must for laboratory accreditation and generating reliable analytical output?
9. How do you get the feedback of the customers to resolve major gaps for diversifying your product model?
10. Why is it essential to determine baseline exposure of antibiotics residues in milk and meat products for combating Antimicrobial Resistance (AMR) syndrome from agro-food sector in Nepal?
11. How do you conduct exposure assessment of pesticide residue in food supply chain for averting subsequent cumulative health alignment of cancer to the consumers?

SECTION "E"

12. Distinguish between. (*ANY TWO*)
- a. ALARA and NOAEL
  - b. AOAC and IUPAC
  - c. JMPR and JECFA

[2 × 2 = 4]