

Second Terminal Examination 2012

Physics

1) (B) Yellow and Blue

2) (b)

3) 400V

4) Velocity of sound

5)

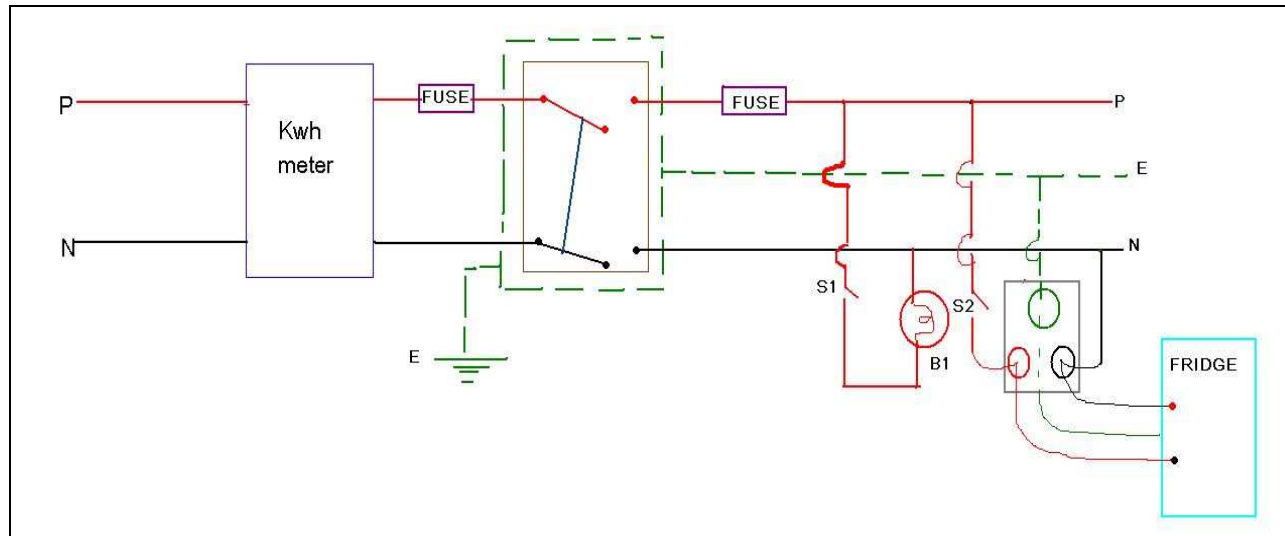
Incandescent Lamp	Fluorescent Lamp
Loss of energy in the form of heat is higher	The Inconvenience due to shadow is minimum
Tungsten Filament is used	Light is produced due to ultraviolet rays

6)

a) Power $P=VI$.When electricity is transmitted to distant places there is loss of energy due to heat. To reduce the energy loss electric current should be minimum. So high voltage is used to decrease the electric current without changing power

b) At the initial stage of the distribution network Step up transformer is used to increase the voltage to decrease energy loss. Step down transformers is used for the distribution of electric power for house hold uses.

7)



8)

a) Loudness increases due to forced vibration

b) 512Hz

9)

a) Kwh meter

b) Total power of 60W lamps = $5 \times 60 = 300W$

$$\text{Power consumed by 60W bulbs in one day} = \frac{300 \times 3}{1000} = 0.9 \text{ units}$$

Total power of 40W lamps = $6 \times 40 = 240W$

$$\text{Power consumed by 40W bulbs in one day} = \frac{240 \times 5}{1000} = 1.2 \text{ units}$$

