



## Department of Electrical and Electronics Engineering

### EE 8015 – Electric Energy Generation Utilization and Conservation

#### Unit II – MCQ Bank

1. Which of the following is not the type of refrigerant?

- (A) Organic refrigerants
- (B) Inorganic refrigerants
- (C) Azeotrope refrigerants
- (D) Halo-helium refrigerants**

**Answer: (D)**

2. The refrigerants which are first cooled by \_\_\_\_\_ refrigerants and then used for cooling purposes are known as \_\_\_\_\_ refrigerants.

- (A) secondary, primary
- (B) primary, secondary**
- (C) tertiary, primary
- (D) secondary, tertiary

**Answer: (B)**

3. Which one of the following inorganic refrigerants is often used?

- (A)  $\text{NH}_3$**
- (B)  $\text{CO}_2$
- (C)  $\text{H}_2\text{O}$
- (D)  $\text{SO}_2$

**Answer: (A)**

4. From the following refrigerants, which is one of the most stable refrigerants?

- (A) Ammonia
- (B) R – 12
- (C) Carbon dioxide

**(D) Sulphur dioxide**

**Answer: (D)**

5. In the presence of which of the following, Sulphur dioxide becomes corrosive?

(A) R – 12

(B) Ammonia

**(C) Water**

(D) Carbon dioxide

**Answer: (C)**

6. Which of the following is true about refrigerants?

(A) Should be corrosive

(B) Should not be stable

(C) Should have high viscosity

**(D) Should have low viscosity**

**Answer: (D)**

7. What is the criterion to find out leakage of ammonia?

(A) Solubility

(B) Corrosiveness

(C) Colour

**(D) Odour**

**Answer: (D)**

8. Which of the following has the highest thermal conductivity at a liquid temperature of 40°C?

(A) R – 22

(B) R – 113

(C) R – 12

**(D) R – 11**

**Answer: (D)**

9. \_\_\_\_\_ is widely used in large industrial plants such as cold storages and ice plants as per the cost basis.

- (A) R – 40
- (B) R – 717**
- (C) R – 744
- (D) R – 764

**Answer: (B)**

10. Where is the reciprocating compressor mostly suitable?

- (A) Small displacements and low condensing pressures
- (B) Small displacements and high condensing pressures**
- (C) Large displacements and low condensing pressures
- (D) Large displacements and high condensing pressures

**Answer: (B)**

11. What is the required condenser and evaporator pressure ratio for reciprocating compressors?

- (A)  $> 1.5$  bar
- (B)  $< 1.5$  bar
- (C) 1 bar
- (D)  $> 3.5$  bar**

**Answer: (D)**

12. Which of the following is the condition to use two compressors in the refrigeration system?

- (A) The desired temperature is  $3^{\circ}\text{C}$
- (B) The desired temperature is  $-3^{\circ}\text{C}$
- (C) The desired temperature is  $-50^{\circ}\text{C}$**
- (D) The desired temperature is  $-5^{\circ}\text{C}$

**Answer: (C)**

13. Centrifugal compressors are used to handle \_\_\_\_\_ volume of refrigerant.

- (A) small
- (B) medium
- (C) large**
- (D) very large

**Answer: (C)**

14. Which of the following cooling towers possess maximum heat transfer from air to water?

- (A) Natural Draft
- (B) Mechanical Draft**
- (C) Natural and Mechanical Draft
- (D) Atmospheric Draft

**Answer: (B)**

15. What is the difference between the temperature of entering and leaving water in the cooling tower?

- (A) Wet-bulb temperature
- (B) Dry bulb temperature
- (C) Approach
- (D) Range**

**Answer: (D)**

16. Which of the following is true about the optimum effective temperature for human comfort?

- (A) Same in winter and summer
- (B) Not dependent on season
- (C) Lower in winter than in summer**
- (D) Higher in winter than in summer

**Answer: (C)**

17. When the heat stored in the body is \_\_\_\_\_ the human body feels comfortable.

- (A) zero**
- (B) infinite
- (C) positive
- (D) negative

**Answer: (A)**

18. Room air conditioners and packaged units are examples of \_\_\_\_\_

- (A) Direct expansion systems**
- (B) Indirect expansion systems
- (C) Chilled water systems
- (D) Indirect contraction systems

**Answer: (A)**

19. In which component of the chilled water system, the return air and the fresh air mixture is filtered?

**(A) Fan coil unit**

(B) Ducting grill

(C) Compressor

(D) Evaporator

**(Answer: (A))**

20. Which of the following qualities is not possessed by the filters in the air conditioning system?

(A) They should be capable of removing dust particles from the incoming air

(B) They should afford easy cleaning

(C) They should offer low frictional resistance to the airflow

**(D) They should offer high frictional resistance to the airflow**

**Answer: (D)**

21. Which of the following types of filters used in the air conditioning system is made of cloth that is discarded on getting dirty?

(A) Viscous type filters

**(B) Dry filter**

(C) Spray washers

(D) Electric precipitators

**Answer: (B)**

22. Which of the following statements about electric precipitators is false?

(A) They are used to remove dust by providing a strong electric field

(B) Their initial installation cost is high

(C) Their operational cost is low

**(D) Dust particles get attached to the positive electrode.**

**Answer: (D)**

23. The process of extraction of the certain required amount of water from air is known as \_\_\_\_\_

(A) Heating

(B) Cooling

(C) Humidification

**(D) Dehumidification**

**Answer: (D)**

24. Which of the following is capable of absorbing excess moisture from the air?

- (A) Silica gel
- (B) Charcoal
- (C) Salts of calcium or ammonia**
- (D) Activated alumina

**Answer: (C)**

25. Air refrigerator works on.....

- (A) Carnot cycle
- (B) Rankine cycle
- (C) Reversed Carnot cycle
- (D) Bell-Coleman cycle
- (E) Both C and D**

**Answer: (E)**

26. In refrigeration cycle, the flow of refrigerant is controlled by ....

- (A) Condenser
- (B) Compressor
- (C) Evaporator
- (D) Expansion valve**

**Answer: (D)**

27. Absorption system normally uses following refrigerant....

- (A) CO<sub>2</sub>
- (B) SO<sub>2</sub>
- (C) Freon-11
- (D) Freon-22
- (E) Ammonia**

**Answer: (E)**

28. The vapour pressure of the refrigerant should be.....

(A) Lower than atmospheric pressure

**(B) Higher than atmospheric pressure**

(C) Equal than atmospheric pressure

(D) None of the above

**Answer: (B)**

29. The bank of tube at the back of domestic refrigerator are.....

**(A) Condenser tube**

(B) Evaporator tube

(C) Refrigerant cooling tubes

(D) Capillary tubes

**Answer: (A)**

30. Horse power per ton of refrigeration is expressed as.....

**(A) 4.75/COP**

(B) COP/4.75

(C) 4.75 x COP

(D) 47.5/COP

**Answer: (A)**