PEMERINTAH KOTA SEMARANG

DINAS PENDIDIKAN

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Mata Pelajaran : Fisika

Materi Pokok : **GGl** **Induksi**

Teknik Penilaian : Tes Praktik

Bentuk Instrumen : Tes Simulasi

Tahun Pelajaran : 2018/2019

Nama Peserta : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Kelas/Program : XII IPA \_\_\_

No. Peserta : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hari/Tanggal : \_\_\_\_\_ / \_\_ Jan 2019

Waktu : 120 menit

Nilai :

**NASKAH SOAL UJIAN PRAKTIKUM**

**Rumusan Butir Soal No. 9 :**

Lakukan simulasi percobaan Induksi Elektromagnetik untuk memahami proses terjadinya ggl induksi dan faktor-faktor yang menyebabkan terjadinya ggl induksi.

1. Tujuan Percobaan

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1. Dasar Teori

Induksi elektromagnetik pertama kali dipelajari oleh Michael Faraday. Induksi elektromagnetik atau ggl induksi merupakan pembangkitan energi listrik dari medan magnet. Induksi elektromagnetik terjadi pada suatu kumparan jika ada perubahan jumlah garis gaya magnet yang dilingkupi setiap saat. Penyimpangan jarum galvanometer pada percobaan Faraday menunjukkan bahwa dalam rangkaian kumparan terdapat arus listrik atau muatan listrik.

1. Alat dan Bahan

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| No. | Nama Alat/Bahan | No. | Nama Alat/Bahan |
| 1.  2.  3.  4.  5. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 6.  7.  8.  9.  10. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Hipotesis

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1. Langkah Percobaan

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1. Data Hasil Percobaan

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| No- | Jumlah Lilitan (N) | Jumlah Magnet | Gerak Magnet | Tegangan (V) | Kuat Arus (A) |
| 1 | 500 | 1 | Perlahan |  |  |
| 2 | 500 | 2 | Cepat |  |  |
| 3 | 1200 | 1 | Perlahan |  |  |
| 4 | 1200 | 2 | Cepat |  |  |
| Rata-rata | |  |  |  |  |

1. Evaluasi
2. Bagaimana frekwensi arus bolak balik ketika magnet keluar masuk kumparan? Jelaskan.

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1. Jika magnet batang didiamkan di dalam kumparan, apakah ada tegangan dan kuat arus yang mengalir? Mengapa demikian?

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1. Bagaimana proses terjadinya ggl induksi? Jelaskan.

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1. Jelaskan faktor-faktor yang menyebabkan timbulnya ggl induksi.

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1. Sebutkan 5 (lima) penerapan ggl induksi dalam kehidupan sehari-hari.

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1. Kesimpulan Percobaan

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