

Code No: 56018

Set No. 1

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**III B.Tech. II Sem., II Mid-Term Examinations, April – 2014**

**REFRIGERATION AND AIR CONDITIONING**

**Objective Exam**

Name: \_\_\_\_\_ Hall Ticket No. 

						A			
--	--	--	--	--	--	---	--	--	--

**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. The wet bulb temperature during sensible heating of air \_\_\_\_\_ [      ]  
(A) Remains constant      (B) increases      (C) decreases      (D) none of the above
2. The humidity ratio or specific humidity is the mass of water vapour present in \_\_\_\_\_ [      ]  
(A) 1 m<sup>3</sup> of wet air      (B) 1 m<sup>3</sup> of dry air      (C) 1 kg of wet air      (D) 1 kg of dry air
3. The difference between dry bulb temperature and wet bulb temperature, is called \_\_\_\_\_ [      ]  
(A) dry bulb depression      (B) wet bulb depression  
(C) dew point depression      (D) degree of saturation
4. As relative humidity decreases, the dew point temperature will be \_\_\_\_\_ wet bulb temperature [      ]  
(A) same as      (B) lower than      (C) higher than      (D) none of the above
5. Air conditioning is concerned with maintaining \_\_\_\_\_ [      ]  
(A) temperature      (B) humidity      (C) cleanliness      (D) all the above
6. In a psychrometric process, the sensible heat added is 30 kJ/s and the latent heat added is 20 kJ/s. the sensible heat factor for the process will be \_\_\_\_\_ [      ]  
(A) 0.3      (B) 0.6      (C) 0.67      (D) 1.5
7. A heat pump working on a reversed Carnot cycle has a C.O.P. of 5. It works as a refrigerator taking 1 kW of work input. The refrigerating effect will be \_\_\_\_\_ [      ]  
(A) 1 kW      (B) 2 kW      (C) 3 kW      (D) 4 Kw
8. The curved lines on a psychrometric chart indicates \_\_\_\_\_ [      ]  
(A) dry bulb temperature      (B) wet bulb temperature  
(C) dew point temperature      (D) relative humidity
9. Air conditioning means \_\_\_\_\_ [      ]  
(A) cooling      (B) heating      (C) dehumidifying      (D) all the above
10. The conditioned air supplied to the room must have the capacity to take up \_\_\_\_\_ [      ]  
(A) room sensible heat load only      (B) room latent heat load only  
(C) both room sensible heat and latent heat loads      (D) none of the above

**Cont.....2**

**II Fill in the blanks**

11. Dehumidification is the process of removing moisture from air with dry bulb temperature \_\_\_\_\_.
12. For unsaturated air, wet bulb temperature is \_\_\_\_\_ than dew point.
13. On psychometric chart, dry bulb temperature lines are \_\_\_\_\_.
14. Humidity ratio is also called \_\_\_\_\_.
15. While designing air conditioning systems it should be ensured that oxygen concentration should not fall below \_\_\_\_\_ percent and carbon dioxide concentration should not exceed \_\_\_\_\_ percent.
16. Process of adding heat to moist air at the same specific humidity, is known as \_\_\_\_\_.
17. A cooling tower cools water upto temperature \_\_\_\_\_ than as compared to wet bulb temperature.
18. The weight of water vapour per unit volume is known as \_\_\_\_\_.
19. The ratio of sensible heat of air to the total heat is known as \_\_\_\_\_.
20. Humidifying efficiency is \_\_\_\_\_.

Code No: 56018

Set No. 2

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**III B.Tech. II Sem., II Mid-Term Examinations, April – 2014**

**REFRIGERATION AND AIR CONDITIONING**

**Objective Exam**

Name: \_\_\_\_\_ Hall Ticket No. 

