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C09-M-606A

3784

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DME - SIXTH SEMESTER EXAMINATION

REFRIGERATION AND AIR-CONDITIONING

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **four** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Represent Bell-Coleman refrigeration cycle on p-v diagram.
2. List the disadvantages of air refrigeration.
3. Represent vapour compression system on p-h diagram.
4. Name four important components of a vapour absorption system.
5. What is dry compression?
6. List three important properties of a refrigerant.
7. How do you classify condensers used in VCR?
8. Differentiate primary and secondary refrigerants.
9. List any four psychrometric processes.
10. Define air-conditioning.

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PART—B

15×4=60

- Instructions :** (1) Answer *any four* questions.
(2) Each question carries **fifteen** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. List and explain any two methods of refrigeration.
12. Explain the principle of electrolux refrigerator with a neat sketch.
13. Explain the working of vapour compression system with a line diagram.
14. Explain the working principle of domestic refrigerator with a neat line diagram.
15. List and explain the properties and applications of two types of refrigerants.
16. Explain centrifugal dust collector with the help of neat sketch.
17. Define the following terms (a) dry bulb temperature, (b) wet bulb temperature and (c) relative humidity. Represent them on psychrometric chart.
18. Explain the working of window type air-conditioner with a neat sketch.

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