



ASSESSMENT & EXAMINATIONS

Bundy Park Building, Schomville, King William's Town, Private Bag 4571, King William's Town, 5600
REPUBLIC OF SOUTH AFRICA, Website: www.ecdoe.gov.za
E-mail: nomvuyo.Mbeleki@edu.ecprov.gov.za

Ref. No 13/P

Tel: (043) 604 7788

Enquiries: Ms N. Mbeleki

Fax: 043 604 7789/0868 035 085

MEMORANDUM

**TO: DISTRICT DIRECTORS
CES: CURRICULUM MANAGEMENT
DCES: ASSESSMENT & EXAMINATIONS
SUBJECT ADVISORS
PRINCIPALS OF GRADE 12 SCHOOLS OFFERING PHYSICAL SCIENCES**

FROM: ACTING DIRECTOR: ASSESSMENT & EXAMINATIONS

DATE: 18 SEPTEMBER 2014

**SUBJECT: GRADE 12 TRIAL EXAMINATIONS: ERRATA FOR PHYSICAL SCIENCES
P1 MEMORANDUM**

1. Please note the following errata for the 2014 Grade 12 Trial Examination, Physical Sciences paper 1 memorandum and circulate them to the affected schools:

QUESTION 2 / VRAAG 2

2.3.1
$$\left. \begin{aligned} F_{net} \Delta t &= \Delta p \\ F_{net} \Delta t &= m (v_f - v_i) \\ \Delta p &= m (v_f - v_i) \end{aligned} \right\} \checkmark$$
 Add this option / Voeg hierdie opsie by

2.3.2 **POSITIVE MARKING FROM QUESTION 2.3
POSITIEWE NASIEN VAN VRAAG 2.3
(Also accept answer of 4,06 N from Question 2.3.1)
DOWNWARDS AS POSITIVE**

$$\begin{aligned} F_{net} &= \frac{\Delta p}{\Delta t} \checkmark \\ &= \frac{4,06}{0,80} \checkmark \\ &= -5,08 \text{ N} = 5,08 \text{ N} \checkmark \text{ upwards / opwaarts} \checkmark \end{aligned}$$



(4)

DOWNWARDS AS NEGATIVE

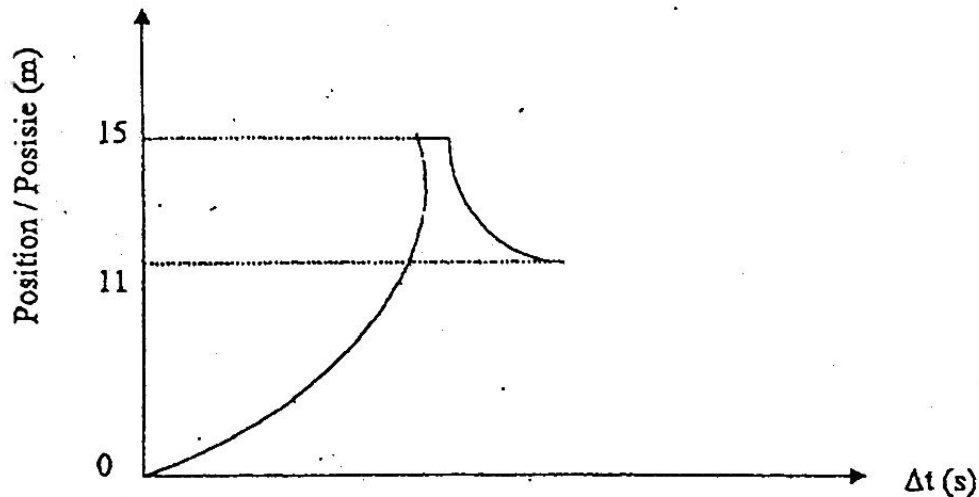
$$F_{\text{net}} = \frac{\Delta p}{\Delta t} \checkmark$$