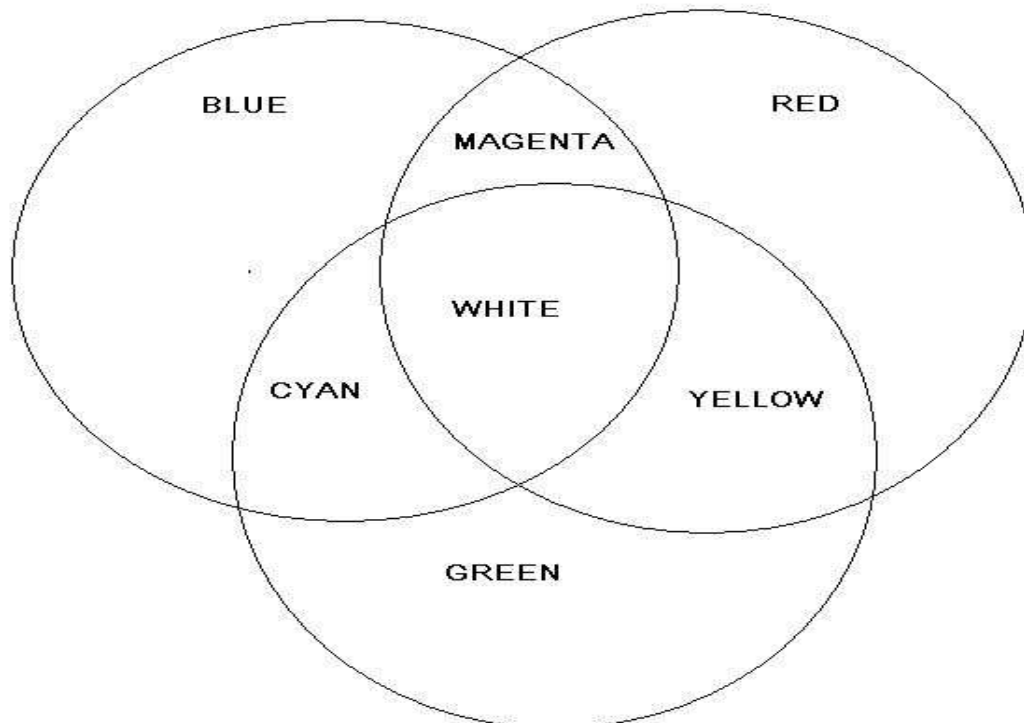
Total energy consumed in one day = $0.9 + 1.2 = 2.1$ units

Total energy consumed in a month of 30 days = $2.1 \times 30 = 63$ units

10)

(A)	(B)	(C)
(i)	Amplitude	1cm
(ii)	Frequency	1Hz
(iii)	Wavelength	8m

11)



- a) X – Blue and Y-Magenta
- b) Z is red it's complimentary colour is Cyan
- c) The red shirt appears as dark in Blue light

12) a) The given component is a capacitor

b) To store electric charge and release it when necessary

c) Electrolytic Capacitor

13) a) Circuit S

b) In circuit R and S due to self induction effective voltage decreases . But it in circuit S there is a softiron core inside the solenoid in this case selfinduction in high and effective voltage is less then in the circuit R

c) Circuit R,S

14)

a) It is due to Reverberation

b) The surface of the wall are to made rough, Rough curtains must be used in the hall, Maximum ventilations are provided in the hall, Rough carpets must use in the floor, etc (Write any 4 suitable reasons)

c) Acoustics of buildings

15)

1) Refraction and Internal reflection

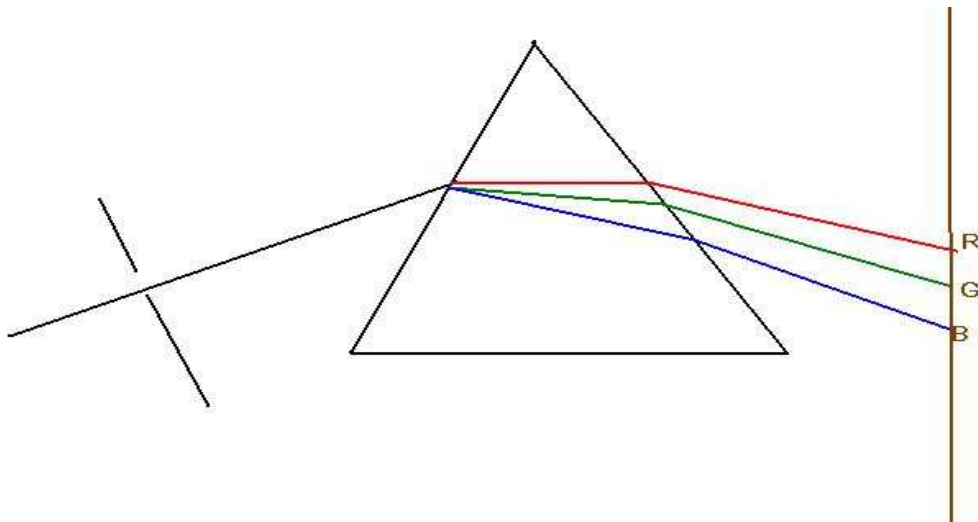
2) P Violet and Q Red

3)Violet is on the inneredge and Red on the outer Edge

4) Only a single colour reaches the eye from a particular water drop.Each colour makes a particular angle with the eye.This is why rainbow is seen in the form of an arc.

Or

a)



b) Blue deviates the most

c) Dispersion

16)

a) A represents Infrared Rays and B represents Ultraviolet rays

b) Due to the chemical changes made in photographic plates

c) Produces Vitamin D in our body (Any suitable answer)

d) Radiation A or Infrared radiation