

CLASS: 9A

PHYSICS ASSIGNMENT No.1

Guidelines:

Total: 50

- Home Work-1 has been designed for the month of June and has to be completed till 30th June.
- It comprises all the compulsory questions and carries 50 Marks.
- Students must write answers/ responses on foolscap sheets.
- Both, Home Work 1 & 2, collectively, will carry 10 Marks in Mid-Term / Pre-Send Up exams.
- Submission Date will be due **20th July, 2022**.
- Students must drop their home work at school gate till submission Date.

Note: Home work is designed according to the requirements of BISE Lhr.

SECTION-I

Q1: Write short answers to the following. (8)

- What is Vernier calipers? Write its least count.
- Differentiate between base quantities and derived quantities.
- What is meant by significant figures of a measurement?
- Define linear motion and circular motion.
- Differentiate between scalars and vectors. Give example of each.
- Describe the law of inertia.
- Differentiate between mass and weight.
- Write ways to reduce friction.

Q2: Write short answers to the following. (8)

- Define resultant force.
- What is meant by axis of rotation?
- What is the value of 'g' on the earth and the moon?
- Why communication satellites appear stationary with respect to the earth?
- Differentiate between like and unlike parallel forces.
- What is meant by rigid body?
- State law of gravitation and write its mathematical form.
- Give two uses of artificial satellite.

Q3: Write short answers to the following. (8)

- Define physical sciences and biological sciences.
- What is meant by physical quantities? Give two examples.
- Define velocity. Write its SI unit.
- Define vibratory motion and give its examples.
- State Newton's third law of motion and write its two examples.
- What are natural satellites?
- What is the difference between 'g' and 'G'?
- Prove that $\frac{P_f - P_i}{t} = F$.

SECTION-II

Answer the following questions in detail.

Q4: a. Define equilibrium and explain its states. (4)

b. Derive first equation of motion (numerically and graphically both). (4)

Q5: a. State and explain conditions for equilibrium. (4)

b. Derive second equation of motion (numerically and graphically both). (5)

Q6: What do you mean by centripetal force? Derive the equation for centripetal force. (4)

b. Derive third equation of motion (numerically and graphically both). (5)