

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX EXAMINATION

MAY 2016

Physics Paper I

Time: 35 minutes Marks: 25

INSTRUCTIONS

1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 25 only.
4. In each question there are four choices A, B, C, D. Choose ONE. On the answer grid black out the circle for your choice with a pencil as shown below.

Correct Way		Incorrect Ways	
1	☐ A ☐ B ☒ C ☐ D	1	☐ A ☐ B ☒ C ☐ D
		2	☐ A ☐ B ☒ C ☐ D
		3	☐ A ☐ B ☒ C ☐ D
		4	☐ A ☐ B ☒ C ☐ D

Candidate's Signature

5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
6. DO NOT write anything in the answer grid. The computer only records what is in the circles.
7. You may use a simple calculator if you wish.

1. The number of significant figures in 204.600 is
 - A. 2
 - B. 3
 - C. 4
 - D. 6
2. All of the following quantities can be measured by using a vernier callipers EXCEPT
 - A. depth.
 - B. length.
 - C. weight.
 - D. diameter.
3. The number of significant figures in 0.002016 is
 - A. 3
 - B. 4
 - C. 6
 - D. 7
4. The type of motion in a simple pendulum is
 - A. rotatory.
 - B. vibratory.
 - C. translatory.
 - D. circulatory.
5. In a classroom, a student gets up from his desk and walks 5 metre ahead to his friend's desk, collects a book and walks 5 metre back to his own desk.

The total displacement of the student will be

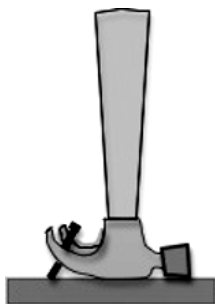
 - A. 0 metre.
 - B. 5 metre.
 - C. 10 metre.
 - D. 20 metre.
6. If the momentum of a body changes from 20 Ns to 30 Ns in 5 s, then the average force acting on that body will be
 - A. 2 N
 - B. 10 N
 - C. 50 N
 - D. 120 N

7. In an elastic collision, which of the following also remains conserved along with momentum?
- A. Heat energy
 - B. Sound energy
 - C. Kinetic energy
 - D. Potential energy
8. An astronaut is sitting in a spaceship on the Earth, ready to depart to the moon.

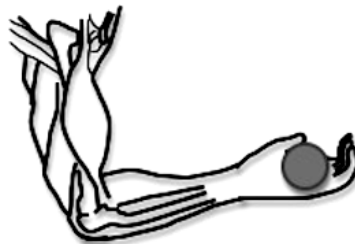
When the astronaut reaches the moon, his weight and mass will

	Weight	Mass
A	increase	remain same
B	remain same	increase
C	decrease	remain same
D	remain same	decrease

