



Erasmus+



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O2 Virtual Learning Materials

## **PREPARATION OF DHW USING SOLAR PANELS – test choice of answers**

### **1. Solar panels work on the principle**

- a) aquathermal energy
- b) photothermal conversion
- c) germicidal transformation

### **2. The best orientation of solar collectors is**

- a) to the south and southwest with an angle of inclination of 30-50 °C from the horizontal surface
- b) to the south and southwest with an angle of inclination of 30-50 °C from the vertical surface
- c) to the south and southwest with an angle of inclination of 10-20 °C from the horizontal surface

### **3. Solar energy spreads in form**

- a) electromagnetic waves
- b) ultraviolet radiation
- c) luminous fluxes

#### **4. It is recommended for the preparation of DHW**

- a) 1 – 1.3 m<sup>2</sup> of collector area per person and a boiler with a volume 75 – 100 litres per person.
- b) 1 – 1.3 m<sup>2</sup> of collector area per person and a boiler with a volume 125 – 200 litres per person.
- c) 0.2 – 0.8 m<sup>2</sup> of collector area per person and a boiler with a volume 75 – 100 litres per person.

#### **5. Division of solar collectors**

- a) tubular and vacuum
- b) flat and vacuum
- c) flat and meandering

#### **6. Convection is**

- a) heat flow
- b) heat radiation
- c) heat conduction

#### **7. Tick the correct statement**

- a) a flat collector has a lower efficiency than a tube collector
- b) a flat collector has a higher efficiency than a tube collector
- c) a flat collector has the same efficiency than a tube collector

#### **8. Optical efficiency of the collectors is**

- a) amount of radiation converted into heat in the boiler
- b) real heat gains from collectors
- c) what percentage of the solar radiation will the absorption layer of the collectors turn into heat

#### **9. Which statement is not correct**

- a) Solar connectors can convert solar energy into light energy.
- b) They work on the principle of converting solar radiation into thermal energy.
- c) The absorption surface transforms the solar radiation into heat and transfers it to the warm water substance.

**10. The sun's rays falling on the surface of the solar panel are divided into**

- a) direct and diffuse
- b) direct and indirect
- c) direct, reflected and diffuse

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