



Energy = (11/14) frequency

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ABSTRACT :

Sun light is a portion of the electromagnetic radiation given off by the sun. It consists of the infrared light , the visible light and the ultraviolet light. A photon is a quantum of electromagnetic energy. Photon is also a particle of light. Photoelectrons are released from a material when it absorbs some electromagnetic radiation .The motion of photons is worked according to the law, Action = Reaction + Absorption . If 1 part of the photons fall on the metal then simultaneously (3/14) part of the photons are absorbed in the metal and the rest (11/14) part of the photons combine with the electrons of the metal to be ejected as photoelectrons.

The energy is the ability of a body to do the work .The work done is the measure of the kinetic energy of the body .The kinetic energy of a body is the energy possessed by the body by virtue of its motion .The work is said to be done by a force acting on a body such that the body is displaced actually in any direction except in a direction perpendicular to the direction of force.

$$\text{Energy} = \text{Work done} = \text{Force} * \text{displacement}$$

Rotation is motion and vice versa. If a force is applied on a wheel and that force simultaneously converts to the centripetal force as well as the centrifugal force then the wheel moves forward. So every point of the wheel rotates and moves vertically on a curved path to cover horizontally on a straight line path.

The following laws are derived from the above facts ,

LAW OF MOTION ----- Nrusingh's 1st law

(a) INERTIA OF REST : A body is at rest, until the applied force on it , converts to the centripetal force as well as the centrifugal force

(b) INERTIA OF MOTION : A body is at motion, as long as the applied force on it , converts to the centripetal force as well as the centrifugal force

The following law is derived from Nrusingh's 1st law

THE FORCE OF ACTION IS ALWAYS EQUAL TO THE SUM OF OPPOSITE REACTION AND ABSORPTION ----- Nrusingh's 2nd law

This implies that, **14 PARTS ACTION = 11 PARTS REACTION + 3 PARTS ABSORPTION**

So **1 part action = (11/14) part reaction + (3/14) part absorption**

The following laws are derived from Nrusingh's 2nd law

FORCE = (11/14) MASS * ACCELERATION ----- Nrusingh's 3rd law

ENERGY = (11/14) MASS (VELOCITY OF LIGHT)² ----- Nrusingh's 4th law

PRESSURE * VOLUME = (11/14) TEMPERATURE ----- Nrusingh's 5th law

PRESSURE = (11/14) FORCE/AREA ----- Nrusingh's 6th law

where (11/14) is the constant of proportional

IF 14 PHOTONS FALL ON THE METALLIC SURFACE THEN SIMULTANEOUSLY 3 PHOTONS ARE ABSORBED AND 11 PHOTOELECTRONS ARE EJECTED FROM IT THE ENERGY OF PHOTOELECTRIC EFFECT IS DIRECTLY PROPORTIONAL TO THE FREQUENCY OF THE WAVES OF PHOTONS

Energy = (11/14) frequency

KEY WORDS :

Energy, Photon, Photoelectron, Metal, Electron, Work function, Frequency, Absorption, Action, Reaction, Centripetal force, Centrifugal force, Cycloid path, Straight line path

INTRODUCTION :

If a force is applied to a wheel then that force is converted to the centripetal force and the centrifugal force so that every point of the wheel moves vertically **8r length** in a cycloid path by the centripetal force and Simultaneously the same point covers **2πr length** horizontally on a straight line path by the centrifugal force.

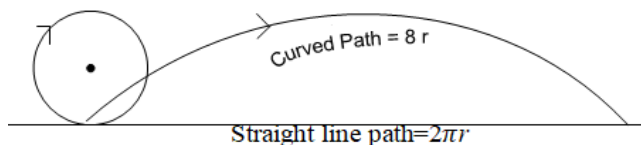
The cycloid is a curved path, which is traced out by a point on a circle that rolls on a straight line .

