

PHYSICS FORM TWO NECTA 1987

Solutions from: Maktaba by TETEA

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
D	A	A	A	C	A	C	A	B	D	B	D	B	A	B

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
D	C	A	C	A	B	C	B	C	A	D	B	D	D	B

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
A	A	B	C	C	F	H	A	E	B	B	C	D	F	E

46. (a) Archimedes principle states that “when the body is partially or totally immersed in fluid it experience an upthrust which is equal to its total weight”

(b) Given, volume of liquid = 85 cm^3

-displaced mass = 9 g

Relative density = 1.8

Then, density of liquid = relative density x density of water

$$= 1.8 \times 1 \text{ g/cm}^3$$

$$\text{Density of liquid} = 1.8 \text{ g/cm}^3$$

Then, displaced volume = mass/density

$$= 9\text{g}/1.8\text{g/cm}^3$$

$$\text{Displaced volume} = 5 \text{ cm}^3$$

Then, new volume = $85 \text{ cm}^3 + 5 \text{ cm}^3$

$$= 90 \text{ cm}^3$$

47. (a) Newton's second law of motion states that “the rate of changing momentum of the body is proportional to the applied force.”

(b) Given, $u = 10 \text{ m/s}$, $v = 0 \text{ m/s}$, $a = -2 \text{ m/s}^2$

$$\text{From, } v^2 = u^2 + 2as$$

$$0^2 = 10^2 - 2 \times 2 \times s$$

Distance, $s = 25 \text{ m}$

48. Brownian motion experiment and conclusion

49. (a) By placing the plane mirrors in different angles.

(b) Principle of operation of periscope.

50. (a)(i) permanent magnet

(ii) temporary magnet

(iii) electrophorus

(b)(i) shield a watch from external magnetic fields

(ii) make a metal sphere with net negative electric charge.