









<p>12</p>	<p>(a) No: of Primary turns, <math>N_P=20,000</math>                  No: of secondary turns, <math>N_S = 30,000</math>                  Voltage in the primary, <math>V_P= 160</math> V                  Voltage in the secondary, <math>V_S = ?</math>  <math display="block">\frac{V_S}{V_P} = \frac{N_S}{N_P} \therefore V_S = \frac{V_P \times N_S}{N_P} = \frac{160 \times 30000}{20000} = 240</math> V</p> <p>(b) As no.of turn's increases in the secondary the flux linked with secondary increases thereby increases the induced emf in the secondary.</p> <p>(c) 500 W. Because power in the primary and secondary are equal.</p>	<p>Score: 2</p> <p>Score: 1</p> <p>Score: 1</p>
<p>13</p>	<p>(A)</p> <p>(a) Mass , <math>m = 5</math> Kg                  Change in temperature , <math>\theta = 313\text{K} - 303\text{K} = 10</math> K                  Quantity of heat , <math>Q = 209300</math> J  <math>Q = mc\theta</math>  <math display="block">C = \frac{Q}{m\theta} = \frac{209300}{5 \times 10} = 4186 \text{ J/Kg K}</math></p> <p>(b)</p> <ul style="list-style-type: none"> <li>• The change in atmospheric temperature do not affect our body temperature quickly</li> <li>• Water is used as a coolant in radiators of engines</li> <li>• Land breeze and sea breeze</li> </ul> <p>(B)</p> <p>(a) J / Kg</p> <p>(b) It is the quantity of heat absorbed by 1 Kg of solid to change into liquid state at its melting point without change in temperature</p>	<p>Score: 2</p> <p>Score: 2</p> <p>Score: 1</p> <p>Score: 1</p>

	(c) <ul style="list-style-type: none"> <li>Glaciers do not melt as a whole at the same time</li> <li>Ice creams does not melt fast</li> </ul>	Score: 2
14	c. 55000 Kj / Kg	Score: 1

Chapter no	Chapter name	No of questions (optional )	Marks	% weight
1	Wave motion	5	6	15%
2	Effects of electric current	3	5	12.5%
3	Electromagnetic induction	2	4	10%
4	Power transmission and distribution	4	5	12.5%
5	Heat	3(3)	6	15%
6	Colours of light	5(4)	6	15%
7	Electronics and modern technology	3	4	10%
8	Energy management	3	4	10%
		<b>Total</b>	<b>40</b>	<b>100%</b>

❖ NB: % weight of score for each chapter may vary