Code No: 56020 **Set No. 1**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

HEAT TRANSFER

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. Free convection heat flow depends on all of the following, except [ ]
   (A) density (B) coefficient of viscosity
   (C) gravitational force (D) velocity

2. The free convection heat transfer is significally affected by [ ]
   (A) reynolds number (B) grashof number (C) prandtl number (D) Stanton number

3. Which of the following heat flow situations pertains to free convection [ ]
   (A) cooling of IC engine (B) flow of water inside the condenser tubes
   (C) cooling of billets in atmosphere (D) air conditioning installations & nuclear reactors

4. Dropwise condensation usually occurs on [ ]
   (A) glazed surface (B) smooth surface (C) oily surface (D) coated surface

5. Milk spills over when it is boiled in an open vessel. The boiling of milk at this instant is referred to as [ ]
   (A) interface evaporation (B) sub-cooled boiling
   (C) film boiling (D) saturated nucleate boiling

6. The steam condenser in a thermal power plant is a heat exchange of the type [ ]
   (A) direct contact (B) regenerator (C) recuperator (D) none of these

7. The normal automobile radiator is a heat exchanger of the type [ ]
   (A) direct contact (B) parallel flow (C) counter flow (D) cross flow

8. Temperature near absolute zero are obtained using [ ]
   (A) peltier effect (B) thermionic emission (C) azeotropes (D) magnetic cooling

9. Heat transfer by radiation is encountered least in [ ]
   (A) boiler furnace (B) insulated steam pipe (C) electric bulb (D) nuclear reactor

10. For a gray surface [ ]
    (A) emissivity is constant (B) absorptivity equals reflectivity
    (C) emissivity equals transmissivity (D) reflectivity equals emissivity

Cont……2

II Fill in the blanks

11. For free convection, Nusselt number is a function of Prandtl and _____ number

12. In a heat exchanger with one fluid evaporating or conducting the surface are required is least in _____ type.

13. The convective heat transfer process that involves a phase change from liquid to vapour state is called _____

14. The convective coeffient for boiling and condensation usually lie in the range _____ W/m^2 k

15. In condensation over a vertical surface the value of convection coefficient varies as _____

16. The requirement of transfer of large heat is usually met by having _____ tube

17. For evaporators and condensers, for the given conditions, the LMTD for parallel flow is _____ that for counter flow

18. A radiation shield should have high _____

19. The surface temperature of sun is nearly _____ degree Kelvin

20. If the temperature of hot body is increased by 50% , the amount of radiation emitted by it would increase by nearly _____ %

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Code No: 56020 **Set No. 2**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

HEAT TRANSFER

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. Dropwise condensation usually occurs on [ ]
(A) glazed surface (B) smooth surface (C) oily surface (D) coated surface

2. Milk spills over when it is boiled in an open vessel. The boiling of milk at this instant is referred to as [ ]
(A) interface evaporation (B) sub-cooled boiling
(C) film boiling (D) saturated nucleate boiling

3. The steam condenser in a thermal power plant is a heat exchange of the type [ ]
(A) direct contact (B) regenerator (C) recuperator (D) none of these

4. The normal automobile radiator is a heat exchanger of the type [ ]
(A) direct contact (B) parallel flow (C) counter flow (D) cross flow

5. Temperature near absolute zero are obtained using [ ]
(A) peltier effect (B) thermionic emission (C) azeotropes (D) magnetic cooling

6. Heat transfer by radiation is encountered least in [ ]
(A) boiler furnace (B) insulated steam pipe (C) electric bulb (D) nuclear reactor

7. For a gray surface [ ]
(A) emissivity is constant (B) absorptivity equals reflectivity
(C) emissivity equals transmissivity (D) reflectivity equals emissivity

8. Free convection heat flow depends on all of the following, except [ ]
(A) density (B) coefficient of viscosity
(C) gravitational force (D) velocity

9. The free convection heat transfer is significally affected by [ ]
(A) reynolds number (B) grashof number (C) prandtl number (D) Stanton number

10. Which of the following heat flow situations pertains to free convection [ ]
(A) cooling of IC engine (B) flow of water inside the condenser tubes
(C) cooling of billets in atmosphere (D) air conditioning installations & nuclear reactors

Cont……2

II Fill in the blanks

11. The convective coeffient for boiling and condensation usually lie in the range _____ W/m^2 k

12. In condensation over a vertical surface the value of convection coefficient varies as _____

13. The requirement of transfer of large heat is usually met by having _____ tube

14. For evaporators and condensers, for the given conditions, the LMTD for parallel flow is _____ that for counter flow

15. A radiation shield should have high _____

16. The surface temperature of sun is nearly _____ degree Kelvin

17. If the temperature of hot body is increased by 50% , the amount of radiation emitted by it would increase by nearly _____ %

18. For free convection, Nusselt number is a function of Prandtl and _____ number

19. In a heat exchanger with one fluid evaporating or conducting the surface are required is least in _____ type.

20. The convective heat transfer process that involves a phase change from liquid to vapour state is called _____

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Code No: 56020 **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

