CBSE Class 12 Air-Conditioning and Refrigeration 2018 - Set 113

Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 2 Hours **Maximum Marks: 40**

General Instructions

(i) Section A: attempt any thirteen questions (1 mark each).
(ii) Section B: answer any four questions (2 marks each).
(iii) Section C: answer any three questions (3 marks each).
(iv) Section D: answer any two questions (5 marks each).

Section A

*Attempt any **thirteen** questions. 1×13=13*

1. Which of the following is the capacity of an air-conditioner ?

(A) Ton
(B) Consumption of power
(C) Quantity of air delivered
(D) Its weight

2. In which part of the air-conditioner does expansion of refrigerant take place ?

(A) Compressor
(B) Evaporator
(C) Condenser
(D) Fan

3. Which of the following is ***not*** a duct system ?

(A) Loop perimeter duct system
(B) Radial perimeter duct system
(C) Extended plenum duct system
(D) Overboard duct system

4. Which of the following is ***not*** a sensing element ?

(A) Thermostat
(B) Bulb and Bellow
(C) Hair
(D) Relay

5. Which of the following is ***not*** a motor control device ?

(A) Starter
(B) Relay
(C) Capacitor
(D) Damper

6. Which of the following is ***not*** a control device in a refrigeration system ?

(A) Sensing element
(B) Actuating element
(C) Regulating element
(D) Recording element

7. Which of the following is called the heat gain through solar radiation ?

(A) Sensible heat gain
(B) Latent heat gain
(C) Sensible and latent heat gain
(D) Radiation heat gain

8. Which of the following is a flow control device for refrigerants ?

(A) Automatic expansion valve
(B) Thermostatic expansion valve
(C) Solenoid valve
(D) Relief valve

9. Which of the following types of compressors is used in a domestic refrigerator ?

(A) Reciprocating compressor
(B) Centrifugal compressor
(C) Rotary compressor
(D) Hermetically sealed compressor

10. Which of the following refrigerants is used in a domestic refrigerator ?

(A) Freon
(B) Ammonia
(C) Carbon dioxide
(D) Propylene

11. Which of the following is ***not*** a method of gas leak detection ?

(A) Halide torch
(B) Electronic gas leak detector
(C) Applying soap solution
(D) Colour change of applied chemical

12. If the motor of a refrigerator is working but no cooling is produced, then which of the following ***cannot*** be the reason ?

(A) Leaked gas
(B) Blockage in line
(C) Defective thermostat

13. Which of the following is ***not*** an air conditioning system based on seasons ?

(A) Summer air conditioning
(B) Autumn air conditioning
(C) Winter air conditioning
(D) All year round air conditioning

14. Which type of condenser from the following is a shell and tube condenser ?

(A) Water-cooled condenser
(B) Air-cooled condenser
(C) Evaporative condenser

15. Which of the following is ***not*** a type of filter ?

(A) Viscous filter
(B) Dry filter
(C) Electric filter
(D) Magnetic filter

Section B

*Answer any **four** questions. 2×4=8*

16. Which device is used to control temperature in a refrigeration system ?

17. Solenoid is a device to control flow. Is it true or false ?

18. Name any two sensing elements.

19. Which device is used to protect a/the compressor from overload ?

20. What is the function of a humidifier ?

21. Which device is used to start an electric motor ?

Section C

*Answer any **three** questions. 3×3=9*

22. Where is central air conditioning used ?

23. What is the function of a choke in an electrical system ?

24. Name any three tools used in refrigeration work.

25. How does cooled air reach the air-conditioned space ?

26. Name the measuring devices used in refrigeration.

Section D

*Answer any **two** questions. 5×2=10*

27. What is the function of an evaporator in a refrigeration system ? Which types of evaporators are used ?

28. Explain various sources of heat load in an air-conditioning system.

29. Explain Bypass control. When is it used ?

30. How is preventive maintenance carried out in an air-conditioning system ?

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