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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. Food Tech.(2014 Onwards) (Sem.-6)

STATISTICAL QUALITY CONTROL

Subject Code :BTFT-601

Paper ID : [74332]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- a) What do you mean by Total quality management?
- b) Write the uses of the control chart?
- c) Write about attribute sampling plan.
- d) Draw six sigma control chart.
- e) Normal distribution.
- f) What are the types of benchmarking?
- g) What are R and p charts?
- h) Name seven QC tools.
- i) What serves the Process Capability Index (Cpk)?
- j) What is stratification in quality control?

SECTION-B

2. Write ISO 9001 application guidelines for food and drink industry. (5)
3. a) Temperature is used to measure the output of a production process. When the process is in control, the mean of the process is μ 128.5 and the standard deviation is σ 0.3. (2.5+2.5)
- Construct an \bar{x} chart if samples of size 6 are to be used.
- b) What are the various patterns of scatter diagrams?
4. a) Write the procedure to check the six sigma quality performance. (3)
b) Write note on sensory control. (2)
5. What do you mean by statistical quality control? What are its advantages? (5)
6. Write notes on :
a) Null hypothesis. (2)
b) Statistical Significance. (2)
c) Degree of freedom. (1)

SECTION-C

7. Write about the Expert Systems, characteristics of Expert Systems, capabilities of Expert Systems and components of Expert Systems.
8. Write the formula for the following SPC techniques :
a) ANOVA. b) Variance of population.
c) Coefficient of variation, d) t-test for related lots,
e) t-test for twp independent lots, f) t-test of a mean against specified value,
g) F-test, h) Standard error of means,
i) Percent coefficient of variation, j) Standard error of differences.
9. Write notes on the following control indices used in quality assurance/ control :
a) Capability index b) Net content control
c) SPC d) ISO 22000