Assignment 11

The due date for submitting this assignment has passed. Due on 2019-10-16, 23:59 IST. As per our records you have not submitted this assignment.

1) The correct statements amongst the following is/are

- Non-Fickian diffusion is diffusion through air spaces within fibrous structure
- Diffusion along the fiber itself is non-Fickian diffusion
- In case of hydrophilic fiber assemblies vapour diffusion obey Ficks law
- The amount of moisture adsorption increases with decrease in temperature

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Diffusion along the fiber itself is non-Fickian diffusion
- The amount of moisture adsorption increases with decrease in temperature

2) The correct statement(s) amongst the following is/are

- The adsorption hysteresis increases with decrease in hydrophilicity of fiber
- The adsorption hysteresis increases with increase in hydrophilicity of fiber
- Water vapour permeability increases with increase in hygroscopicity of material
- Water vapour permeability decreases with increase in hygroscopicity of material

No, the answer is incorrect.
Score: 0
Accepted Answers:
- The adsorption hysteresis increases with increase in hydrophilicity of fiber
- Water vapour permeability increases with increase in hygroscopicity of material

3) The correct statement(s) amongst the following is/are

- Diffusivity decreases with increase in fiber volume fraction
- Diffusivity decreases with decrease in flatness of fiber cross section

No, the answer is incorrect.
Score: 0
1. Diffusivity decreases with an increase in fabric thickness
2. Diffusivity increases with an increase in air permeability of the fabric

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Diffusivity decreases with increase in fiber volume fraction
- Diffusivity decreases with an increase in fabric thickness
- Diffusivity increases with an increase in air permeability of the fabric

4) Which among the following fiber cross section will give higher water vapour permeability?  

- Trilobal
- Triangular
- Circular
- Elliptical

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Circular

5) Evaporative heat transfer is the effective means of cooling when

- Body temperature is higher than environmental temperature
- Body temperature is lower than environmental temperature
- Body and environmental temperature are equal
- Evaporative heat transfer is independent of body and environmental temperature

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Body temperature is lower than environmental temperature

6) Which of the following methods of measuring water vapour permeability is most suitable for water proof fabrics?

- Inverted cup test method
- Evaporative dish method
- Upright cup method
- Vertical wicking method

No, the answer is incorrect.
Score: 0
Accepted Answers:
- Inverted cup test method

7) The correct statement(s) amongst the following for microclimate simulator cum moisture vapour transmission tester is/are

- When the fan is switched on microclimate temperature increases
- When the fan is switched on microclimate temperature decreases
- When the fan is switched on microclimate humidity increases
- when the fan is switched on, the microclimate humidity decreases

No, the answer is incorrect.
Score: 0
Accepted Answers:
- When the fan is switched on microclimate temperature decreases
- when the fan is switched on, the microclimate humidity decreases
8) With increase in fineness and fiber shape factor water vapour permeability of the material

- Increases
- Decreases
- Remains constant
- First increases and then decreases

No, the answer is incorrect.
Score: 0
Accepted Answers: Decreases

9) Which of the following statement(s) is/are incorrect

- Diffusion coefficient of fiber increase with increase in concentration of water in fibers
- Diffusion coefficient of fiber increases with decrease in concentration of water in fibers
- Diffusion coefficient of fibers initially increases and then decreases with increase in concentration of water in fibers
- Diffusion coefficient of fiber is independent of concentration of water in fibers

No, the answer is incorrect.
Score: 0
Accepted Answers:
Diffusion coefficient of fiber increases with decrease in concentration of water in fibers
Diffusion coefficient of fibers initially increases and then decreases with increase in concentration of water in fibers
Diffusion coefficient of fiber is independent of concentration of water in fibers