INDIAN SCHOOL MUSCAT

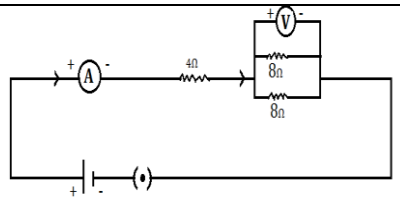
SET C

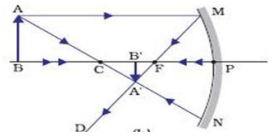
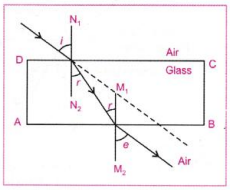
FIRST PRELIMINARY EXAMINATION

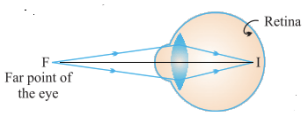
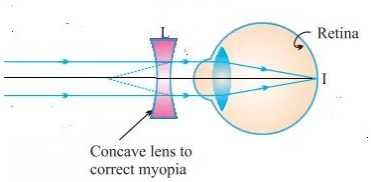
JANUARY 2019

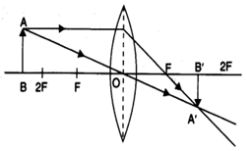
CLASS X

Marking Scheme – SUBJECT[PHYSICS][THEORY]

	VALVUE POINTS	Split up marks
	SECTION A	
1.	BIO	1
2.	BIO	1
	SECTION B	
3.	CHE	2
4.	Explanation-Electricity produced in a nuclear reactor OR (a) A large number of solar cells combined in a particular pattern is called solar cell panel (b) Solar cooker: Advantage-Nutrients of food will be sustained as constant temperature is maintained. Disadvantage- Cooking of food takes a significantly longer time compared to conventional methods	2 1 1
5.	BIO	2
	SECTION C	
6.	 P = 32 W $1/R_P = 1/8 + 1/8 = 2/8$ $R_P = 4\ \Omega$ Total resistance R' = 4 + 4 R' = 8Ω $I^2 = P/R = 32/8$ I = 2A	1 ½ ½ ½ ½
7.		

	$h_O = 12$ cm f = -20cm v = -50cm 1/v+1/u = 1/f 1/u = 1/f -1/v 1/u = 1/-20 +1/50 1/u = -3/100 U = -100/3= -33.3cm $h_i / h_O = -v/u$ = -(-50/-33.3) h_i = 12 x-1.5 = 18.01 or 18cm Height of the image formed is enlarged. The object is placed between C & F of a concave mirror.  	½ ½ ½ ½ 1
8.	(a) Explanation -a straight conductor carrying current produces a magnetic field around it. - Diagram (b) Right hand thumb rule OR (a) Definition- electromagnetic induction (b) Explanation- how current is induced in a solenoid using bar magnet. -Diagram	1 1 1 1 1 1
9.	(a)  (b)Lateral displacement depends on : -angle of incidence -Thickness of the material (any two)	2 ½ ½
10.	CHE	3
11.	CHE OR CHE	3
12.	CHE	3
13.	BIO	3
14.	BIO OR BIO	3

15.	BIO	3
	SECTION D	
16.	(a) Electric generator (b) Electric generator –Principle -working -diagram OR (a) To avoid electric shocks, the metal body of an electrical device is 'earthed'. A wire called 'earth wire' is used to connect the metal body of the electrical device to the earth, which is at zero potential. (b) One end of the earth wire is connected to the metallic device and the other end of the wire is connected to the earth.Tthe device is now "earthed" or "grounded". The earth wire carries the high current to the earth from the device and prevents electric shock to the person who is using it. (c) Explanation- on the working of domestic electric circuit - diagram	1 1 1 2 1 1 1 2
17.	(a) P = -4D F = 1/P = 1/-4 = -0.25m or -25cm The person is suffering from Myopia (b) Causes for myopia: -Excessive curvature of eye lens -Elongation of the eye ball (c) (i) defected eye  (ii) correction for Myopia  	½ ½ 1 ½ ½ 1 1
18.	CHE OR CHE	5
19.	CHE	5
20.	BIO	5
21.	BIO OR BIO	5
	SECTION E	

22.	(a) Statement- Ohm's law (b) To maintain constant temperature while doing the experiment. As temperature increases, the resistance of the wire also increases. OR (a) S.I unit of current is Ampere(A). If a charge of 1C flows through a circuit for a time 1s then the current produced in the circuit is said to be 1A. (b) The two resistors are connected in parallel $1/R_P = 1/4 + 1/6$ $R_P = 2.4\Omega$	1 1 1 ½ ½
23.	(a) Object beyond 2F  (b) Image is formed between F &2F. Nature of the image is real and inverted.	1 ½ ½
24.	CHE OR CHE	2
25.	CHE	2
26.	BIO	2
27.	BIO OR BIO	2
	End of the Question Paper	