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Hours) Sub ? ype

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(2) Write short answers to any Four (4) questions: -

i.) Differentiate between Geo physics and plasma physics.

(ii); Define acceleration ?and write down its SI unit.

. (vii) Differentiate between testa

(ii) State Newton's second law of motion. '

Write the number of significance figures in each case.

(i) 275.00 (ii) 0.027

(v.) Define base units. Write down the base units of temperature and electric current.

Differentiate between circular motion and rotatory ? motion.

(vii, SI unit of force is Newton. Define calc on Oil!

(3] ?Write ieee our (4) questions:

epi 8 unlike parallel forces.

is meant by rigid body and line of action of force?

Why are vehicles made heavy at the bottom?

Why we cannot feel gravitational force around us?

What is meant by gravitational field strength? - @

a What is the difference between artificial and natural satellite?

(vi) Define work On what factors work depends.

vii) Describe Einstein's mass energy equation,

(4] Wie short answers to any Four (4) questions: (to

(i. Define principle of flotation ?

ea.)

Why is water not suitable to be used in a barometer?

Why not?

Why does the atmosphere pressure me

Write down applications of it ?.

and heat?

How does heat flow from hot to cold?

Where does heat take place in gases?

= What is greenhouse effect?

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Note: Attempt any TWO questions.

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(a) State Newton's first law of motion and explain with the help of two examples.

help of two examples.

(b) Find the retardation produced when a car moving at

an initial velocity of 30 m/s slows down uniformly to rest in 5 s.

in 5 s.

(a) Explain the motion of artificial satellites and derive

the formula for orbital speed near Earth.

(c) Find the magnitude and direction of force, if the

x-component is 12 N and y-component is 5 N

length?at 30°

(a) State Pascal's law and

C. The coefficient of expansion of brass is 1.9×10^{-5} ;

find

(b) A brass rod of length 100 cm and cross-sectional area 1 cm² is heated from 30°C to 130°C. Find the change in length.

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