

GANPAT UNIVERSITY
B. Tech. Semester: IV Marine Engineering
Regular Examination April – June 2017
2MR601 Refrigeration & Air Conditioning

Time: 3 Hours

Total Marks: 60

- Instruction:** (1) Attempt all Questions.
 (2) Assume suitable data if necessary.
 (3) Figure to the right indicates full Marks.
 (4) Start new Question on New Page.1

Section – I

- Que. – 1** (a) Comparison between VAR and VCR system. [5]
 (b) Describe psychometric chart. [5]

OR

- Que. – 1** With neat sketch explain construction and working of VCR system [10]
Que. – 2 (a) Explain thermostatic expansion valve with neat sketch. [5]
 (b) Describe in brief properties of commonly used refrigerant [5]

OR

- Que. – 2** Describe with a diagram the use of Secondary Refrigerant and give reasons as to why Secondary refrigerants are used in Marine Industry. [10]
Que. – 3 With neat sketch explain construction and working of VAR system [10]

Section – II

- Que. – 4** (a) Draw Diagram of typical Refrigeration circuit used in Marine Application and describe all components in brief. [5]
 (b) Define following term related to psychrometry [5]
 (i) Wet bulb temperature (ii) dry bulb temperature
 (iii) Relative humidity (iv) Specific humidity (v) dew point temperature

OR

- Que. – 4** Enlist safety precautions while working on Refrigeration Equipments [10]
Que. – 5 (a) Explain brief Designation of refrigerant [5]
 (b) Give difference between primary and secondary refrigeration [5]

OR

- Que. – 5** With the help of diagram explain single Duct Air conditioning system. [10]
Que. – 6 Describe eco friendly refrigerant [10]

END OF PAPER