

The Brigade School Unit Test 1 (2020-21)

Total points 13/15 ?

Class 10

Subject: Physics

Paper 1: Objective

Marks: 15

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0 of 0 points

Name :

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Class: *

10 A

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TBSG

Physics Objective Questions Paper 1

13 of 15 points

Marks: 15



1. . Identify the correct energy conversion in the following: *

	electrical to light and heat energy	light energy to chemical energy	chemical energy to heat and light energy	Light to electrical	Score	
Photosynthesis	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/1	✓
Striking a matchbox with a matchstick	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1/1	✓
Glowing filament lamp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/1	✓
Photovoltaic cell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1/1	✓

✓ 2. The centre of gravity of a solid cone is at a height _____ from its base. * 1/1

- ☒ h/4 ✓
☐ h/3
☐ 3h/4
☐ 2h/3

Feedback

CG of solid cone is $h/4$ from its base, it will be $3h/4$ from its vertex



✗ 3. Sunil exerts a force of 300 N in pulling a cart at a constant speed of 10 m/s. The power exerted is: *

- ☐ 15 W
- ☐ 1500 W
- ☒ 1/15 W

✗

Correct answer

- ☒ 1500 W

✓ 4. Internal resistance is related to ϵ (emf), V (terminal voltage) and I (current) as: *

1/1

- ☐ $r = (\epsilon - I)/V$
- ☐ $r = I/(\epsilon - V)$
- ☐ $r = \epsilon/(VI)$
- ☒ $r = (\epsilon - V)/I$

✓

✗ 5. A ball of 450 g falls from a height of 2 m. The K E of the ball when it just reaches the ground will be: *

- ☐ 9000 J
- ☐ 9 J
- ☐ 0 J
- ☒ 900 J

✗

Correct answer

- ☒ 9 J



✓ 6. Calculate the current flowing through the circuit if 3360 C of charge flows through it in 7 minutes? * 2/2

- ☐ 0.125 A
- ☐ 480 A
- ☐ 23520 A
- ☒ 8 A



Feedback

$$Q = It; I = Q/t = 3360/7 \times 60 = 8 \text{ A}$$

✓ 7. When a boy weighing 200 N sits at one end of a 6 m long see-saw, it gets depressed at one end. Where should a man weighing 400 N sit to bring the see-saw to a horizontal position? * 2/2

- ☐ 1 m from the other end
- ☐ 1.5 m on the same side as the boy
- ☒ 1.5 m from the centre on the other side
- ☐ 2.5 m from the centre on the other side



Feedback

$$200 \times 3 = 400 \times L \text{ or } L = 600/400 = 1.5 \text{ m on the other side from the centre (} L \times LA = E \times EA)$$



✓ 8. In a circuit an ammeter is connected in _____ and the voltmeter is connected in _____. Pick the correct sequence to fill in the blanks. * 1/1

☐ parallel, series

☒ series, parallel



Feedback

Ammeter is always connected in series whereas a voltmeter is always connected in parallel

✓ 9. What is the type of wave used for echo depth sounding? * 1/1

☒ ultrasonic

☐ infrasonic

☐ audible



Feedback

Correct



✓ 10. What is the range of the wave that you have selected in Q 9? *

1/1

- ☐ 0 Hz to 19 Hz
- ☐ 20 Hz to 20000 Hz
- ☐ 20 kHz and above

Feedback

Ultra sonic waves have a frequency greater than 20000 Hz or 20 kHz

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