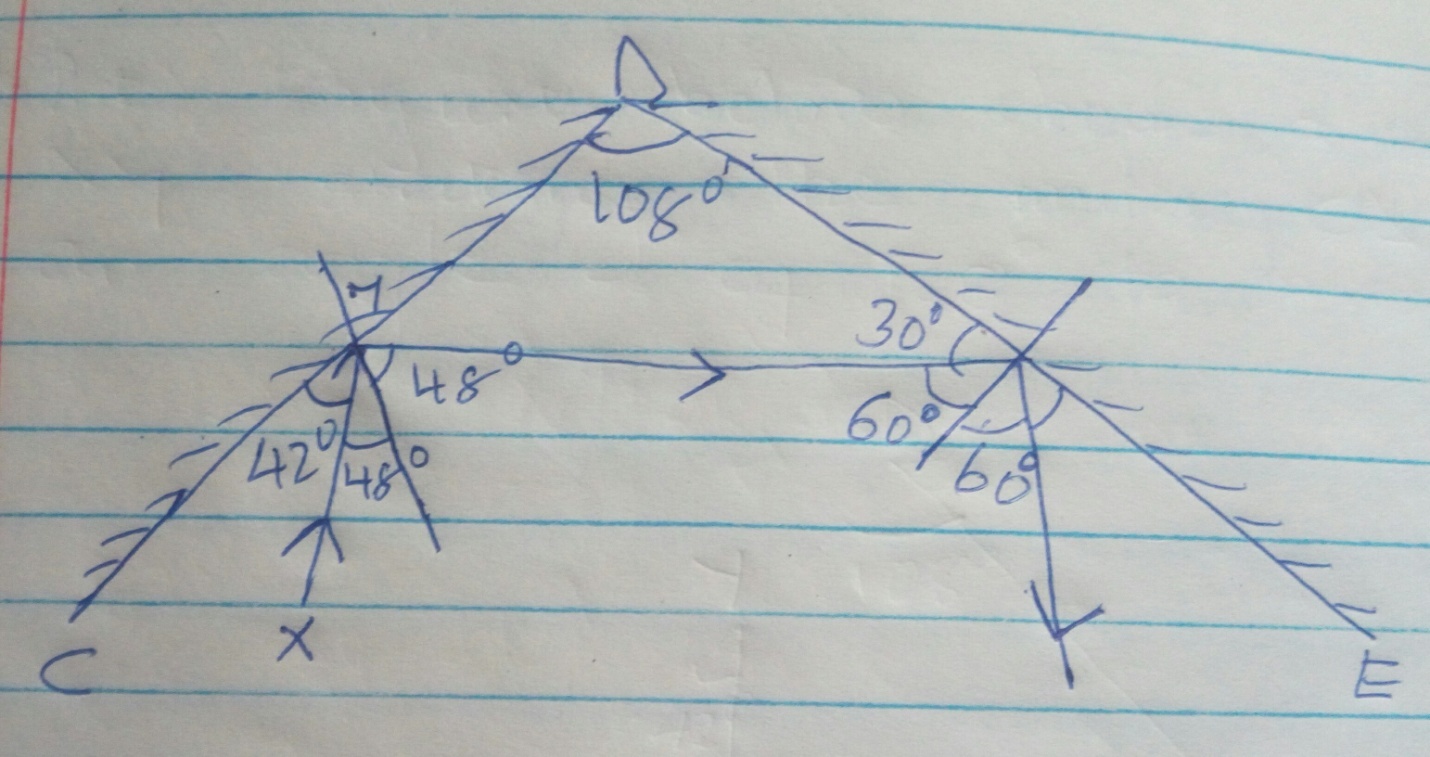
**PHYSICS PAPER 2 MARKING SCHEMES**

1. To oxidize hydrogen gas to water

2.



Correction direction of two reflected rays

Final angle of reflection =60o

3.The leaf divergence increases

Like charges (negative ) repel

4.Iron filling remain infact on the steel rod. Which it fell off from the iron rod. Steel rods retain magnetization form a longer time.

