

S.B. Roll No.....

AIR CONDITIONING ENGG
5th Exam/RAC/5412/May'18

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Fill in the blanks.

10x1.5=15

- a. In summer comfort cooling, relative humidity should not be above than..... (40% /60%)
- b. The difference between DBT and DPT is called..... (Dew point depression/Dry bulb depression)
- c. The curved lines on a psychometric chart indicate.....(humidity/relative humidity)
- d. Heat production from a normal healthy man when asleep is about.....watts.(60/40)
- e. The rate at which body produces heat is termed as.....(heat generation/metabolic rate)
- f. The high concentration of people generally produces a.....sensible heat factor.(low/high)
- g. In comfort chart, the effective temperature is represented bylines.(vertical/diagonal)
- h. The sensible heat factor for auditorium cinema hall is generally kept as..... (0.6/0.7)
- i. During sensible cooling of air, the specific humidity..... (decreases /remains constant)
- j.is a grill provided with damper.(Register/Diffuser)

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. Explain humidification and dehumidification.
- ii. What is sensible heat load and latent heat load?
- iii. Discuss by pass factor.
- iv. What factors affect effective temperature?
- v. How do you prepare load estimation sheet?
- vi. What are the friction losses in ducts?
- vii. Explain one pipe and two pipe steam heating systems.
- viii. Write a note on dust collectors.
- ix. What do you mean by ventilation? Define its different types.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. Draw a neat diagram of split air conditioning system and explain working of different components in the circuit.
- b. What is a comfort chart? Draw the comfort chart and show the comfort zone in it.
- c. What are different types of heat load in buildings?
- d. Explain the different types of heating systems.
- e. What are different methods of air conditioning duct design? Explain them.