Unit 8 - Maxwell's Equations

Assessment week 7

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-18, 23:59 IST.

1) Which one of the following is true? *1 point*

- Electronic Hamiltonian does not include nuclear kinetic energy
- Electronic Hamiltonian includes electrostatic interaction between electron and nucleus
- Electronic Hamiltonian does not include electron kinetic energy
- Both (a) and (b) are true

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both (a) and (b) are true

2) Equilibrium point on a potential energy surface indicates a point *1 point*

- where no force acting on any nucleus
- where potential energy is in equilibrium
-) where kinetic energy is in equilibrium
- where vibration stops

No, the answer is incorrect.
Score: 0
Accepted Answers:
where no force acting on any nucleus

3) Which one of the following is true? *1 point*

- Force represents an equilibrium point
- Force represents a point where vibration stops
- Force represents gradient of potential
- Force represents velocity

No, the answer is incorrect.
Score: 0
Accepted Answers:
Force represents gradient of potential

4) Mixed quantum classical method represents *1 point*

- electrons quantum chemically
- nuclei quantum chemicall
- both electrons and nuclei quantum chemically
- either electrons or nuclei quantum chemically

No, the answer is incorrect.
Score: 0
Accepted Answers:
electrons quantum chemically

5) Which one of the following is true? *2 points*

- Born-Oppenheimer approximation does not include all electronic states
- Born expansion of total wavefunction includes different electronic states
- Conical intersection cannot be explored using Born-Oppenheimer approximation
- All three are true

No, the answer is incorrect.
Score: 0
Accepted Answers:
All three are true

6) What is 6-31G? *1 point*

- a basis set
- nuclear kinetic energy
- electronic kinetic energ
- just a number

No, the answer is incorrect.
Score: 0
Accepted Answers:
a basis set

7) Which one of the following is true in a dispersive medium (revision from earlier chapter): *1 point*

- red light travels faster than blue light
- blue light travels faster than red light
- red and blue light travels with equal velocity
- Green light travels faster than red light

No, the answer is incorrect.
Score: 0
Accepted Answers:
red light travels faster than blue light

8) In a birefringent crystal, ordinary and extraordinary rays experience (revision from earlier chapter) *1 point*

- the same refractive index
- different refractive index
- different direction of reflection
- all above

No, the answer is incorrect.
Score: 0
Accepted Answers:
different refractive index

9) For a plane wave, magnitude of wave vector is (revision from earlier chapter) *1 point*

- proportional to the wavelength
- inversely proportional to the wavelength
- proportional to the square of wavelength
- inversely proportional to the square of wavelength

No, the answer is incorrect.
Score: 0
Accepted Answers:
inversely proportional to the wavelength

You were allowed to submit this assignment only once.