PENCILTUTOR SCHOOL PTE. LTD.
Co. Reg. No. 200601708E
Blk 102, #02-135
Yishun Avenue 5
Singapore 760102

Penciltutor®

Answers to 2017 O level Science Physics 5076/5077 Paper 1

Question	Answer	Explanation
1	C	Average speed = Total distance / Total time = 120/(90/60) = 80 km/h
2	C	Distance = Area under the graph (trapezium) = ½ x (40+80) x (3/60) = 3km
3	C	Air resistance opposes motion.
4	B	Volume = Mass/Density = 4/2 = 2cm^3 Volume of water = 4.6 – 2 = 2.6cm^3
5	A	Unstable objects tend to have smaller base area and higher centre of gravity.
6	D	At equilibrium, anticlockwise moment = clockwise moment. Moment = Force x Perpendicular distance from pivot
7	A	P = F/A Since F = weight = constant, increasing A will decrease P.
8	D	According to Law of Conservation of Energy, Kinetic Energy at X = GPE at highest point

9	C	KE is directly proportional to temperature.
10	C	During solidification, temperature remains constant.
11	D	Definition.
12	A	Fact
13	B	Fact
14	B	The particles in solid are closer to each other.
15	A	2d = speed x time = 1500 x 0.24 = 360m d = 180m
16	B	Fact
17	D	Q = It = 3 x (5x60x60) = 54 000C
18	B	V = IR = 3 x 3 = 9V In parallel circuit, voltage remains constant. Hence, e.m.f. = 9V too. Total Resistance = $[(1/3) + (1/6)]^{-1}$ = 2Ω I_t = V/R = 9/2 = 4.5A

19	A	Fuse is a safety device which melts when there is excessive current.
20	B	According to Fleming's Left-Hand Rule, direction of force, direction of magnetic field and direction of current flow are perpendicular to each other.