						A			
--	--	--	--	--	--	---	--	--	--

**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. As relative humidity decreases, the dew point temperature will be \_\_\_\_\_ wet bulb temperature [      ]  
(A) same as      (B) lower than      (C) higher than      (D) none of the above
2. Air conditioning is concerned with maintaining [      ]  
(A) temperature      (B) humidity      (C) cleanliness      (D) all the above
3. In a psychrometric process, the sensible heat added is 30 kJ/s and the latent heat added is 20 kJ/s. the sensible heat factor for the process will be [      ]  
(A) 0.3      (B) 0.6      (C) 0.67      (D) 1.5
4. A heat pump working on a reversed Carnot cycle has a C.O.P. of 5. It works as a refrigerator taking 1 kW of work input. The refrigerating effect will be [      ]  
(A) 1 kW      (B) 2 kW      (C) 3 kW      (D) 4 Kw
5. The curved lines on a psychrometric chart indicates [      ]  
(A) dry bulb temperature      (B) wet bulb temperature  
(C) dew point temperature      (D) relative humidity
6. Air conditioning means [      ]  
(A) cooling      (B) heating      (C) dehumidifying      (D) all the above
7. The conditioned air supplied to the room must have the capacity to take up [      ]  
(A) room sensible heat load only      (B) room latent heat load only  
(C) both room sensible heat and latent heat loads      (D) none of the above
8. The wet bulb temperature during sensible heating of air \_\_\_\_\_ [      ]  
(A) Remains constant      (B) increases      (C) decreases      (D) none of the above
9. The humidity ratio or specific humidity is the mass of water vapour present in [      ]  
(A) 1 m<sup>3</sup> of wet air      (B) 1 m<sup>3</sup> of dry air      (C) 1 kg of wet air      (D) 1 kg of dry air
10. The difference between dry bulb temperature and wet bulb temperature, is called [      ]  
(A) dry bulb depression      (B) wet bulb depression  
(C) dew point depression      (D) degree of saturation

**Cont.....2**

**II Fill in the blanks**

11. Humidity ratio is also called \_\_\_\_\_.
12. While designing air conditioning systems it should be ensured that oxygen concentration should not fall below \_\_\_\_\_ percent and carbon dioxide concentration should not exceed \_\_\_\_\_ percent.
13. Process of adding heat to moist air at the same specific humidity, is known as \_\_\_\_\_.
14. A cooling tower cools water upto temperature \_\_\_\_\_ than as compared to wet bulb temperature.
15. The weight of water vapour per unit volume is known as \_\_\_\_\_.
16. The ratio of sensible heat of air to the total heat is known as \_\_\_\_\_.
17. Humidifying efficiency is \_\_\_\_\_.
18. Dehumidification is the process of removing moisture from air with dry bulb temperature \_\_\_\_\_.
19. For unsaturated air, wet bulb temperature is \_\_\_\_\_ than dew point.
20. On psychometric chart, dry bulb temperature lines are \_\_\_\_\_.

Code No: 56018

Set No. 3

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**III B.Tech. II Sem., II Mid-Term Examinations, April – 2014**

**REFRIGERATION AND AIR CONDITIONING**

**Objective Exam**

Name: \_\_\_\_\_ Hall Ticket No. 

						A			
--	--	--	--	--	--	---	--	--	--

**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.**

**I Choose the correct alternative:**

1. In a psychrometric process, the sensible heat added is 30 kJ/s and the latent heat added is 20 kJ/s. the sensible heat factor for the process will be [      ]  
(A) 0.3                      (B) 0.6                      (C) 0.67                      (D) 1.5
2. A heat pump working on a reversed Carnot cycle has a C.O.P. of 5. It works as a refrigerator taking 1 kW of work input. The refrigerating effect will be [      ]  
(A) 1 kW                      (B) 2 kW                      (C) 3 kW                      (D) 4 Kw
3. The curved lines on a psychrometric chart indicates [      ]  
(A) dry bulb temperature                      (B) wet bulb temperature  
(C) dew point temperature                      (D) relative humidity
4. Air conditioning means [      ]  
(A) cooling                      (B) heating                      (C) dehumidifying                      (D) all the above
5. The conditioned air supplied to the room must have the capacity to take up [      ]  
(A) room sensible heat load only                      (B) room latent heat load only  
(C) both room sensible heat and latent heat loads                      (D) none of the above
6. The wet bulb temperature during sensible heating of air \_\_\_\_\_ [      ]  
(A) Remains constant                      (B) increases                      (C) decreases                      (D) none of the above
7. The humidity ratio or specific humidity is the mass of water vapour present in [      ]  
(A) 1 m<sup>3</sup> of wet air                      (B) 1 m<sup>3</sup> of dry air                      (C) 1 kg of wet air                      (D) 1 kg of dry air
8. The difference between dry bulb temperature and wet bulb temperature, is called [      ]  
(A) dry bulb depression                      (B) wet bulb depression  
(C) dew point depression                      (D) degree of saturation
9. As relative humidity decreases, the dew point temperature will be \_\_\_\_\_ wet bulb temperature [      ]  
(A) same as                      (B) lower than                      (C) higher than                      (D) none of the above
10. Air conditioning is concerned with maintaining [      ]  
(A) temperature                      (B) humidity                      (C) cleanliness                      (D) all the above