5.The bars repel

The ends acquire the same polarity

6a. 3 waves =0.4sec

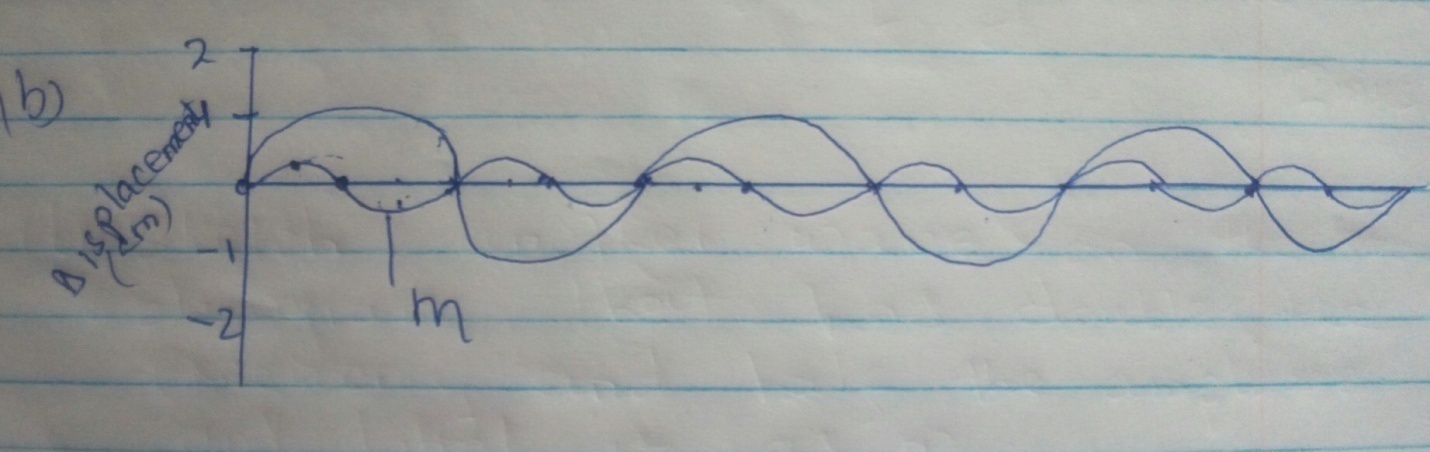
1 wave =?

0.4/3=0.13 sec

T=0.13

F=1/T=1/0.13

b.



7i. Both are virtual images

ii.Used as showing mirror

Used by dentists to examine the teeth

8.Wavelength (a)=V/f=3.0x108/1.5x107

=20m

9a. Gamma rays, x-rays, ultra violet, visible light infra-red, radio waves.

b.Infrated –used in :

