PEMERINTAH KOTA SEMARANG

DINAS PENDIDIKAN

**SMA NEGERI 14 SEMARANG**

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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 :**

Lakukan simulasi percobaan Gerak Laju Aliran Fluida untuk mengukur laju aliran air keluar dari botol pada tiap lubang dengan ketinggian tertentu terhadap permukaan air.

1. Tujuan Percobaan

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1. Dasar Teori

Fluida dinamik adalah fluida yang bergerak. Dalam fluida yang bergerak memiliki besaran yang dinamakan debit. Debit air adalah banyaknya fluida yang mengalir melalui suatu penampang melintang pada suatu titik tertentu per satuan waktu.

Untuk fluida sempurna, yaitu zat alir yang tidak dapat dimampatkan dan tidak memiliki kekentalan, hasil kali kelajuan fluida dengan luas penampangnya selalu tetap.

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No- | Lubang Botol | Volume Air  (V = A.h) – m3 | Waktu Air Keluar (t) – s | Debit Air  (Q = V/t) – m3/s | Laju Air  (v = Q/A) – m/s |
| 1 | h4 = 3,6 cm |  |  |  |  |
| 2 | h3 = 7,2 cm |  |  |  | **8** |
| 3 | h2 = 10,8 cm |  |  |  |  |
| 4 | h1 = 14,4 cm |  |  |  |  |

1. Evaluasi
2. Lubang mana yang memiliki laju aliran air yang lebih cepat dan yang lebih lambat? Jelaskan mengapa demikian?

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1. Bagaimanakah perbedaan tekanan air di lubang pada h1, h2, h3 dan h4? Jelaskan.

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1. Jika diameter lubang botol dibuat lebih besar, apakah berpengaruh pada besar laju aliran air? Jelaskan.

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1. Bagaimana hubungan antara debit air dengan laju aliran air dari percobaan?

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1. Kesimpulan Percobaan

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Skor Total **= 24**