

Total number of printed pages—4

53 (FTP 402) FPTC-II

2012 C

2013

(May)

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|--|--|--------------------|--|
| <b>CEREALS LEGUMES PROCESSING<br/>TECHNOLOGY</b> |  |                    |  |
|  |  | Paper : FPT 402    |  |
|  |  | Full Marks : 100   |  |
|  |  | Pass Marks : 30    |  |
|  |  | Time : Three hours |  |

***The figures in the margin indicate full marks  
for the questions.***

***Answer any five questions out of seven.***

***Instructions :***

- (i) Make suitable assumption(s) wherever applicable.
- (ii) Illustrate your answers with suitable sketches and examples wherever necessary.
- (iii) Preferably, write the answers in sequential order.

*Contd.*

1. (a) During evaluation of an air screen grain cleaner with two-screens, 250gm samples were collected for analysis of clean seed fraction from different outlets. Calculate the cleaning efficiency referring following data.

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| Sample Fraction | Feed (gm) | Clean grain outlet (gm) | Blower outlet (gm) | Over size outlet (gm) | Under size outlet (gm) |
|-----------------|-----------|-------------------------|--------------------|-----------------------|------------------------|
| Cleaned Seed    | 231.25    | 246.5                   | 1.25               | 4.5                   | 2.0                    |
| Impurities      | 18.75     | 3.5                     | 248.75             | 245.5                 | 248.0                  |

- (b) Explain how the food millers apply the term screening. Write down the different types of screen. 10
2. (a) What is meant by CIP ? 3
- (b) What are the various methods of cleaning practices in a Food Processing Plant ? 7
- (c) Describe a single use CIP system with advantages and disadvantages. 5+3+2
3. (a) Draw need labelled diagram of
- (i) Paddy 3+3+4

(ii) Wheat

(iii) Corn Kernel.

(b) List out the names of milling equipments used for wheat. 4

(c) Discuss different types of flour grade and their suitability for baked goods. 6

4. Differentiate the following :  $5 \times 4 = 20$

(a) Shelling and hulling

(b) Grading and Sorting

(c) Ideal Screen and Actual Screen

(d) Particle density and bulk density

(e) Rotary screen and Vibratory screen.

5. Write short notes on :  $5 \times 4 = 20$

(a) Malting of barley

(b) Sphericity

(c) Popped Corn

- (d) Rubber-roll husker
- (e) Tempering of wheat.
6. (a) Draw flow diagram of Corn-dry Milling process. 10
- (b) Draw line diagram of CFTRI process of pulse milling. 10
7. (a) What is meant by rheology ? What are its application in Food Processing ? 10
- (b) Discuss comparative cost analysis of raw and parboiled rice. 10
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