INDIAN SCHOOL MUSCAT
SECOND TERM EXAMINATION
SCIENCE 086

CLASS: IX   TERM- 2   Max. Marks: 40

		MARKING SCHEME	
	QN.NO	**VALUE POINTS**	**MARKS SPLIT UP**
	1	<table><tr><td>Mass is a property of matter. The mass of an object is the same everywhere.</td><td>Weight depends on the effect of gravity. Weight increases or decreases with higher or lower gravity.</td></tr><tr><td>Mass can never be zero.</td><td>Weight can be zero if no gravity acts upon an object, as in space.</td></tr></table>	1+1

	2	a) P =1800W
		t = 2h
		E = P x t
		= 1800 x 2 =3600/1000=3.6kWh
		Cost of electrical energy consumed:
		  n= 30days
		unit price = Rs.2/-
		Cost = E x n x unit price = 3.6 x 30 x2
		  = Rs. 216/-
		
		OR
		
		b) m = 50kg, t = 25seconds
		
		  h=40 ×0.2=8 m
		
		Change in potential energy, =mgh=50×10×8=4000 J
		So, Work done by the man, W=4000 J
		
		Power used, P=W/t =4000/25 =160 W
			½
			½
			
			½
			½
			
			½
			½
			
			½
			½

	3	(i)Al (ii) S (iii)Cu (iv)Zn (1/2 +1/2 +1/2+1/2)	(1/2+1/2+ 1/2+1/2)

4	Definition:(1) Explanation:(1)	(1+1)
5	Formula and Substitution (1) Result=4 x 6.022×10^{23} (1) **OR** Definition:(1) Example:(1)	(1+1) (or) (1+1)
6	Definition (1) No=6.022×10^{23} (1)	(1+1)

7	Pandemic is an outbreak of a particular disease which affects the population worldwide. (1mark)
	
	    a) Swine flu
	    b) H1N1 (or any other two) (1/2 x 2=1mark)
	
	OR
	
	1. Proper nourishing balanced diet
	2. Clean and hygienic environment
	3. Good social environment
	4. Proper sanitation and cleanliness (1/2x 4=2 marks)
		2 marks

8	a) Work done-definition b) Derivation –Kinetic energy	1 1+1

9	a) g= $-10 m/s^2$
	   h=180m
	   (i) $v^2 - u^2 = 2g\,s$
	         $0 - u^2 = 2 \times -10 \times 180$
	         $u^2 = 3600$
	         u= 60m/s
	
	   (ii) $v = u + g\,t$
	         $0 = 60 - 10\,t$
	         t= 60/10 =6s
	
	OR
	
	b) The Earth and the moon experience equal gravitational forces from each other. However, the mass of the Earth is much larger than the mass of the moon. Hence, it accelerates at a rate lesser than the acceleration rate of the moon towards the Earth. Due to this reason, the Earth does not move towards the moon.
	c) M = 20kg
	    $W_E = mg = 20 \times 10$
	        =200N
	
	    $W_M = 1/6 \times W_E$
	       = 1/6 x 200 = 33.3N
		
		½
		½
		½
		
		½
		½
		½
		
		1
		
		½
		
		½
		
		½
		
		½

	10	There are specific organs targeted by the pathogens once they enter the host body. This depends upon the way through which they enter the host body. For example, If they enter through the respiratory system, lungs are the organ which will get infected. (2 marks) Loose motion, vomiting, nausea and stomachache (any two symptoms) (1/2 x 2=1mark)	2+1=3 marks
	11	a) Person is suffering from AIDS – Acquired Immune Deficiency Syndrome. (1/2 mark) b) The pathogen that has caused AIDS is HIV – Human Immune Deficiency Virus. (1/2 mark) c) This virus is transmitted through following ways: (i) Sexual contact with an infected person carrying AIDS virus. (ii) Transfusion of blood. (iii) Use of unsterilized needles, blades or razors. (iv) AIDS infected mother to the fetus developing in her womb. (Or any other) (1/2x 4=2 marks)	½ + ½ + 2=3 marks
	12	(i) Definition (1) (ii) Two postulates (1+1) **OR** Each chemical formula (½)	(1+2) Or 6 x ½
	13	Neil's Bohr Model (2) Bohr model for Sodium Atom (1)	(2+1)
	14	a) Universal law of gravitation-statement $F = G m_1 m_2 /R^2$ b) Importance of universal law of gravitation are: (i) the force that binds us to the earth. (ii) the motion of moon around the earth. (iii) the motion of planets around the sun. (iv) the tides due to the moon and the sun c) Any two differences Or At poles	1 1 ½ ½ ½ ½ ½ +1/2 1
	15	(a) 48g of Mg(2 x No) (1) (b) NaCl (½) 0.1 mole (½) (c)35.5g (1) 0.6022×10^{23} (1) **OR** (i) n/2 (1) (ii)1260g (1) (iii) 84g (1) (iv) N_o (or) 6.022×10^{23} (1)	(1+1+2) (or) (1+1+1+1)