**PAVEMENT NATIONAL EXAMINATION**

**OPENER EXAMINATION** **TERM ONE 2021/2021**

**FORM 4 PHYSICS PP2 (MARKING SCHEME)**

**1.** B- more current was supplied by the batteries to a low resistance circuit.

**2.** Hard magnetic materials are difficult to magnetize though they retain the magnetism for a longer period. Soft magnetic materials are easily magnetized but don’t keep it for a longer period.

**3.** This is because of multiple reflection of the object and its image on each mirror

**4.**

 = 1.524

**6.**

 = 60.63 W

**7.**

 = ) m

 =

 148.5 =

 = 124.5 m

**8.**

=

**9.**

 **=**

P

=

=

**10.**

 

**11.** (a)

 **=**

(b) C =

 =

 =

 (c) - the critical angle must be exceeded

 - the light ray must be coming from a denser medium to a rarer medium

**12.**



**13.** the majority negative charges are first attracted to the cap leading to a decrease in divergence, then minority positive charges are repelled. This leads to increase in divergence

**14.** I

 **=**

 =

**15.**

 **=**

**16.**

 The image is - real, diminished and inverted

**17.** (a) generator

 (b) has a high resistance and melting point

(c) (i)

 V =

 (ii)

 = 0.00104 Ω

**18.**

 

1. Gradient =
2. 0.2 V
3. 0.65 V

**19.** (a) the currevt flowing ia a circuir is direcly proportional to the potential difference across it provided temperature and other factors are kept constantt

(b) (i)

 (ii) 3 +1 = 4 A

 (iii) R = 28 +

 (iv) V

 = 142 V

**20.** (a) WZ and XY

(b) anticlockwise

 (c) – increase the current

 - use stronger magnet

 - increase the number of turns

 - making sure that the coils are perpendicular to the magnetic field lines

 (d) the coil rotates in the opposite direction

**21.** (a)

 

 (b) it is possible since moon is rotating/moving. The shadow “moves”

 (c) when the moon is far from the earth, the moons shadow is usually short and doesn’t reach he earth.