PEMERINTAH KOTA SEMARANG

DINAS PENDIDIKAN

**SMA NEGERI 14 SEMARANG**

Jalan Kokrosono Semarang 50177 Telp. (024) 3513404 – Fax. (024) 3564343

Website : <http://www.sman14-smg.sch.id> Email : [sekretariat@sman14-smg.sch.id](mailto:sekretariat@sman14-smg.sch.id)

Mata Pelajaran : Fisika

Materi Pokok : **Laju Aliran Fluida /Pers. Kontinuitas**

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. 8 :**

Lakukan simulasi percobaan Resonansi Bunyi untuk memahami gejala resonansi dan menentukan cepat rambat bunyi di udara.

1. Tujuan Percobaan

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1. Dasar Teori

Resonansi adalah suatu gejala ikut bergetarnya suatu sumber bunyi karena bergetarnya bunyi yang lain dengan frekwensi sama. Dalam kehidupan sehari-hari, resonansi dapat diamati dengan menggunakan kolom udara. Jika pada kolom udara yang terletak di atas permukaan air digetarkan oleh garpu tala maka molekul-molekul air akan ikut bergetar. Resonansi pada kolom udara terjadi jika pada permukaan air terjadi simpul gelombang dan pada ujung-ujung tabung bagian atas merupakan perut gelombang.

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- | f (Hz) | ℓ1 (m) | ℓ2 (m) | λ (m) | v (m/s) |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| Rata-rata | |  |  |  |  |

1. Evaluasi
2. Bagaimana azas kerja tabung resonansi? Jelaskan.

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1. Tentukan besar cepat rambat bunyi di udara pada masing-masing percobaan.

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1. Bunyi dengan frekwensi f merambat di udara pada suhu tertentu dengan kecepatan v. Bila frekwensinya dinaikkan menjadi 2f dengan suhu yang sama, apakah cepat rambatnya menjadi 2v? Mengapa demikian?

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1. Prediksikan bagaiman nilai cepat rambat bunyi di udara jika dalam percobaan frekwensinya diubah-ubah (dibuat tidak konstan)? Jelaskan.

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1. Prediksikan bagaimana cepat rambat bunyi di udara yang akan diperoleh bila percobaan dilakukan pada malam hari. Jelaskan.

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1. Prediksikan bagaimana nilai cepat rambat bunyi di udara yang akan diperoleh apabila dalam percobaan tidak menggunakan air (ρ = 1 gr/cm3) melainkan minyak (ρ = 0,87 gr/cm3)?

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1. Kesimpulan Percobaan

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