FORCE AND PRESSURE

<1M>

1.The standard atmospheric pressure at sea level is -

(A) $10x10^{-12}$ N/m^2 (B) $1x10^{23}$ N/m^2 (C) 10^{12} N/m^2 (D) 10^5 N/m^2

2.The effects of force are:

(A) Motion of an object (B) Change in the magnitude of velocity of an object

(C) Change in direction of motion (D) All of these

3.Which among the following are the types of forces-

(A) Magnetic force (B) Nuclear force (C) Gravitational force (D) All of these

4.Friction forces act

(A) In the direction of force applied (B) In the direction of the motion

(C) In the direction opposite to the direction of motion (D) None of these

5.The effect of frictional force may be minimized by

(A) Using a smooth object (B) Using a smooth plane

(C) Providing a lubricant at the surface of contact (D) All of these

6.Negative value of force implies that

(A) Force is exerted on some other object

(B) Force is in the direction opposite to that of the motion

(C) Force is in the same direction to that of the motion

(D) Gravitational force is acting on the object

7.S.I. Unit of force is

(A) Newton (B) Dyne (C) Kg-wt (D) Kg

8.Gravitational force acts between

(A) Sun and Planet (B) Earth and Bodies

(C) All the bodies in the universe (D) Sun and Earth

9.Which force can act from a large distance

(A) Magnetic (B) electrostatic (C) Gravitational (D) All of these

10.A car slips on a wet road because

(A) Water increases the friction between the road and the tyres.

(B) It is not possible to apply brakes on a wet road

(C) The friction between the brakes shoes and the wheels is reduced

(D) Water reduce the friction between the road and the tyres

11.Friction force is

(A) Contact force (B) Non-Contact force

(C) Muscular force (D) None of these

12.Friction can be reduced by

(A) Polishing (B) Oiling (C) By use the ball bearing (D) All of these

13.Two bodies in this universe attract each other by a force-

(A) Contact force (B) Gravitational force (C) Muscular force (D) None of these

14.The weight of the body is because of

(A) Magnetic force (B) Electrostatic force (C) Gravitational force (D) none of these

15.Any change in pressure on a confined gas produced a change in

(A) Volume (B) Force (C) Temperature (D) All of these

16.A barometer is a compact device for measuring-

(A) Volume (B) Height (C) Pressure (D) All of these

17.Atmospheric pressure at sea level support a column of mercury-

(A) 520 mm (B) 25 mm (C) 740 mm (D) 760 mm

18.What happens when a body leaves the Earth's gravitational field?

(A) The body will no longer be pulled back to the earth.

(B) Speed of body decreases

(C) Body fall on the Earth.

(D) None of these.

19.Fill a glass with water and cover it with a coaster. Invert the glass. What happen?

(A) Water will spill (B) Water will not spill

(C) Some water will spill and some will not (D) None of these

20.The S.I. unit of pressure

(A) Pascal (B) Newton (C) Joule (D) none of these

21.Gravitational force is a

(A) Contact force (B) Consequential force

(C) Action at a distance force (D) None of these

22.Friction is

(A) Always a disadvantage

(B) Always an advantage

(C) Sometimes a disadvantage and some times an advantage

(D) Neither an advantage nor a disadvantage

23.Rocket have a special streamline body in order to

(A) Increase friction (B) Reduce friction (C) Make them attractive (D) none of these

24.Which force is contact force

(A) Gravitational (B) Magnetic force (C) Electrostatic force (D) Frictional force

25.Grooves in tyres

(A) Increase friction of the tyre with the road.

(B) Decrease friction of the tyre with the road

(C) Do not affect friction of the tyre with the road.

(D) Make the tyre look good.

26.Burning of the meteor in the atmosphere is due to

(A) Electrostatic force (B) Magnetic force (C) Frictional force (D) Gravitational force

27.A stone falling from the roof of a house is an example of

(A) Frictional Force (B) Magnetic Force

(C) Gravitational Force (D) Electrostatic Force

28.If area of a contact is increased, then

(A) Pressure increases (B) Pressure decreases

(C) Pressure remain Constant (D) none of these

29.Muscular force is an example of

(A) Contact force (B) Non-Contact force

(C) Gravitational Force (D) None of these

30.Pressure is directly proportional to the

(A) Area (B) Force Applied (C) a and b (D) None of these

31.A charged comb attract small pieces of paper due to

(A) Frictional Force (B) Magnetic Force

(C) Gravitational Force (D) Electrostatic Force

32.What happen when two force act in opposite direction on an object?

33.What is a force?

34.Define the push force with its effect.

35.Define pull force and write its effects.

36.Explain the term contact force?

37.Define Muscular Force?

38.What is the Friction?

39.Explain the term Non-contact Forces?

40.What is the Magnetic Force?

41.What is the Electrostatic Force?

42.What happens when we press a rubber ball placed on a table?