Control pests

Remote controls

Green house

Missiles

10i. A –neutral

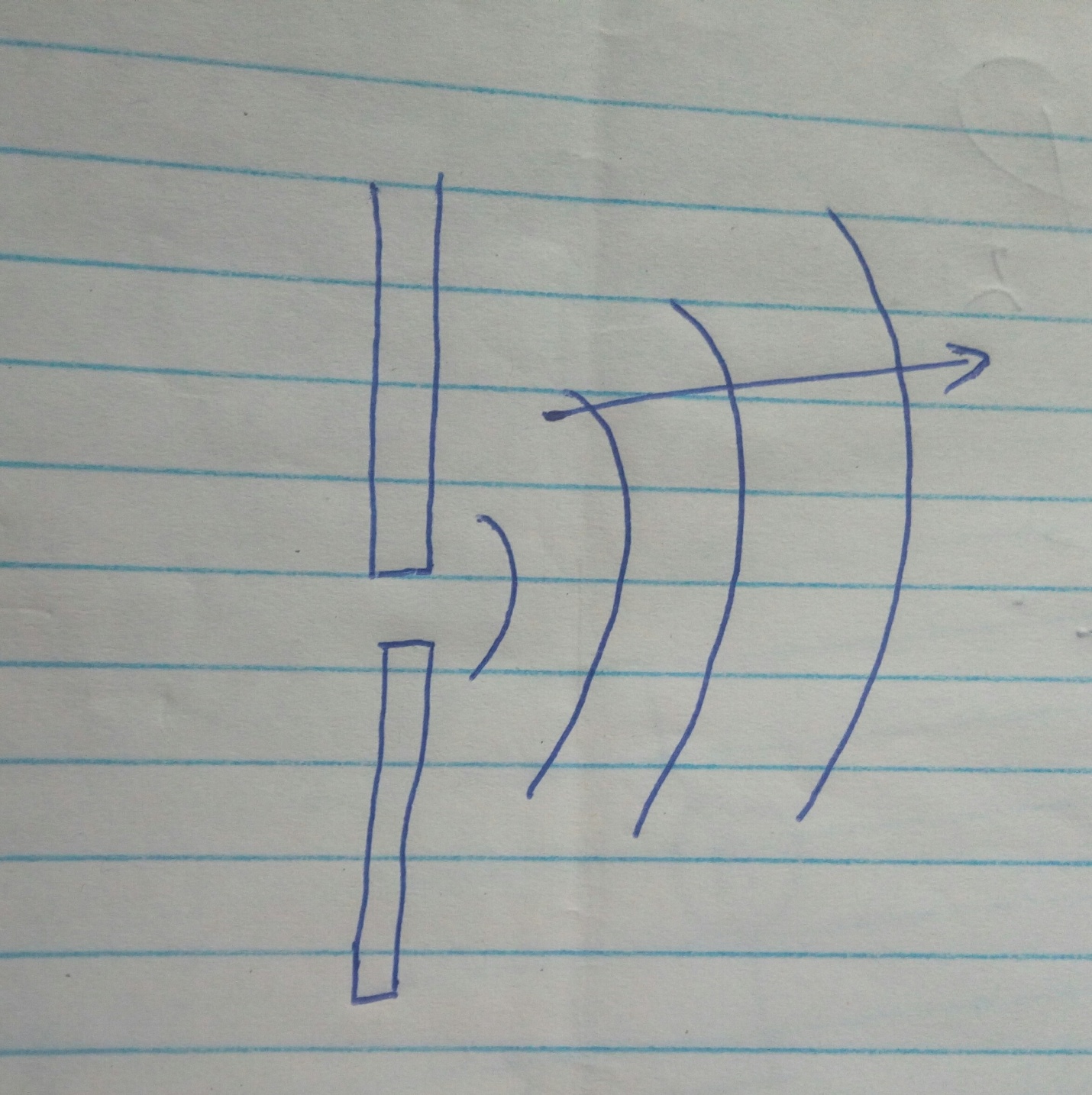
B –live

ii.To protect the circuit against damage by excessive current by melting or cutting it out

11.