$$= \frac{4,06}{0,80} \checkmark$$

$$= 5,08 \text{ N} \checkmark \text{ upwards / opwaarts} \checkmark$$

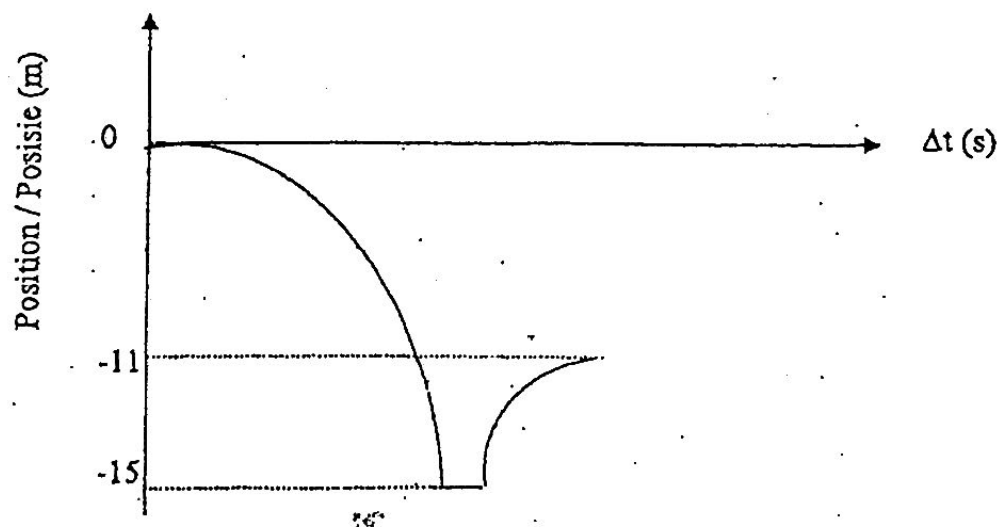
(4)

2.4 DOWNWARD POSITIVE / AFWAARTS POSITIEF



Criteria for graph / Kriteria vir grafiek	Marks / Punte
Correct shape (Both curves) / Korrekte vorm (Beide kurwes)	✓
Graph starts as $y = 0 \text{ m}$ at $t = 0 \text{ s}$ / Grafiek begin by $y = 0$ by $t = 0 \text{ s}$	✓
Second max height at $y = 11 \text{ m}$ / Tweede maks by $y = 11 \text{ m}$	✓
Contact time shown as space on x-axis between two curves / Kontak tyd aangetoon as spasie op x-as tussen twee krommes	✓

2.4 DOWNWARD NEGATIVE / AFWAARTS NEGATIEF



Criteria for graph / Kriteria vir grafiek	Marks / Punte
Correct shape (Both curves) / Korrekte vorm (Beide kurwes)	✓

Graph starts as $y = 0$ m at $t = 0$ s / Grafiek begin by $y = 0$ by $t = 0$ s	✓
Second max height at $y = -11$ m / Tweede maks by $y = -11$ m	✓
Contact time shown as space between two curves / Kontak tyd aangetoon as spasie tussen twee krommes	✓

QUESTION 3 / VRAAG 3

3.2 Check substitution correct / Kyk dat sustituisie reg is.

Consider LEFT as positive / Beskou LINKS as positief

$$m_M v_{iM} + m_C v_{iC} = m_M v_{fM} + m_C v_{fC} \checkmark$$

$$(2000)(20) + 1500(0) \checkmark = 2000(v_{fM}) + 1500(12) \checkmark$$

$$v_{fM} = 11 \text{ m}\cdot\text{s}^{-1} \checkmark \tag{4}$$

3.3 Awarding of single mark for underlined part / Toekenning van enkel punt vir onderstreepte gedeelte.

The driver will continue moving forward at the same velocity until it strike the dashboard or windscreen. ✓

Die bestuurder hou aan vorentoe beweeg teen dieselfde snelheid totdat dit die paneel of voorruit tref. ✓ (1)

QUESTION 7

7.1 Electric field is a space where a point charge experiences a force. ✓.✓.
 Elektriese veld is 'n gebied waar 'n punt lading 'n krag ondervind. ✓.✓. (2)

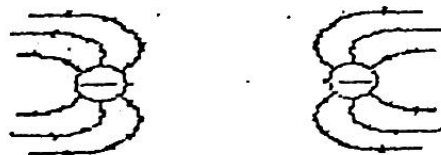
7.3 $E_{net} = E_M + E_N$
 $2 \times 10^5 \checkmark = 1,6 \times 10^5 \checkmark + E_N$
 $E_N = 4 \times 10^4 \text{ N}\cdot\text{C}^{-1} \checkmark$

$$E_N = \frac{kQ_N}{r^2}$$

$$4 \times 10^4 = \frac{(9 \times 10^9) Q_N}{(45 \times 10^{-3})^2} \checkmark = 9 \times 10^9 \text{ C} \checkmark \tag{5}$$

7.4 Negative / Negative (1)

7.5 Use same rubric / Gebruik dieselfde rubriek.



(3)

7.6 FINAL ANSWER / FINALE ANTWOORD
 $F = 3,2 \times 10^{-14} \text{ N}$

QUESTION 8

8.5

~~Increase the speed of rotation~~

Increase the number of turns in the coil.

Increase the strength of the magnetic field

Increase the current strength (Add this option)

Any ONE ✓

~~Verhoog speed van rotasie.~~

Vermeerder die aantal windings van die spoel

Verhoog die magnetiese veldsterkte.

Verhoog die stroomsterkte (Voeg hierdie opsie by)

Enige EEN ✓

QUESTION 10

10.2 English learners: Accept frequency

Yours in Education



N. LEHLAKANE

(A) DIRECTOR: ASSESSMENT & EXAMINATIONS

18/09/2014

DATE