11819

17579

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions : *(1)* ***All*** *questions are* ***compulsory****.*
(2) Illustrate your answers with neat sketches ***wherever*** *necessary.*
(3) Figures to the ***right*** *indicate* ***full*** *marks.*
(4) Assume suitable data, if ***necessary****.*
(5) Use of Non-programmable Electronic Pocket Calculator is ***permissible****.*
(6) Mobile Phone, Pager and any other Electronic Communication devices are ***not permissible*** *in Examination Hall.*
(7) Use of Steam tables, logarithmic, Mollier's chart, psychrometric chart is ***permitted****.*

Marks

1. Attempt **any five** : **(5×4=20)**

a) Write properties and applications of stainless steel pipes and glass pipe in dairy industry. **4**

b) Write functions of stuffing box and rotary seal in sanitary pumps. Name materials used for it. **4**

c) State necessity of homogenization. How efficiency of homogenization is measured ? **4**

d) Explain summer A.C. system with sketch. **4**

e) Write factors affecting human comfort. What are standard comfort conditions for a human body ? **4**

f) Write sources of sensible heat gain. **4**

g) Name different types of conveyors used in dairy industry with their applications. **4**

2. Attempt **any two** : **(2×8=16)**

a) Write procedure of weighing and measuring milk standards. Explain equipments used. **8**

b) Write specifications for storage tank. Explain Refrigerated storage tank and write its use. **8**

c) State function of separators. Explain warm milk separator and cold milk separator. **8**

3. Attempt **any two** : **(2×8=16)**

a) State necessity of evaporator and drying equipments. Explain its working principle. **8**

b) Write purpose of pasteurization. Explain F.D.V. UHT Pasteurizers. with sketch. **8**

c) Explain construction and working of i) Case stackers and unstackers ii) Ice cream handling unit as conveyor components. **8**

P.T.O.

Marks

4. Attempt **any two** : **(2×8=16)**

a) Explain batch freezer and continuous freezer used in ice cream manufacturing. **8**

b) Explain operation and maintenance procedure of continuous butter making equipment. **8**

c) Explain in brief :

i) ADP **2**

ii) Bypass factor **2**

iii) SHF **2**

iv) RSHF **2**

5. Attempt **any two** : **(2×8=16)**

a) State necessity of air distribution systems. Explain radial duct system with sketch. **8**

b) Write purpose and desirable properties of insulating materials. Explain any one method of applying insulation. **8**

c) With the help of psychrometric chart, find : **8**

i) Dew point temperature.

ii) Enthalpy

iii) Specific volume of air

iv) Vapour pressure of air for air having 30°C DBT and 50% RH.

6. Attempt **any four** : **(4×4=16)**

a) Explain drum drier and spray drier in brief. **4**

b) Compare single stage homogenization two stage homogenizers. **4**

c) Explain adiabatic mixing of air streams. **4**

d) List application areas of A.C. systems. **4**

e) List any four insulating materials with their properties and use. **4**

f) Explain grills and diffusers used in air distribution systems. **4**