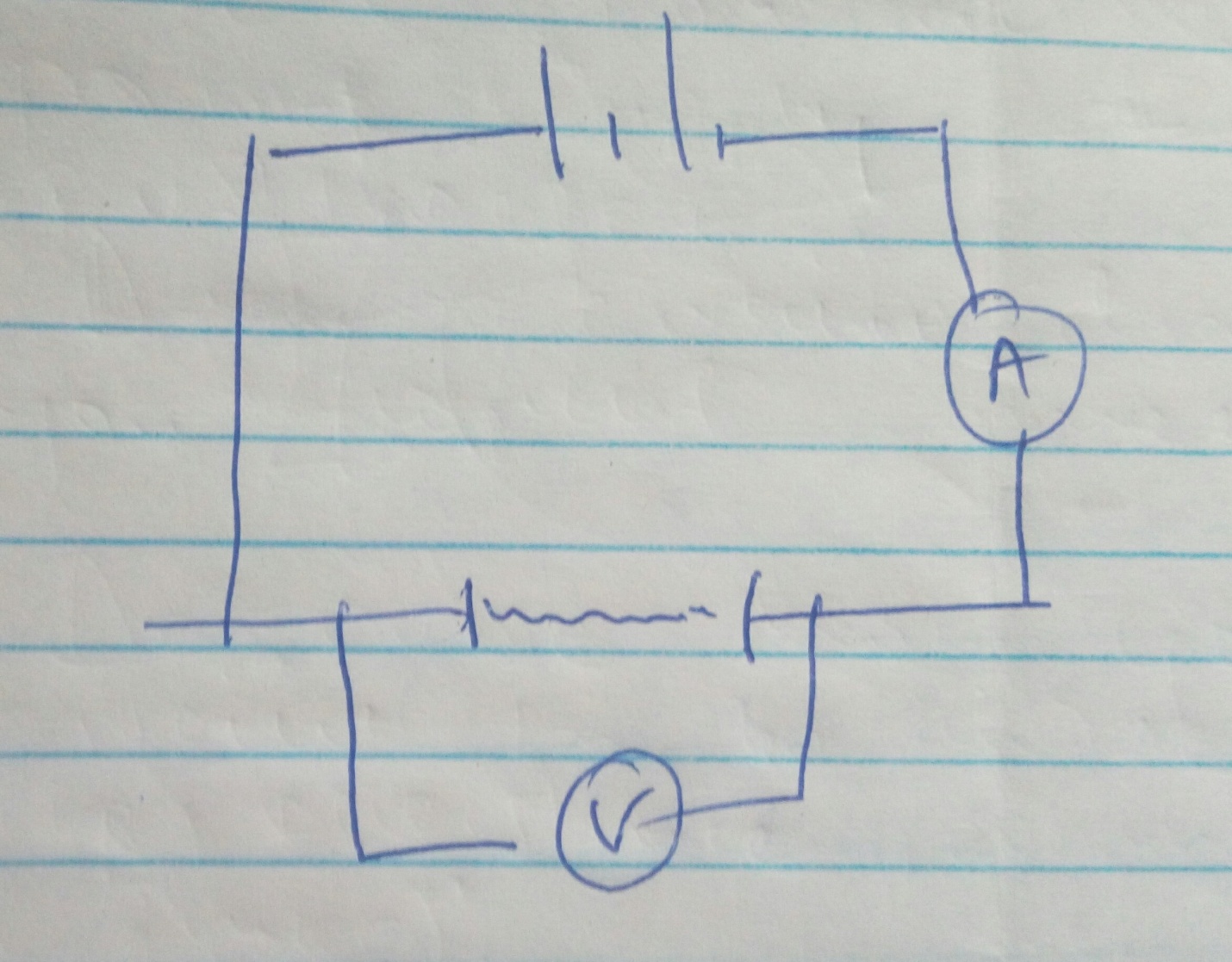
|  |  |
| --- | --- |
| Sound wave | Light wave |
| Longitudinal wave | Transverse wave |
| Travel at speed lower than 3.0x108m/s | Travels at 3.0x108m/s |
| Mechanical wave | Electromagnetic wave  any two correct pairs |

12.



13. The current flowing a conductor is directly proportional to the p.d provided temperature and other physical factors are kept constant

Bi.



Measure length of wire (l)

Take reading of A metre and voltmeter (V)

Calculate the resistance R

Then find the value R/L

c.

|  |  |
| --- | --- |
| I/R=I/S/1/5  i.=2/5 | RT=52.55 |
| R=5/2  =2.5 | =12.5 |
| ii. I=V/R  =10/12.5  =0.8 |  |

14a.Capacitors are used in

Rectification smoothing circuits

Tuning circuits

Camera flash

Reduction of sparking in induction coil contact

bii. 2x8/2x8=16/10=1.6µf

1.63.=4.8µf

CT=5x4.8/5x4.8=24/9.8=2.45x10-6

ii.Q=CV

=2.45x10-6x12=2.94x10-5C

Charge on 3.2µf=2/3x2.94x10-5

=1.96x10-5c

iii. p.d on 5µf=2.94x10-5/5x10-6

=5.88volts

iv.Energy =1/2Cr2

=1/2x2x10-6x6.122

3.75x10-5J

15ai.The negative charge on the electroscope repel the photoelectrons produced when the ultraviolet radiation falls on zinc plate therefore both zinc plate and the electroscope loose charges discharging the electroscope

ii.Work function of metal

Frequency of the incident radiation

Thresh hold frequency of metal

bi.h=slope

= (9-3)x10-19

(2.5-1.5)x1015

=6.0x10-34js

ii.Fo=x-intercepts =1.0x1015hz

Wo=hf0

=6x10-34x1.0x1015

=6.0x10-19j

16i.Filament heats the cathode electrons which gain energy to escape from the surface.

ii.Accelerating the electrons of focusing

iii.Across x plate

iv.To reduce collisions with air \molecules that could lead to ionization

b.Height =4cm

Meet value =4x5

=20V

ii.2 wavelength =16cm.