9. All of the following are the examples of turning effect of force EXCEPT



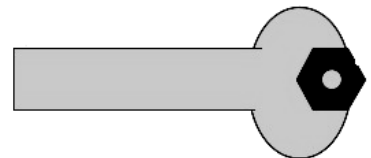
A



B



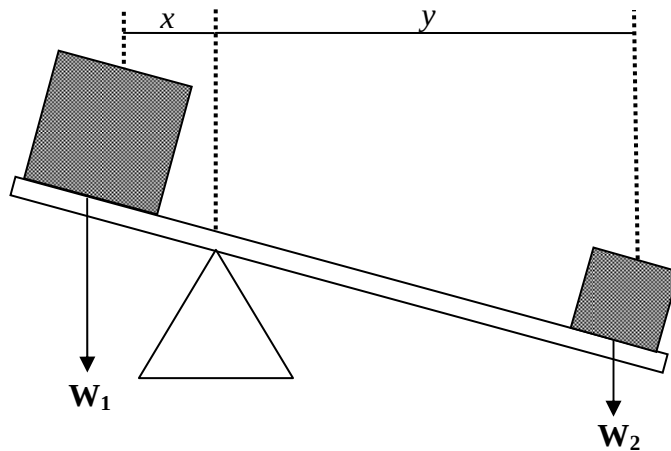
C



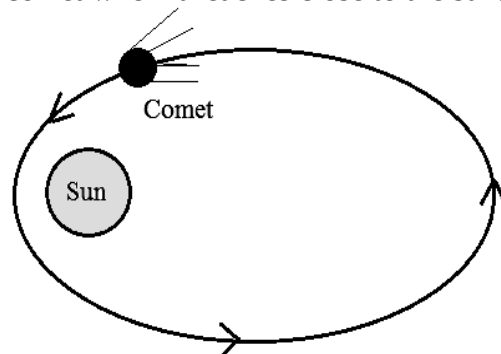
D

10. A body is said to be in dynamic equilibrium when it is moving with
- A. variable velocity.
 - B. uniform velocity.
 - C. variable acceleration.
 - D. uniform acceleration.

11. In the given diagram, two weights ' W_1 ' and ' W_2 ' are placed on a rod whereas ($W_1 > W_2$). For keeping the rod in the equilibrium position, than



- I. increase ' W_2 ' and decrease ' x '.
 - II. increase ' W_2 ' and ' x ' remain same.
 - III. increase ' x ' and ' W_2 ' remain the same.
- A. I only
 - B. III only
 - C. I and II
 - D. II and III
12. The weight of an object at the centre of the Earth is
- A. zero.
 - B. infinite.
 - C. half as on the surface of Earth.
 - D. same as on the surface of Earth.
13. If the radius of the Earth decreases and its mass remains the same, then the acceleration due to gravity on the surface of the Earth
- A. increases.
 - B. decreases.
 - C. becomes zero.
 - D. remains the same.
14. The given diagram shows the path followed by a comet when it reaches close to the sun. The shape of the path is



- A. elliptical.
- B. spherical.
- C. parabolic.
- D. hyperbolic.

15. The energy possessed by a body due to its motion is called
- A. heat energy.
 - B. light energy.
 - C. kinetic energy.
 - D. potential energy.
16. If the velocity of a body is doubled, then the kinetic energy of that body will
- A. reduce to half.
 - B. increase to double.
 - C. reduce to a quarter.
 - D. increase to four times.
17. If the mass of an elevator is 2000 kg, then the work done to raise the elevator to a height of 50 m in 20 seconds will be
(Take 'g' = 10 m/s²)
- A. 4 J
 - B. 400 J
 - C. 20,000 J
 - D. 1,000,000 J
18. If a gas is compressed, then the pressure exerted by gas molecules will
- A. increase.
 - B. decrease.
 - C. become zero.
 - D. remain the same.
19. The height of Tarbela dam is 143 m.
- Assuming that the dam is filled with water and the density of water is 1000 kg/m³. The value of acceleration due to gravity is 10 m/s², the pressure exerted by water at the base of the dam will be
- A. 1.43×10^4 Pa
 - B. 1.43×10^5 Pa
 - C. 1.43×10^6 Pa
 - D. 1.43×10^7 Pa
20. According to Archimedes Principle, the "upthrust" of the displaced liquid is equal to its
- A. mass.
 - B. depth.
 - C. weight.
 - D. volume.

21. The normal body temperature is 98.6°F . This temperature is equal to
- A. 37°C
 - B. 43°C
 - C. 57°C
 - D. 69°C
22. The amount of heat energy required to change a substance from solid into liquid state at its melting point without any change in its temperature is known as
- A. heat capacity.
 - B. latent heat of fusion.
 - C. specific heat capacity.
 - D. latent heat of vapourisation.
23. When a glass test tube is heated at a high temperature and then immediately immersed in a beaker of cold water, it cracks because the glass has
- A. low thermal conductivity.
 - B. low specific heat capacity.
 - C. high thermal conductivity.
 - D. high specific heat capacity.
24. All of the following are factors on which rate of energy transfer through radiation from one body to another body depends on EXCEPT
- A. surface area.
 - B. surface temperature.
 - C. colour of the surface.
 - D. pressure on the surface.
25. Metals are good conductor of heat because
- A. they have free electrons.
 - B. their electrons emit energy.
 - C. their molecules move very fast.
 - D. they have big size of their molecules.

Please use this page for rough work

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