43.How a force of friction arises?

44.Which device is used to measure the weight of a body?

45.Define the weight of a body. Also write its S.I. unit.

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46.What are the effect of force?

47.What is the Gravitational Force?

48.What is the Pressure?

49.What is the Atmospheric Pressure?

50.Define the term Gravity?

51.How does a person move forward during swimming?

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52.What happens when a force acts on an object? <

53.What do you mean by the force of friction? How can it be minimised?

54.Why does an empty can not cave in normally? <

55.Why is the moon's force of gravity less than that of the earth?

56.Mention three types of forces which can act from a distance.

57.fill the following situations Identify the agent exerting (he force ;<nrl the ot^ect on which it acts. State the effect of the force in each case.
(a) Squeezing a piece oflemon between the fingers tn extract its juice
(b) Taking out paste from a toothpaste tube.
(c) A load suspended from a spring while its other end is on a nook fixed , to a wall.
(tj) An athlete making a high jump to clear the bar at a certain height.

58.A blacksmith hammers a hot piece of iron while making a loo!. How does the force due to hammering affect the piece of iron?

59.An inflated balloon was pressed against a wall after it has been rubbed with a piece of synthetic cloth. It was found that the balloon slicks to the. wall. What force might be responsible for the attraction between the balloon and the wall?

60.Name the forces acting on a plastic bucket containing water held above, ground level in your hand. Discuss why the forces acting on the bi icket do not bring a change in its state of motion.

61.A nx&et has been fired upwards to launch a satellite in its orbit. Name two forces acting on the rocket immediately after leaving the launching

62.When we pxen the bulb of a dropper with its nozzle kept in water, air in (be dropper to)«it to escape in the form of bubbles. Once we release the jiscessure on the bulb, water gets filled in the dropper. The rise of water in the dropper is due to {£) pressure of water. gravity of the earth. shape of rubber bulb. *HW

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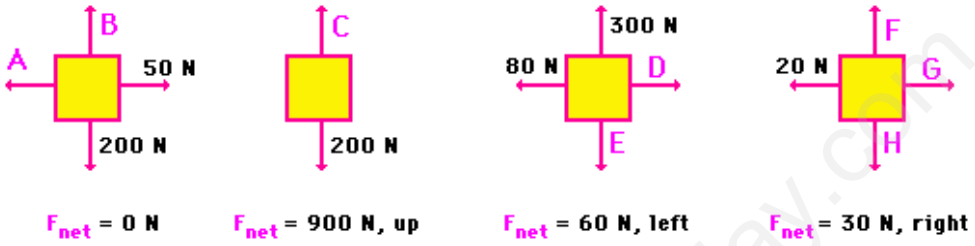
63.Mention three disadvantages of friction between the parts of a machine. How does (a) oiling and (b) using ball bearings help reduce friction? <

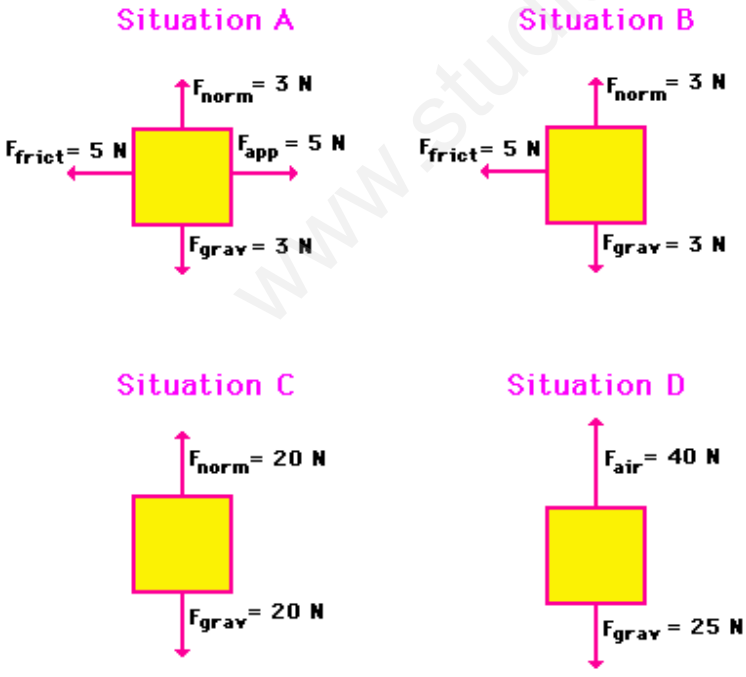
64.Free-body diagrams for four situations are shown below. The net force is known for each situation. However, the magnitudes of a few of the individual forces are not known.



Analyze each situation individually and determine the magnitude of the unknown forces.

65.Define the term net force.

Free-body diagrams for four situations are shown below.



For each situation, determine the net force acting upon the object.