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188452

1st Sem, Level 5 / DVOC (Ref. & Air Cond.)

Subject : Basics of Air Conditioning

Time : 2 Hrs. M.M. : 50

SECTION-A

Note: Very short questions. Attempt all ten questions. (10x1=10)

Q.1 Give two applications of Air conditioning.

Q.2 Define Wet Bulb Temperature.

Q.3 What do you mean by saturated air?

Q.4 Define sensible heating.

Q.5 What do you understand by humidification?

Q.6 Define degree of saturation.

Q.7 Give the significance of relative humidity.

Q.8 Define specific volume.

Q.9 In order to humidify a moist air, it must pass over a coil at a temeparture _____ than dew point.

Q.10 The curved lines on a psychrometric chart indicates _____

SECTION-B

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 Explain Dalton's law of partial pressures and its appplication.

Q.12 Explain the methods of dehumidification of air, with the device.

Q.13 Write short note on composition of air.

Q.14 What are the various factors which affect human comfort.

Q.15 Explain window type package air conditioner.

Q.16 Explain By-pass factor.

Q.17 Give the advantages and disadvantages of central air-conditioning?

Q.18 Explain the functional difference between thermostat and overload protector as used in air conditioning systems.

SECTION-C

Note: Long answer questions. Attempt any one questions out of two questions. (1x10=10)

Q.19 What are the various types of heat loads. Explain their relations.

Q.20 A mixture of dry air and water vapour has dry bulb temperature of 20 degree Celsius under a total pressure of 740mm of hg and dew point temperature is 15 degree celcius. Calculate:

a) Partial pressure of water vapour

b) Relative humidity

c) Specific humidity

d) Enthalpy of air per kg of dry air

e) Specific volume of air per kg of dry air