Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: **2020-21 B Tech**	**School of Technology**	**Department:** **Mechanical**
Course Code: **MET 403**	**Course Title:** **Refrigeration and Air Conditioning (RAC)**	**Semester :** **VII**
Day : Tuesday **Date :22/12/2020**	**End Semester Examination**	**Time : 2Hrs.** **Max Marks: 50**

Instructions: 1) All Questions arecompulsory.
2) Use of Scientific calculator (non programable) isallowed.
3) Use of p h chart, Psychrometry chart and data book ispermitted.

		Marks	Bloom's Level	CO
Q.1	**Answer the following (any Two)–**			
a)	Explain Reverse Carnot cycle with Sketch and T S diagram also write the limitations of it.	8	L2	1
b)	Write short note on i. Coldstorage ii. Transport refrigerated vehicles.	8	L2	1
c)	Explain the effect of evaporator pressure and condenser pressure on the performance of the vapour compression refrigeration system.	8	L2	2
Q.2	**Answer the following (any two) –**			
a)	Describe the desirable properties of refrigerants.	8	L2	3
b)	Explain the Effect of refrigerants on Ozone depletion and global warming.	8	L2	3
c)	Explain the psychrometric properties of moist air.	8	L2	4
Q.3	**Answer the following (any two) –**			
a)	Consider a case study of building an air conditioning system for a home and find the sensible heat addition and latent heat addition loads (cooling load estimation).	9	L3	5
b)	Explain with neat sketch Re-circulated air and Ventilation air applied in air-conditioned multiplex theaters.	9	L3	5
c)	Explain with neat sketch the colling load estimation for: i. Hospitals ii. Assemblyshop	9	L3	3

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