HEAT TRANSFER

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 steam condenser in a thermal power plant is a heat exchange of the type [ ]
(A) direct contact (B) regenerator (C) recuperator (D) none of these

2. The normal automobile radiator is a heat exchanger of the type [ ]
(A) direct contact (B) parallel flow (C) counter flow (D) cross flow

3. Temperature near absolute zero are obtained using [ ]
(A) peltier effect (B) thermionic emission (C) azeotropes (D) magnetic cooling

4. Heat transfer by radiation is encountered least in [ ]
(A) boiler furnace (B) insulated steam pipe (C) electric bulb (D) nuclear reactor

5. For a gray surface [ ]
(A) emissivity is constant (B) absorptivity equals reflectivity
(C) emissivity equals transmissivity (D) reflectivity equals emissivity

6. Free convection heat flow depends on all of the following, except [ ]
(A) density (B) coefficient of viscosity
(C) gravitational force (D) velocity

7. The free convection heat transfer is significally affected by [ ]
(A) reynolds number (B) grashof number (C) prandtl number (D) Stanton number

8. Which of the following heat flow situations pertains to free convection [ ]
(A) cooling of IC engine (B) flow of water inside the condenser tubes
(C) cooling of billets in atmosphere (D) air conditioning installations & nuclear reactors

9. Dropwise condensation usually occurs on [ ]
(A) glazed surface (B) smooth surface (C) oily surface (D) coated surface

10. Milk spills over when it is boiled in an open vessel. The boiling of milk at this instant is referred to as [ ]
(A) interface evaporation (B) sub-cooled boiling
(C) film boiling (D) saturated nucleate boiling

Cont……2

II Fill in the blanks

11. The requirement of transfer of large heat is usually met by having _____ tube

12. For evaporators and condensers, for the given conditions, the LMTD for parallel flow is _____ that for counter flow

13. A radiation shield should have high _____

14. The surface temperature of sun is nearly _____ degree Kelvin

15. If the temperature of hot body is increased by 50% , the amount of radiation emitted by it would increase by nearly _____ %

16. For free convection, Nusselt number is a function of Prandtl and _____ number

17. In a heat exchanger with one fluid evaporating or conducting the surface are required is least in _____ type.

18. The convective heat transfer process that involves a phase change from liquid to vapour state is called _____

19. The convective coeffient for boiling and condensation usually lie in the range _____ W/m^2 k

20. In condensation over a vertical surface the value of convection coefficient varies as _____

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Code No: 56020 **Set No. 4**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

HEAT TRANSFER

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. Temperature near absolute zero are obtained using [ ]
(A) peltier effect (B) thermionic emission (C) azeotropes (D) magnetic cooling

2. Heat transfer by radiation is encountered least in [ ]
(A) boiler furnace (B) insulated steam pipe (C) electric bulb (D) nuclear reactor

3. For a gray surface [ ]
(A) emissivity is constant (B) absorptivity equals reflectivity
(C) emissivity equals transmissivity (D) reflectivity equals emissivity

4. Free convection heat flow depends on all of the following, except [ ]
(A) density (B) coefficient of viscosity
(C) gravitational force (D) velocity

5. The free convection heat transfer is significally affected by [ ]
(A) reynolds number (B) grashof number (C) prandtl number (D) Stanton number

6. Which of the following heat flow situations pertains to free convection [ ]
(A) cooling of IC engine (B) flow of water inside the condenser tubes
(C) cooling of billets in atmosphere (D) air conditioning installations & nuclear reactors

7. Dropwise condensation usually occurs on [ ]
(A) glazed surface (B) smooth surface (C) oily surface (D) coated surface

8. Milk spills over when it is boiled in an open vessel. The boiling of milk at this instant is referred to as [ ]
(A) interface evaporation (B) sub-cooled boiling
(C) film boiling (D) saturated nucleate boiling

9. The steam condenser in a thermal power plant is a heat exchange of the type [ ]
(A) direct contact (B) regenerator (C) recuperator (D) none of these

10. The normal automobile radiator is a heat exchanger of the type [ ]
(A) direct contact (B) parallel flow (C) counter flow (D) cross flow

Cont……2

II Fill in the blanks

11. A radiation shield should have high _____

12. The surface temperature of sun is nearly _____ degree Kelvin

13. If the temperature of hot body is increased by 50% , the amount of radiation emitted by it would increase by nearly _____ %

14. For free convection, Nusselt number is a function of Prandtl and _____ number

15. In a heat exchanger with one fluid evaporating or conducting the surface are required is least in _____ type.

16. The convective heat transfer process that involves a phase change from liquid to vapour state is called _____

17. The convective coeffient for boiling and condensation usually lie in the range _____ W/m^2 k

18. In condensation over a vertical surface the value of convection coefficient varies as _____

19. The requirement of transfer of large heat is usually met by having _____ tube

20. For evaporators and condensers, for the given conditions, the LMTD for parallel flow is _____ that for counter flow

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