

I. Answer the following questions:

1. Governments at various levels are providing assistance to small business by various means. By helping small industries, government aims at ----- (1)
  - a) Prevention of migration
  - b) Poverty alleviation
  - c) Employment to artisans
  - d) All of these
2. Give the full form of (1)
  - i) NCEUS
  - ii) RSBDC
3. What is the definition used by government of India for small scale Industries? (4)
4. Show would you differentiate between an ancillary unit and a tiny unit? (4)
5. State the features of cottage industries. (4)
6. Discuss the problems faced by small scale industries. (5)
7. What are the incentives provided by the Government for industries in backward and hilly areas? (6)

I. Answer the following:

5x5=25

1. Calculate the heat required to convert 3 kg of ice at  $-12^{\circ}\text{C}$  kept in a calorimeter to steam at  $100^{\circ}\text{C}$  at atmospheric pressure, Given specific heat capacity of ice =  $2100 \text{ J kg}^{-1} \text{ K}^{-1}$ . Specific heat capacity of water =  $4186 \text{ J kg}^{-1} \text{ K}^{-1}$ . Latent heat of fusion of ice =  $3.35 \times 10^5 \text{ J kg}^{-1}$  and latent heat of steam =  $2.256 \times 10^6 \text{ J kg}^{-1}$ .
2. Explain Thermal conduction with example.
3. Explain convection
4. Explain Black body radiation with graph and derive Wien's displacement law.
5. A pan filled with hot food cools from  $94^{\circ}\text{C}$  to  $86^{\circ}\text{C}$  in 2 minutes when the room temperature is at  $20^{\circ}\text{C}$ . How long will it take to cool from  $71^{\circ}\text{C}$  to  $69^{\circ}\text{C}$ ?