

Model Questions for PGQP37

1. Derivative of solar energy is/are
 - a) Wind energy only
 - b) Wave energy only
 - c) Bio-energy only
 - d) All the three.
2. Plant products may be used to produce the fuel/fuel additives/fuel blends for
 - a) Diesel only
 - b) Gasoline only
 - c) Hydrogen only
 - d) All the three
3. In a steam engine, the piston rod is usually connected to the cross-head by means of a
 - a) Knuckle joint
 - b) Cotter joint
 - c) Oldham coupling
 - d) Universal joint
4. For high speed engines, the cam follower should move with
 - a) Uniform velocity
 - b) Simple harmonic motion
 - c) Uniform acceleration and retardation
 - d) Cycloidal motion
5. The ministry to represent India on climate change issues is the ministry of
 - a) New and Renewable Energy
 - b) Finance
 - c) Forest and Environment
 - d) Water Resources
6. Biomass gasifier produces a gas rich in carbon monoxide called
 - a) Producer gas
 - b) Water gas
 - c) Biogas
 - d) Natural gas

7. The lowest energy contribution is from the solar radiation component

- a) Visible
- b) UV
- c) IR
- d) Microwave

8. The radiation emitted by a hot furnace is dominated by

- a) Ultra-violet
- b) infra-red
- c) X-ray
- d) microwave

9. For industrial process heating, the best quality of steam is

- a) Dry saturated steam
- b) Superheated steam
- c) Wet steam
- d) High pressure steam

10. Which of the following is not used for direct conversion to electrical energy?

- a) Fuel Cell
- b) MHD generator
- c) Photovoltaic Cell
- d) Nuclear Reactor

11. If each of the photosensitive metals with their work function(ϕ) are exposed to radiation of wavelength 300nm which one of them will not emit photoelectrons

- a) Na ($\phi=1.92$ eV)
- b) K($\phi=2.15$ eV)
- c) Mo($\phi=4.17$ eV)
- d) None of the above

12. In which single-phase motor, the rotor has no teeth or winding?

- a) Split- phase motor
- b) Reluctance motor
- c) Hysteresis motor
- d) Shade pole motor