1. Tick the correct statement

A. the flight path of a vertically falling body appears straight to the stationary observer

B. the flight path of vertically falling body appears parabolic to an observer in uniform relative motion

C. all states of rest and motion are relative and there is no such thing as absolute motion

D. all the above

Answer: Option **D**

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2. Mark the wrong statement.

A. a frame of reference which is either at rest or moves with a constant velocity is called an inertial frame of reference

B. an un-accelerated frame of reference is called an inertial frame of reference

C. all the frames of reference in uniform rectilinear motion are equivalent

D. Newtons laws of motion are valid in an accelerated (non inertial) frame of reference

Answer: Option **D**

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3. The relativistic energy E is equivalent to relativistic mass given by

A. Ec2

B. E/c2

C. E/c

D. c2/E

Answer: Option **B**

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4. An observer shoots parallel to a meter stick at very high (relativistic) speed and finds that the length of meter stick is

A. greater than one meter

B. less than one meter

C. one meter

D. a foolish question

Answer: Option **B**

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5. 0.001 kg mass will be equivalent to

A. 2.50 GWh
B. 25.00 GWh
C. 0.26 GWh
D. 250 GWh

Answer: Option **B**

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6. Which one of the following radiations has the strongest photon?

A. T.V waves
B. micro waves
C. X-rays
D. ?-rays

Answer: Option **D**

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7. Tick the right statement.

A. no photo electronic emission takes place if the frequency of radiation however intense it may be is less than a certain critical value called threshold frequency
B. threshold frequency depends upon the nature of the metal surface
C. maximum energy of a photoelectron is a function of frequency rather than intensity of radiation
D. all of the above

Answer: Option **D**

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8. Linear momentum of a photon is

A. zero
B. hv/c2
C. hv/c
D. c2/hv

Answer: Option **A**

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9. A device based on photoelectric effect is called

A. photo sensitive detection
B. photo diode
C. photosynthesis
D. photo cell

Answer: Option **D**

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10. The linear momentum of an X-ray photon of wavelength 0.1A is

A. 6.625x1023N-s

B. 66.25x1023N-s

C. 662.5x1023N-s

D. data is insufficient

Answer: Option **A**