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## PHYSICS

## BOOKS -VGS BRILLIANT PHYSICS

## (TELUGU ENGLISH)

## AP MARCH-2018

Section A

1. What is the discovery of C.V. Raman ?
2. How can systematic errors be minimised or eliminated?

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3. When two right angled vectors of magnitude 7 units and 24 units combine, what is the magnitude of their resultant ?
4. A horse has to pull harder during the start of the motion than later. Explain .

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5. Why are drops and bubbles spherical?

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6. Mention any two examples (or) applications
that Obey Bernoullis theorem and justify
them.

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## 7. State Newton`s law of cooling.

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8. Can a substance contact on heating ? Given an example.

## 9. State Boyle`s law and Charles law.

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10. Define mean free path.

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## Section B

1. Show that the trajectory of an object thrown
at certain angle with the horizontal is a parabola.

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2. A car travels the first third of a distance with
a speed of 10 kmph , the second third at 20
kmph and the last third at 60 kmph . What is
its mean speed over the entire distance?
3. Explain Friction. Mention the methods used to decrease friction.

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4. Distinguish between centre of mass and centre of gravity .

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5. Find the centre of mass of three particles at
the vertices of an equilateral triangle. The masses of the particles are $100 \mathrm{~g}, 150 \mathrm{~g}$ and 200 g respectively. Each side of the equilateral triangle is 0.5 m long, 100 g mass is at origin and 150 g mass is on the X -axis.

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6. What is escape velocity? Obtain an expression for it.
7. In what way is the anomalous behaviour of water advantageous to aquatic animals ?

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## Section C

1. A machine gun fire 360 bullets per minute and each bullet travels with a velocity of 600
$\mathrm{m} / \mathrm{s}$. If the mass of each bullet is 5 gm , find the power of the machine gun.

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