Suppose s_1 = length of the cycloid path and s_2 = length of the straight line path

So $s_1 = 8r$ and $s_2 = 2\pi r$

Here $8r > 2\pi r \Rightarrow s_1 > s_2$

Suppose v_1 = Velocity of any point on the cycloid path = $\frac{ds_1}{dt}$



And $v_2 =$ Velocity of the same point on

the straight line path $= \frac{ds_2}{dt}$

$$\text{As } s_1 > s_2 \Rightarrow \frac{ds_1}{dt} > \frac{ds_2}{dt}$$

$$\text{So } v_1 > v_2 \Rightarrow mv_1 > mv_2 =$$

$$> m \frac{dv_1}{dt} > m \frac{dv_2}{dt} \Rightarrow ma_1 > ma_2$$

Where $\frac{dv_1}{dt} = a_1 =$ Acceleration of any point on the cycloid path

and $\frac{dv_2}{dt} = a_2 =$ Acceleration of the

same point on the straight line path

$$\text{Hence } ma_1 > ma_2 \Rightarrow F_1 > F_2$$

$$\text{Here } F_1 = ma_1 \text{ and } F_2 = ma_2$$

But **The magnitude of the centripetal force is equal to the magnitude of the centrifugal force.**

$$\text{Hence } F_1 > F_2$$

$$\Rightarrow F_1 - F_2 = \text{SOME ABSORBED FORCE}$$

$$\Rightarrow F_1 = F_2 + \text{SOME ABSORBED FORCE}$$

$$\text{Here } F_1 = \text{CENTRIPETAL FORCE}$$

$$= \text{ACTION FORCE}$$

$$\text{And } F_2 + \text{SOME ABSORBED FORCE}$$

$$= \text{CENTRIFUGAL FORCE}$$

$$\text{where } F_2 = \text{REACTION FORCE}$$

This implies that,

$$\text{ACTION FORCE} = \text{REACTION FORCE} + \text{ABSORPTION FORCE}$$

$$\text{So } \text{ACTION} = \text{REACTION} + \text{ABSORPTION}$$

This implies that, when

$$\text{ACTION} = \text{REACTION} + \text{ABSORPTION}$$

Then the body moves

$$\text{But when } \text{ABSORPTION} = 0$$

$$\text{Then } \text{ACTION} = \text{REACTION} + \text{ABSORPTION}$$

$$= \text{REACTION} + 0 = \text{REACTION}$$

$$\Rightarrow \text{ACTION} = \text{REACTION}$$

so the body does not move

SUBJECT MATTER :

Rotation is motion and vice versa. A body is at rest, until the applied force on it, converts to the centripetal force as well as the centrifugal force .

A body is at motion, as long as the applied force on it , converts to the centripetal force as well as the centrifugal force .

When a force is applied to a wheel and that force simultaneously converts to the centripetal force as well as the centrifugal force then every point of the wheel rotates and moves in a curved path to cover a straight line path, So the simultaneous moving path of the point of a wheel in vertical cycloid path as well as on horizontal straight line path is a wave. The length of the vertical cycloid path of the wave is $8r$ and the length of the horizontal straight line path of the same wave is $2\pi r$.

It is obvious that , $F_1 : F_2 =$

ACTION OF CENTRIPETAL FORCE :

REACTION OF CENTRIFUGAL FORCE

$$\begin{aligned} \text{So } F_1 : F_2 &= 8r : 2\pi r = 8r : (2 * 22/7)r \\ &= (8 * 7/7)r : (2 * 22/7)r \\ &= (56/7)r : (44/7)r = 56r : 44r \\ &= 42r : 33r = 28r : 22r = 14r : 11r \end{aligned}$$

Here r is the radius of the circle, which makes the cycloid path.

The value of r may be any positive number or any positive fractional number ,

But when $r = 1$, $14r : 11r = 14 : 11$

$$r = 2 , 14r : 11r = 28 : 22$$

$$r = 3 , 14r : 11r = 42 : 33$$

and so forth

$$r = \dots 1/4 , 1/3 , 1/2 , 1 , 2 , 3 \text{ and so on}$$

$$\text{Hence } F_1 : F_2 = 14 : 11$$

This implies that, whatever values of r may have ,but $F_1 : F_2 = 14 : 11$

“ TO EVERY 14 PARTS OF ACTION , THERE IS 11 PARTS OF REACTION ”

The magnitude of the centripetal force is equal to the magnitude of the centrifugal force.

