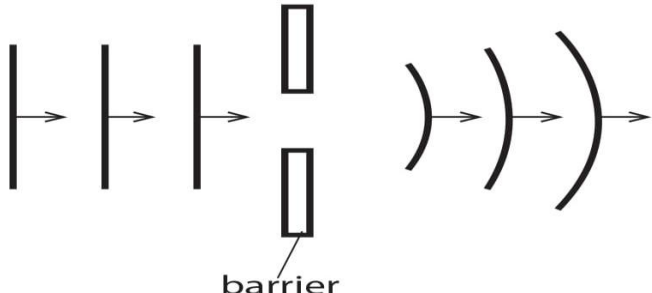



KAMSSA 2020 PHYSICS 535/1 MARKING GUIDE

		REMARKS																																								
	SECTION A (40 MARKS)																																									
	<table><tr><td>1. B</td><td>11. D</td><td>21. A</td><td>31. A</td></tr><tr><td>2. D</td><td>12. A</td><td>22. D</td><td>32. B</td></tr><tr><td>3. B</td><td>13. B</td><td>23. B</td><td>33. B</td></tr><tr><td>4. C</td><td>14. A</td><td>24. B</td><td>34. B</td></tr><tr><td>5. B</td><td>15. C</td><td>25. B</td><td>35. D</td></tr><tr><td>6. D</td><td>16. C</td><td>26. D</td><td>36. D</td></tr><tr><td>7. A</td><td>17. B</td><td>27. C</td><td>37. D</td></tr><tr><td>8. A</td><td>18. B</td><td>28. C</td><td>38. B</td></tr><tr><td>9. A</td><td>19. A</td><td>29. B</td><td>39. D</td></tr><tr><td>10. C</td><td>20. A</td><td>30. B</td><td>40. C</td></tr></table>	1. B	11. D	21. A	31. A	2. D	12. A	22. D	32. B	3. B	13. B	23. B	33. B	4. C	14. A	24. B	34. B	5. B	15. C	25. B	35. D	6. D	16. C	26. D	36. D	7. A	17. B	27. C	37. D	8. A	18. B	28. C	38. B	9. A	19. A	29. B	39. D	10. C	20. A	30. B	40. C	
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	SECTION B (40 MARKS)																																									
41(a)	<ul style="list-style-type: none">– A.c flows in both directions while d.c flows in only one direction.– A.c can be stepped up or down using a transformer while d.c cannot.																																									
(b)	The galvanometer pointer gives a deflection because there is cutting between the coil and the magnetic field lines.																																									
42(a)(i)	Is the splitting of a heavy nucleus into lighter nuclides with release of energy.																																									
(ii)	By bombarding an atom by a neutron.																																									
(b)(i)	<ul style="list-style-type: none">– Some is lost as heat energy.– Some energy is used in separating nucleon from the nucleus (binding energy).																																									
(ii)	<ul style="list-style-type: none">– Making of nuclear bombs.– Generation of electricity.																																									
43(a)(i)	Is the product of force and the perpendicular distance of the line of action of the force from the pivot.																																									
(ii)	It states that for the body in equilibrium, the sum of clockwise moment about a point is equal to the sum of anti-clockwise moment about the same point.																																									
(b)	<p><i>Sum of clock wise moment = sum of anti clock wise moment</i></p> $W \times 10 = 20 \times 30$ $10W = 600$ $W = 60N$																																									

44(a) (b)	<p>Is the spreading of waves of the same wave length and frequency around the corner or barrier.</p>	
		
(c)	<ul style="list-style-type: none"> – Amplitude – Frequency – Density of the medium 	
45(a)	<p>This means that the heat required to change the temperature of 1kg mass of water by 1kelvin is 4200J.</p>	
(b)	<ul style="list-style-type: none"> – It's readily available. – It's cheap. – It has a high specific heat capacity. 	
46(a)(i)	<p>It states that when the speed of the fluid increases, the pressure in the fluid decreases and vice versa.</p>	
(b)(i)	<p>Stream line flow is a type of fluid flow where all the fluid particles that pass a given point follow the same path at same speed while turbulent flow is a type of fluid flow in which the speed and direction of the fluid particles passing any given point vary time.</p>	
(ii)	<ul style="list-style-type: none"> – When the fluid comes out of a jet. – A spinning ball. – Aero foil. <p>Is the temperature at which saturated vapour pressure is equal to the atmospheric pressure.</p>	
47(a)	<p>Because most of its top is covered which reduces the space of escape for vapour molecules which increases the pressure and the increase in pressure causes increase of boiling point. Therefore cooking is faster.</p>	
(b)	<ul style="list-style-type: none"> – Evaporation takes place at any temperature while boiling takes place at a constant temperature. 	
(c)	<ul style="list-style-type: none"> – Evaporation occurs at the surface of the liquid while boiling occurs with in the liquid. 	

48(a)	$velocity = \frac{Effort\ distance}{Load\ distance}$ $= \frac{40}{10}$ $= 4$	
(b)	<p>The efficiency of the system.</p> $\eta = \frac{mechanical\ advantage}{velocity\ ratio} \times 100$ $= \frac{3}{4} \times 100\%$ $= 75\%$	
49(a)	<p>Graph paper.</p>	
(b)	$Magnification = \frac{image\ distance}{object\ distance}$ $= \frac{v}{u}$ $= \frac{10.7}{32}$ $= 0.33$	
50(a)		
(b)(i)	<p>Stationary wave (standing wave)</p>	
(ii)	<ul style="list-style-type: none"> – Guitar – Bow hamp 	