**Cont.....2**

**II Fill in the blanks**

11. Process of adding heat to moist air at the same specific humidity, is known as \_\_\_\_\_.
12. A cooling tower cools water upto temperature \_\_\_\_\_ than as compared to wet bulb temperature.
13. The weight of water vapour per unit volume is known as \_\_\_\_\_.
14. The ratio of sensible heat of air to the total heat is known as \_\_\_\_\_.
15. Humidifying efficiency is \_\_\_\_\_.
16. Dehumidification is the process of removing moisture from air with dry bulb temperature \_\_\_\_\_.
17. For unsaturated air, wet bulb temperature is \_\_\_\_\_ than dew point.
18. On psychometric chart, dry bulb temperature lines are \_\_\_\_\_.
19. Humidity ratio is also called \_\_\_\_\_.
20. While designing air conditioning systems it should be ensured that oxygen concentration should not fall below \_\_\_\_\_ percent and carbon dioxide concentration should not exceed \_\_\_\_\_ percent.

Code No: 56018

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

III B.Tech. II Sem., II Mid-Term Examinations, April – 2014

REFRIGERATION AND AIR CONDITIONING

Objective Exam

Name: \_\_\_\_\_ Hall Ticket No. 

						A			
--	--	--	--	--	--	---	--	--	--

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

**I Choose the correct alternative:**

1. The curved lines on a psychrometric chart indicates [      ]  
(A) dry bulb temperature (B) wet bulb temperature  
(C) dew point temperature (D) relative humidity
2. Air conditioning means [      ]  
(A) cooling (B) heating (C) dehumidifying (D) all the above
3. The conditioned air supplied to the room must have the capacity to take up [      ]  
(A) room sensible heat load only (B) room latent heat load only  
(C) both room sensible heat and latent heat loads (D) none of the above
4. The wet bulb temperature during sensible heating of air \_\_\_\_\_ [      ]  
(A) Remains constant (B) increases (C) decreases (D) none of the above
5. The humidity ratio or specific humidity is the mass of water vapour present in [      ]  
(A) 1 m<sup>3</sup> of wet air (B) 1 m<sup>3</sup> of dry air (C) 1 kg of wet air (D) 1 kg of dry air
6. The difference between dry bulb temperature and wet bulb temperature, is called [      ]  
(A) dry bulb depression (B) wet bulb depression  
(C) dew point depression (D) degree of saturation
7. As relative humidity decreases, the dew point temperature will be \_\_\_\_\_ wet bulb temperature [      ]  
(A) same as (B) lower than (C) higher than (D) none of the above
8. Air conditioning is concerned with maintaining [      ]  
(A) temperature (B) humidity (C) cleanliness (D) all the above
9. In a psychrometric process, the sensible heat added is 30 kJ/s and the latent heat added is 20 kJ/s. the sensible heat factor for the process will be [      ]  
(A) 0.3 (B) 0.6 (C) 0.67 (D) 1.5
10. A heat pump working on a reversed Carnot cycle has a C.O.P. of 5. It works as a refrigerator taking 1 kW of work input. The refrigerating effect will be [      ]  
(A) 1 kW (B) 2 kW (C) 3 kW (D) 4 Kw

**Cont.....2**

**II Fill in the blanks**

11. The weight of water vapour per unit volume is known as \_\_\_\_\_.
12. The ratio of sensible heat of air to the total heat is known as \_\_\_\_\_.
13. Humidifying efficiency is \_\_\_\_\_.
14. Dehumidification is the process of removing moisture from air with dry bulb temperature \_\_\_\_\_.
15. For unsaturated air, wet bulb temperature is \_\_\_\_\_ than dew point.
16. On psychometric chart, dry bulb temperature lines are \_\_\_\_\_.
17. Humidity ratio is also called \_\_\_\_\_.
18. While designing air conditioning systems it should be ensured that oxygen concentration should not fall below \_\_\_\_\_ percent and carbon dioxide concentration should not exceed \_\_\_\_\_ percent.
19. Process of adding heat to moist air at the same specific humidity, is known as \_\_\_\_\_.
20. A cooling tower cools water upto temperature \_\_\_\_\_ than as compared to wet bulb temperature.