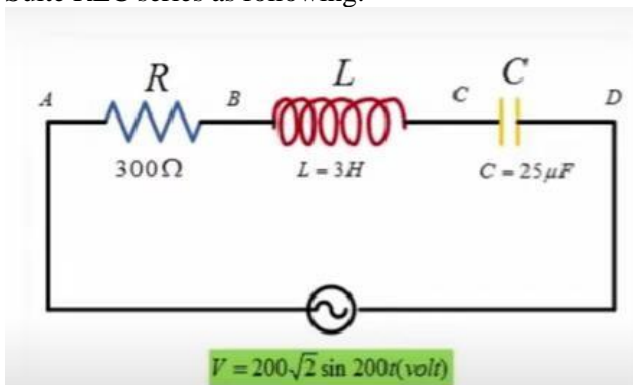
 <p> <b>MINISTRY OF EDUCATION, CULTURE, RESEARCH AND TECHNOLOGY</b>  <b>UNIVERSITY NEGERI JAKARTA</b>          FACULTY MATHEMATICS AND KNOWLEDGE KNOWLEDGE          NATURAL  <b>MAJOR PHYSICS &amp; EDUCATION PHYSICS</b>          Campus A UNJ Rawamangun, G-d. Hasjim Asj'arie Lt. 5          Jl. Rawamangun Advance No. 1 Jakarta          13220Tel. 021-29266285/29266284       </p>	<b>EXAM END SEMESTER 118</b>	
	<b>Basic Physics II</b>	
	<b>Date and time</b>	<b>Monday, 12 June 2023</b>
	<b>O'clock</b>	<b>08.00 - 09.40</b>
	<b>Study Program</b>	<b>Physics &amp; Education Physics</b>
	<b>Characteristic Exam</b>	<b>Closed Book</b>
<b>Lecturer</b>	<b>Prof. Dr. I Made Astra, M.ScDr. Umiatin, M.Sc Dr. Hadi Nasbey, M.Sc Upik Rahma Fitri, M.Pd</b>	

- A wire conductor shaped half circle fingered – finger 0.2 m And placed in a uniform magnetic field that has an out-of-plane direction, as in the picture. Big B expressed in the function  $B = 4.0t^2 + 20t + 3$ , B in Tesla and t in seconds. A battery ideal with emf  $\varepsilon = 2V$  connected on conductor Which own obstacle  $2.0 \Omega$ . Determine

  - Big And direction emf induction resulting from on  $t = 10$  s
  - How many current Which generated on loops conductor on  $t = 10$  s
- A ball of diamond material ( $n = 2.4$ ) radius of curvature 36 cm. right in the center of the ball there hole there is one ant, somebody observe ant the from distance 15 cm from edgeball decide

  - Shadow ant Which seen person
  - Shadow person Which seen ant
- Suite RLC series as following:



- decide big
- Reactance Suite
  - Big current effective
  - Big power factor
  - Big effective power
  - Big frequency resonance
- Ray with long wave  $7500 \text{ \AA}$  dropped upright straight on layer thin Which has a refractive index of 1.5. How thick should the film be to ensure that light amplification occurs? First?
  - A puck metal Which have energy threshold 2 eV illuminated with light monochromatic with a wavelength of  $6000 \text{ \AA}$  until the electrons leave the surface metal. If  $h = 6.6 \times 10^{-34} \text{ Js}$  and the speed of light is  $3 \times 10^8 \text{ m/s}$ , then the kinetic energy of the electron free is?