31. UV radiation can be produced by

A. Heating the filament.
B. Electron excitation in the gas.
C. Ionization of atoms.
D. All the above.

Answer: Option B

32. What is the velocity of a particle of mass m & de-Broglie wavelength ??

A. h/m?
B. 2h/m?
C. mh/h
D. (2hc/m?)1/2

Answer: Option A

33. Wave-like characteristic of electron is demonstrated by

A. Line spectrum of atoms.
B. Production of x-rays.
C. Diffraction by crystalline solids.
D. Photoelectric effect.

Answer: Option C

34. Electron cannot exist in the nucleus it is confirmed by observing that

A. It does emit ?-radiation.
B. Its size as compare to proton and neutron is very small.
C. No antiparticle of electron is present.
D. The velocity of electron must be very high according to uncertainty principle.

Answer: Option D

35. In normal state of energy the incident high energy photons will be

A. Stimulated.
B. Absorbed.
C. Cause X-ray emission.
D. Cause laser production.

Answer: Option B

36. In laser production the state in which more atoms are in the upper state than in the lower one is called

A. Metal stable state.
B. Normal state.
C. Inverted population.
D. All the above.

Answer: Option C

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37. The metastable state for an atom in laser light is

A. 10-4 sec
B. 10-5 sec
C. 10-3 sec
D. 10-8 sec

Answer: Option C

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38. In He-Ne laser the lasing action is produced by

A. Ne only.
B. He-Ne both
C. Electrons of He.
D. Electrons Ne.

Answer: Option A

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39. Reflecting mirrors in laser is used to

A. Further stimulation
B. Lasing more
C. For producing more energetic lasers.
D. All

Answer: Option A

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40. The velocity of laser light is

A. Less than ordinary light.
B. More than ordinary light.
C. Equal to ordinary light.
D. Different for different colours or frequency.

Answer: Option C