

SCIENCE QUESTION PAPER (UNIT WISE)**STD: X****UNIT-1 LAWS OF MOTION (2 & 5 MARKS)****SHORT ANSWER:**

1. DEFINE FORCE.
2. WHAT IS MECHANICS?
3. WHAT IS DYNAMICS?
4. WHAT IS STATICS?
5. WHAT IS KINEMATICS?
6. WHAT IS KINETICS?
7. STATE THE LAW INERTIA.
8. WHAT IS LINEAR MOMENTUM. WRITE ITS UNITS.
9. STATE NEWTON'S FIRST LAW.
10. WHAT IS RESULTANT FORCE?
11. WHAT IS EQUILIBRANT?
12. DEFINE AXIS OF ROTATION.
13. DEFINE MOMENT OF FORCE OR TORQUE. WRITE ITS UNIT.
14. WHAT IS COUPLE? GIVE EXAMPLE.
15. WHAT IS MOMENT OF FORCE? WRITE ITS UNIT.
16. STATE NEWTON'S SECOND LAW.
17. DEFINE 1 NEWTON.
18. DEFINE 1 DYNE.
19. DEFINE UNIT OF FORCE.
20. DEFINE GRAVITATIONAL UNIT OF FORCE.
21. DEFINE IMPULSE. WRITE ITS UNIT.
22. DIFFERENTIATE MASS AND WEIGHT.
23. CHANGE IN MOMENTUM CAN BE ACHIEVED IN TWO WAYS. WRITE IT.
24. STATE NEWTON'S THIRD LAW OF MOTION WITH EXAMPLE.
25. STATE NEWTON'S UNIVERSAL LAW OF GRAVITATION.
26. CALCULATE THE MASS OF THE EARTH.
27. WHAT IS ACCELERATION DUE TO GRAVITY. WRITE ITS VALUE.
28. WHAT IS MASS? WRITE ITS UNIT.
29. WHAT IS WEIGHT? WRITE ITS UNIT.
30. WHAT IS APPARENT WEIGHT?
31. HOW DOES AN ASTRONAUT FLOAT IN A SPACE SHUTTLE?.

ANSWER IN DETAIL:

1. DESCRIBE THE CONCEPT PROPOSED BY ARISTOTLE ABOUT FORCE AND MOTION.

2. WHAT ARE THE CONCEPTS PROPOSED BY GALILEO ABOUT FORCE, MOTION AND INERTIA?
3. STATE THE LAW OF INERTIA AND EXPLAIN THE DIFFERENT TYPES OF INERTIA WITH EXAMPLES.
4. WHAT IS FORCE? EXPLAIN THE TYPES OF FORCES.
5. DESCRIBE BALANCED AND UNBALANCED FORCES WITH EXAMPLES.
6. WHAT IS TORQUE? GIVE THE APPLICATION OF TORQUE.
7. EXPLAIN PRINCIPLE OF MOMENTS.
8. STATE NEWTON'S SECOND LAW. DERIVE THE EQUATION OF FORCE ($F=ma$)
9. EXPLAIN IMPULSE WITH EXAMPLES.
10. STATE AND PROVE THE LAW OF CONSERVATION OF LINEAR MOMENTUM.
11. DESCRIBE THE ROCKET PROPULSION.
12. STATE THE LAW OF UNIVERSAL LAW OF GRAVITATION AND DERIVE ITS MATHEMATICAL EXPRESSION.
13. DERIVE THE RELATION BETWEEN g AND G .
14. EXPLAIN THE VARIATION OF ACCELERATION DUE TO GRAVITY.
15. WHAT IS APPARENT WEIGHT? DISCUSS THE APPARENT WEIGHT OF THE PERSON IN LIFT.
16. GIVE THE APPLICATIONS OF NEWTON'S LAW OF GRAVITATION.

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