

B.VOC. DEGREE EXAMINATION, JANUARY 2019**Second Semester**

Core Course—BASIC PRINCIPLES OF FOOD ENGINEERING

(For B.Voc. Programme in Food Processing and Technology)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all the questions in one or two sentences.**Each question carries 1 mark.*

1. Define Food Engineering.
2. Explain Heat Exchanger.
3. What is Radian ?
4. What are the reasons for heating foods ?
5. How does Radiation Heat transfer occur ?
6. Define Mixing.
7. Write the types of Liquid mixers.
8. What is the advantage of Paddle agitator ?
9. What is Irradiation ?
10. Mention the use of Low Dose Irradiation.

(10 × 1 = 10 marks)

Part B*Answer any eight of the following in not more than 50 words.**Each question carries 2 marks.*

11. Name the three Engineering units.
12. Write down some of the Derived units.
13. Which mode of heat transfer takes place in fluids ?
14. What is the fastest mode of heat transfer ?
15. Explain Convective Transfer.
16. What is a Ribbon mixer ?

Turn over

17. What is the use of Clarification process ?
18. Write a note on-Powder-liquid contacting devices.
19. Mention the applications of Freeze concentration.
20. Explain Batch filtration.
21. Mention the limitations of irradiation.
22. Describe the indirect effects of Irradiation.

(8 × 2 = 16 marks)

Part C

*Answer any **six** of the following in not more than 100 words.
Each question carries 4 marks.*

23. Write a note on Dimensions.
24. List out the Seven Base units.
25. Describe Contact and Noncontact type Heat Exchangers.
26. State some advantages of Plate heat exchanger.
27. What is the purpose of Concentration process ?
28. Explain Continuous Flash Distillation.
29. What are the sources of Ionizing Radiation ?
30. Mention the divisions of Dose.

(6 × 4 = 24 marks)

Part D

*Answer any **two** of the following in not more than 400 words.
Each question carries 15 marks.*

31. Write a note on State of a System.
32. Differentiate Radiation mode and other modes of heat transfer.
33. Illustrate the different types of Mixers.
34. List the applications of Centrifugation in the food industry.
35. What does food irradiation accomplish ?

(2 × 15 = 30 marks)