

31) Thermal Conductivity of standard SWNT along its length is $\frac{\text{Watt}}{\text{m.K}}$

(A) 35,000 Watt/m.K

☒ (B) 3500 Watt/m.K

(C) 350 m.K/Watt

(D) 3600 Watt

32) By which name is nanotechnology known for its higher performance?

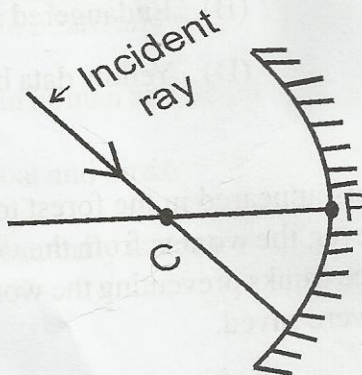
(A) Ideal Technology

(B) Modern Technology

(C) Engineering Technology

☒ (D) Green Technology

33) In which direction the incident ray shown by \rightarrow in the following figure, will go after reflection?



☒ (A) Comes back in the direction of incident ray

(B) Passes through pole of mirror

(C) Passes through the focal point of mirror

☒ (D) Becomes parallel to principal axis

34) For which of the following the total internal reflection of light is possible?

- (A) Angle of incidence is less than critical angle
- (B) Angle of incidence = Critical angle
- ☒ (C) Angle of incidence is more than critical angle
- (D) Angle of incidence = Angle of refraction

35) Gita arranges some mirrors in group - 1 and group - 2 according to the magnification, type of image and size of image from the following data.

Sr.No.	Group - 1	Group - 2
(1) 1	<1 and negative	1 real, inverted and small
(2) 2	>1 and positive	3 real, inverted and enlarged
(3)	>1 and negative	2 virtual, erect and enlarged
(4)	<1 and positive	4 virtual, erect and small

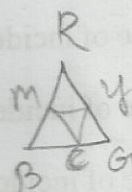
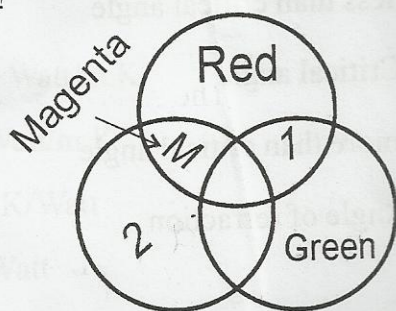
For which of the pairs from group 1 and group 2 you disagree.

- ☒ (A) 2 and 3
- (B) 1 and 3
- (C) 3 and 4
- (D) 1 and 2

36) Which colour of light is scattered the most (maximum) in the atmosphere?

- (A) Yellow
- (B) Red
- ☒ (C) Blue
- (D) Green

- 37) In the following figure, which colours should be there in number 1 and 2 respectively?



- (A) Blue and Yellow
☒ (B) Yellow and Blue
 (C) Yellow and Cyan
 (D) Cyan and Yellow
- 38) What is the unit of electric charge in S.I system?
- (A) Volt
☒ (B) Coulomb
 (C) Watt
 (D) Ampere
- 39) What is used as anode in Volta's cell?
- ☒ (A) Copper plate
 (B) Zinc plate
 (C) Carbon rod
 (D) Iron plate

40) The connection of resistances is divided into two groups as follows.

Group - 1	Group - 2
<ul style="list-style-type: none"> The resistances are connected in series such that same (equal) electric current flows through each resistance. Equivalent resistance is more than every resistance connected in series 	<ul style="list-style-type: none"> The resistances are connected in parallel. So that the voltage drop through each resistance is same. Equivalent resistance is smaller than every resistance connected in parallel

Which of the following is not true?

(A) If we connect group-2, the equivalent resistance obtained is,

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \dots + \frac{1}{R_n}$$

(B) The use of group-2 connection is to increase the resistance of circuit.

☒ (C) The use of group-1 connection is to increase the resistance of the circuit.

(D) The use of group-1 connection is to decrease the resistance of the circuit.

41) On which factor does the resistance of a conductor not depend upon?

(A) Length of conductor

(B) Volume of conductor

(C) Area of cross section of conductor

☒ (D) Material of conductor

42) Who gave the law of electromagnetic induction?

☒ (A) Farade

(B) Oersted

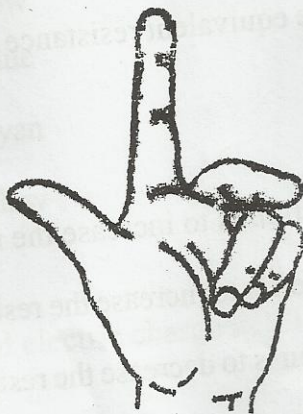
(C) Volta

(D) Ampere

43) How many times does an AC electric current of frequency 50Hz change its direction?

- (A) 50
- (B) 25
- ☒ (C) 100
- (D) 200

44) The figure showing Fleming's left hand rule is given. Which finger or thumb shows the direction of flow of electric current?



- ☒ (A) Second finger
- (C) Thumb

- (B) First finger
- (D) Small finger

45)

In which of the following statements the word light year is used correctly?

- (A) Cetus dwarf galaxy is 2.46 million light year away from us
- (B) Light travels with the speed of 1 light year in the Universe
- (C) The next complete solar eclipse will be seen after 32 light year
- ☒ (D) The earth takes 365 days to complete the distance of 1 light year around the sun.

46) What is the distance of geo-stationary satellites from the earth?

- ☒ (A) 35,786 km
- (B) 37,956 km
- (C) 43,000 km
- (D) 23,123 km

47) In the accident of which space shuttle, Kalpana Chawla died?

(A) Challenger

☒ (B) Colombia

(C) Discovery

(D) Atlantis

48) Which of the following statement is true for 'black hole'?

☒ (A) Its temperature is directly proportional to its density.

(B) It emits radiations in large number.

(C) Its temperature is equal to the temperature of the sun.

☒ (D) Its temperature is inversely proportional to the density.

49) What is true for acidic aqueous solution?

(A) $[H_3O^+] < 10^{-7} M$

(B) $[H_3O^+] = 10^{-7} M$

☒ (C) $[H_3O^+] > 10^{-7} M$

(D) $[H_3O^+] < [OH^-]$

50) What is formed by the reaction between metal oxide and water?

☒ (A) base

(B) acid

(C) salt

(D) metal