So each one of the centripetal force as well as the centrifugal force must do equal amount of work .

But here the centripetal force does more work than the centrifugal force, This implies that some amount of centrifugal force is absorbed in the medium for which it could not do equal amount of work .

Hence 14 PARTS ACTION – 11 PARTS REACTION = 3 PARTS ABSORPTION

This implies that ,

To every 14 parts of action, there is 11 parts of reaction and 3 parts of absorption .

This implies that ,

14 PARTS ACTION = 11 PARTS REACTION + 3 PARTS ABSORPTION

$$\Rightarrow \text{1 PART ACTION} = \text{(11/14) PART REACTION} + \text{(3/14) PART ABSORPTION}$$

This implies that ,

$$\Rightarrow \text{1 part of the centripetal force} = \text{1 part of the centrifugal force}$$

This implies that ,

1 part of the centripetal force = (11/14) part of the centrifugal force used for motion + (3/14) part of the centrifugal force used for absorption.

This implies that ,

If (3/14) part of a force is used for the absorption purpose then the rest (11/14) part of the force is used for the working purpose out of 1 part of the force .

Motion is rotation and every rotation is a motion in the vertical cycloid path as well as on the horizontal straight line path.

So every electromagnetic radiation of the sun moves in a vertical cycloid path to cover on a horizontal straight line path.

A photon is the tiniest packet of energy of an electromagnetic radiation.

So the photon moves both in the vertical cycloid path as well as the horizontal straight line path, which makes a wave.

This implies that, every photon moves from the sun to the earth by waves.

So every wave motion obeys the following universal motion law,

$$\mathbf{1 \text{ PART ACTION} = (11/14) \text{ PART REACTION} + (3/14) \text{ PART ABSORPTION}}$$

So the motion of photon must obey the above universal motion law. When a wheel makes a rotation with 1 part of force then simultaneously (3/14) part of the force is utilised as absorption purpose and the rest (11/14) part the force is used in motion purpose of the wheel.

Similarly when 1 photon hits a metal as an action with 1 part of energy then simultaneously (3/14) part of the energy is absorbed in the metal and the rest (11/14) part of energy is reacted as photoelectron according to the universal motion law,

$$\mathbf{1 \text{ PART ACTION} = (11/14) \text{ PART REACTION} + (3/14) \text{ PART ABSORPTION}}$$

Every photon consists of one positive charge loosely coupled to a negative charge. The negative charge of a photon moves in the cycloid path and simultaneously the positive charge moves on the straight line path. So photons from the electromagnetic radiation hit on the metal in an action,

As a result of which photoelectrons are released from the metal by the reaction and absorption.

This type of phenomenon is happened due to the following universal motion law.

$$\mathbf{1 \text{ PART ACTION} = (11/14) \text{ PART REACTION} + (3/14) \text{ PART ABSORPTION}}$$

The photoemissive law is derived from the above universal motion law as follows

THE ENERGY OF PHOTOELECTRIC EFFECT IS DIRECTLY PROPORTIONAL TO THE FREQUENCY OF THE WAVES OF PHOTONS

Mathematically, It can be expressed as

$$\mathbf{Energy \propto frequency}$$

$$\Rightarrow \mathbf{E = w f}$$

where w = Constant of proportionality

E = Energy and f = frequency

Hence

$$\mathbf{ENERGY =}$$

$$\mathbf{WORK FUNCTION * FREQUENCY}$$

frequency = number of waves fall on the metallic surface per second

work function = The function, which does the work = 11 parts of work is done out of 14 parts of work according to law,

$$\mathbf{1 \text{ PART ACTION} = (11/14) \text{ PART REACTION} + (3/14) \text{ PART ABSORPTION}}$$

The work function w from the straight line path set to the cycloid path set is a correspondence,

Which connects every point of the straight line path to a unique point of the cycloid .

