Federal Board HSSC-I Examination
PHYSICS Model Question Paper
(Reduced Syllabus)
(2021 and Onwards)
SECTION-A (Marks 17)

Time: 25 Minutes **Marks: 17**

Note: Section-A is compulsory. All parts of this section are to be answered on the separately provided OMR Answer Sheet which should be completed in the first 25 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

Q.1 Choose the correct answer i.e. A / B / C/D by filling the relevant bubble for each question on the OMR Answer Sheet according to the instructions given there. Each part carries one mark.

i. **The precision of the measurement 385,000 km is _____.**
A. 10 km B. 100 km
C. 1000 km D. 1000000 km

ii. **$[M^o L^o T^o]$ are dimension of _____.**
A. strain B. refractive index
C. magnification D. All of these

iii. **A meter stick is supported by a knife-edge at the 50-cm mark. Arif hangs masses of 0.40 kg and 0.60 kg from the 20-cm and 80-cm marks, respectively. Where should Arif hang a third mass of 0.30 kg to keep the stick balanced?**
A. 20 cm B. 70 cm
C. 30 cm D. 25 cm

iv. **If $\vec{A_x} = 1.5\ cm$, $\vec{A_y} = -1.0\ cm$, into which quadrant do the vector $\vec{A}$ point?**
A. I B. II
C. III D. IV

v. **The time rate of change of momentum gives _____.**
A. Force B. Impulse
C. Acceleration D. Power

vi. **A 7.0 – kg bowling ball experiences a net force of 5.0 N. What will be its acceleration _____.**
A. $35\ m/s^2$ B. $7.0\ m/s^2$
C. $5.0\ m/s^2$ D. $0.71\ m/s^2$

vii. **The force constant of a wire is k and that of the another wire is 3k when both the wires are stretched through same distance, if work done are W_1 and W_2, then _____.**
A. $W_2 = W_1$ B. $W_2 = 9\ W_1$
C. $W_1 = 3\ W_2$ D. $W_2 = 3\ W_1$

viii. **Escape velocity on the surface of the earth is 11.2 kms^1. if the mass of the earth increases to twice its value and the radius of the earth becomes half the escape velocity is _____.**
A. $5.6\ kms^{-1}$ B. $11.2\ kms^{-1}$
C. $22.4\ kms^{-1}$ D. $33.6\ kms^{-1}$

ix. **A body moving in a circular path with constant speed has _____.**
A. Constant acceleration
B. Constant retardation
C. Variable acceleration
D. Variable speed and constant velocity

x. **Which one is constant for a satellite in orbit _____.**
A. Velocity B. K.E
C. Angular Momentum
D. Potential Energy

xi. **The net force that acts on a 10 – N falling object, when it encounters 4 N of air resistance is _____.**
A. 0N B. 4N C. 6N D. 10N

xii. **A skydiver jumps from a high-flying helicopter. Before reaching terminal velocity, her acceleration _____.**
A. increase B. decrease
C. remain the same
D. is zero

xiii. **The time period of the same pendulum at Karachi and Murree are related as _____.**
A. $T_K = T_M$ B. $T_K > T_M$
C. $T_K < T_M$ D. $2T_K = 3T_M$

xiv. **In an isolated system the total energy of vibrating mass and spring is _____.**
A. Variable B. Low
C. High D. Constant

xv. **Which one of the following could be the frequency of ultraviolet radiation?**
A. $1.0 \times 10^6\ H_z$
B. $1.0 \times 10^9\ H_z$
C. $1.0 \times 10^{12}\ H_z$
D. $1.0 \times 10^{15}\ H_z$

xvi. **During a sunny day we see the objects in a class room even when all the electric lights are off, due to _____.**
A. Reflection of light
B. Refraction of light
C. Diffraction of light
D. Interference of light

xvii. **Triple point of water is _____.**
A. 273.16 °F B. 372.16 K
C. 273.16 °F D. 273.16 K