Shivam Kushwah

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Q1) which is not a property of wave function:-

a) wave function must be finite everywhere.

1. It must be continuous and must have a continuous derivative everywhere.
2. wave function must be infinite everywhere
3. wave function should be physically acceptable

Ans c

Q2) choose incorrect option:-

1. range of principal number from 0 to n
2. range of orbital quantum number 0 to n-1
3. range of magnetic quantum number 0 to +l
4. spin quantum number +1/2 and -1/2

Ans c

Q3) which is a property of semi-conductor LASER

1. These are very large in size.
2. The efficiency is very low.
3. They require a very low operating power.
4. They have whole active medium is active.

Ans c

Q4) Main is not principal of Dalton’s atomic theory:-

a) Matter consists of indivisible entities called atoms.

b) Different elements have different kinds of atoms having different masses.

c) All atoms of a given element are identical in respect of mass and all other physical properties.

d) at the same temperature and [pressure](https://www.thoughtco.com/definition-of-pressure-in-chemistry-604613), equal volumes of all gases contain the same number of molecules.

Ans d

Q5) which of following equations are correct for Bohr’s model

a) E= - ZE^2/R

b) T=2πr/v

c) v=2.18\*10^6 z/n

d) all of the above

Ans d

Q6) properties of He -Ne LASER

a) The efficiency is very high.

b) They require a very low operating power.

c) It is a continuous four-level gas laser.

d) There is not any use of brewster’s angle

Ans c

Q7) choose the correct statements

a) longest line is that which having longest wave length

b) longest line is that which having highest energy

c) shortest line is having lowest energy

d) shortest line is having smallest wavelength

Ans a,d

Q8) choose the correct statements

a) ∇.f >0 then f has a sink.

b) ∇.f>0 then f has a source.

c) ∇.f<0 then f has a sink

d) ∇.f<0 then f has a source

Ans b,c

Q9) Identify polar dielectric

a) H2O, CO2,O2

b) N2, CO2, NH3,H2

c) H2O ,CO2,NH3

d) H2, N2,NH3

Ans c

Q10) tick the properties of EM waves

a) Electromagnetic waves travel at the speed of light in vacuum

b) The magnitudes of the electric and magnetic fields in empty space are related by the

expression c = E/B

c) The components of the electric and magnetic fields of plane EM waves are perpendicular to each other and perpendicular to the direction of propagation

d) all of these

Ans d