T=8x20x10-3

=0.16s

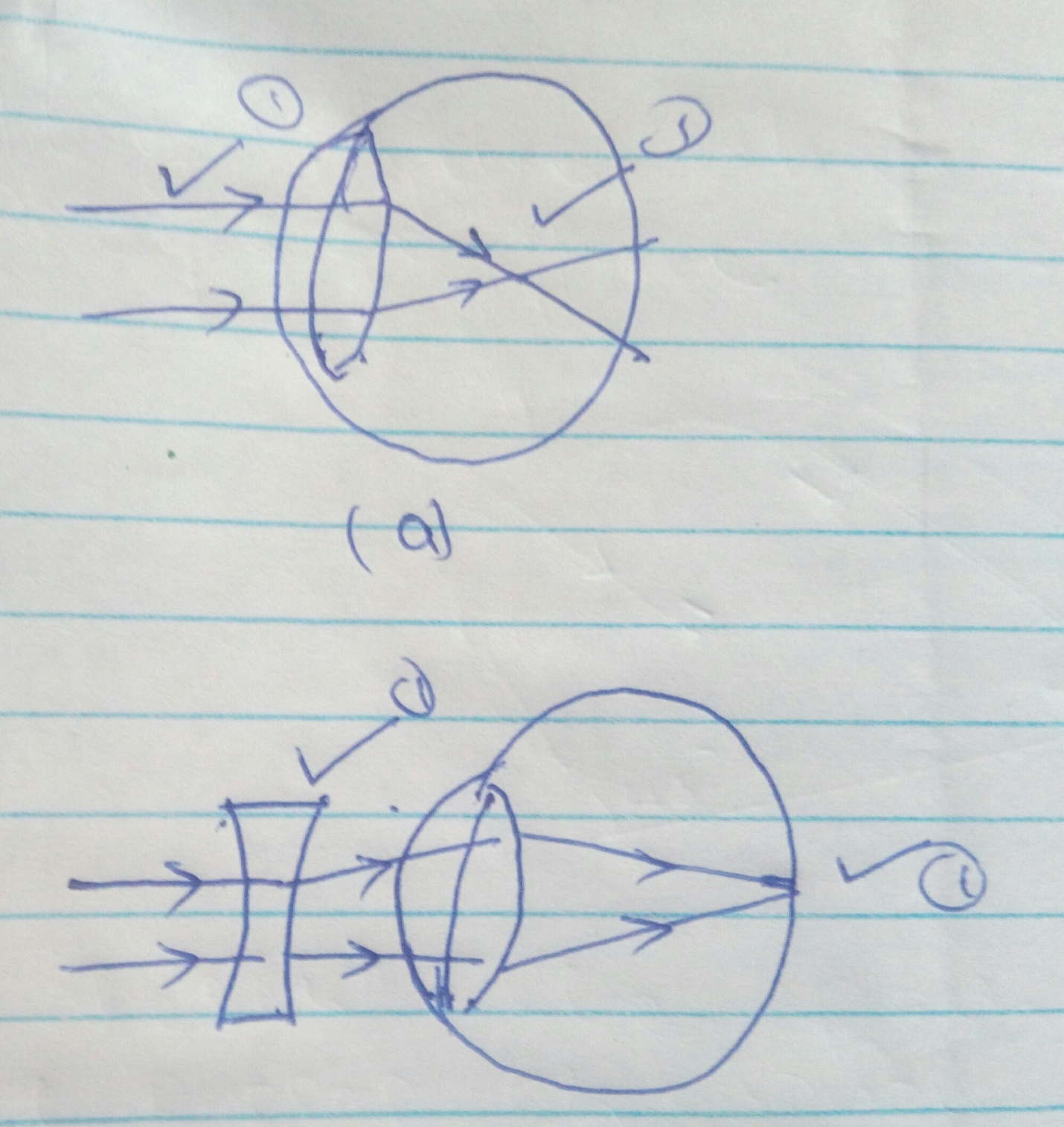
F=1/T

=1/0.16

=6.25Hz

iii.Double the cycles

17i.



ii.

bi.M=V/U=3 V/80-V=3

VU=80 V=240-3V

U=80-v V=60cm

iii. h=80-60

=20cm

1/f=1/u + 1/v

=1/60-1/20

=15cm

c.