It is obvious that,

W = Set of straight line path points :

Set of cycloid path set points = 11 : 14

Since $F_2 : F_1 = 11 : 14$

So $W = \{ (11x , 14y) \in w \mid x \text{ and } y \text{ are both same positive numbers or same positive fractional numbers } \}$

$\Rightarrow W = \{ \dots\dots (11/3,14/3), (11/2,14/2), (11,14), (22,28), (33,42), (44,56) \dots\dots\dots \}$

It is taken that every thing is done by 1 part (i.e. total part) of the force .

Then work function = $1*(11/14) = (11/14)$ part of the force, which only works.

Absorption function = $1*(3/14) = (3/14)$ part of the force , which makes the body to do work .

IF 1 PART OF THE PHOTONS FALL ON THE METAL THEN (3/14) PART OF THE PHOTONS ARE ABSORBED IN THE METAL AND SIMULTANEOUSLY THE REST (11/14) PART OF THE PHOTONS COMBINE WITH THE ELECTRONS TO BE EJECTED FROM THE METAL AS PHOTOELECTRONS .

This implies that, w = ratio of the number of photoelectrons ejected to the number of photons fall on the metal .

So the working function is $w = (11/14)$

Hence putting the value of $w = (11/14)$ in equation $E = wf$,It is obtained that

Energy = (11/14) frequency

This implies that ,when one wave of one photon fall on the metal then (11/14) part of the photoelectron energy is emitted from it. Every photon makes one wave in a bit of motion. The frequency is the number of waves fall on the metal per unit time .If there is no absorption of (3/14) part of the photons in the metal then there would be no emission of (11/14) part of the photoelectrons from the metal .

CONCLUSION :

The respiration of oxygen in the human body obeys always the following law,

1 PART ACTION = (11/14) PART REACTION + (3/14) PART ABSORPTION

The percent of oxygen is available in the atmosphere is 20.95 percent, which is considered as 1 part of action and 1 part of action is one inhalation of the human body. So man inhales 20.95 percent of oxygen in its every respiration.

The law states that ,

1 PART ACTION = 20.95 percent inhalation of oxygen = (419/20) percent inhalation of oxygen

So reaction = reaction function = working function= $(11/14)$ part, out of 1 part action.
 $= 1*(11/14) = 20.95*(11/14)$
 $= (419/20) *(11/14) = 16.461$ percent of exhalation of oxygen.

So man exhales 16.461 percent of oxygen as reaction in the form of carbon dioxide out of 20.95 percent of the oxygen inhalation.

Absorption = Absorption function
= (3/14) part , out of 1 part of the action
So Absorption function = $1 * (3/14)$
= $20.95 * (3/14) = (419/20) * (3/14) = 4.489$
percent of oxygen.

So man absorbs 4.489 percent of oxygen out of 20.95 percent of oxygen inhalation.

Hence

20.95 percent inhalation of oxygen =
16.461 percent exhalation of oxygen as
carbon dioxide + 4.489 percent absorption
of oxygen in the human body.

The above fact is equivalent to the following law ,

**1 PART ACTION = (11/14) PART REACTION
+ (3/14) PART ABSORPTION**

Hence the inhalation of oxygen is obeyed by this law .

Similarly the photoelectric effect is also obeyed by the above law,

So , If (3/14) part of oxygen does not absorb in the body of a man then (11/14) part of carbon dioxide would not come out from the body .

Likewise, If (3/14) part of photon does not absorb in the metal then (11/14) part of the photoelectron does not release from it .

This implies that ,

IF 1 PART OF THE PHOTONS FALL ON THE METAL THEN (3/14) PART OF THE PHOTONS ARE ABSORBED IN THE METAL AND SIMULTANEOUSLY THE REST (11/14) PART OF THE PHOTONS COMBINE WITH THE ELECTRONS TO BE EJECTED FROM THE METAL AS PHOTOELECTRONS .

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