Province of the
EASTERN CAPE
EDUCATION

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TO: **DISTRICTS HEADS OF EXAMINATIONS**
PRINCIPALS OF SCHOOLS IN THE FET BAND

FROM: **CES: INSTRUMENT DEVELOPMENT AND MODERATION SECTION**
MS N. MBELEKI

SUBJECT: **ERRATA – PHYSICAL SCIENCES P1 GRADE 12 SEPTEMBER 2020**

DATE: **07 OCTOBER 2020**

The Physical Sciences P1 Grade 12 September 2020 was written on Friday, 02 October 2020. We were made aware of certain amendments, errors and omissions that were discovered during the marking process.

In order to address this and to ensure that learners are not disadvantaged, the following standardised approach to marking must be adopted across the Province. The following guidelines with regard to marking was prepared in conjunction with the examiner and moderator.

ERRATA

QUESTION 2

2.4.2	**An option where a learner (very much unlikely) would apply the force on both blocks.** $F_{net} = ma$ ✓ $F - F_g + T = ma$ $\underline{172 - 147 + T}$ ✓$= 15a$ $F + W\sin\theta + T + f = ma$ $F + mg\sin\theta - T - f = ma$ $[172 + \underline{22 \times 9{,}8 \sin 28{,}58^o}$ ✓ $- T - 43{,}86]$✓$= 22a$✓ $a = 6{,}93\ m.s^{-2}$ ✓	$F_{net} = ma$ $F - F_g - T = ma$ $T + W\sin\theta - f = ma$ $T + mg\sin\theta - f = ma$ Any one ✓ Calculating $F_{g//}$ ✓ Substitution for the 15 kg block ✓ Substitution for the 22 kg block ✓ Substitution for either 15a or 22a ✓ Answer ✓

NOTE: A learner that would consider an applied force acting on the 22 kg block will get the same answer.

QUESTION 6

6.5

OPTION 2

$f_L = \frac{v \pm v_L}{v \pm v_s} f_s$ ✓

492 ✓$= \frac{340-5}{340}$✓✓x f_s

$f_s = 499{,}34$ Hz ✓

OPTION 3

$f_L = \frac{v \pm v_L}{v \pm v_s} f_s$ ✓

470 ✓$= \frac{340-20}{340}$✓✓x f_s

$f_s = 499{,}38$ Hz ✓

Range (498,67 Hz – 499,38 Hz)

6.6

NOTE:

- The memo need not carry all the options, hence experienced and knowledgeable subject teachers are expected to mark.
- The following are just additional options:

OPTION 5	**OPTION 5**	**OPTION 6**
$v = f\lambda$ $v = 498{,}67 \times 0{,}71$ ✓ $v = 354{,}06$ m.s^{-1} ✓ The velocity is greater than the velocity of sound in air given. It is not suitable. ✓	$v = f\lambda$ $v = 499{,}34 \times 0{,}71$ ✓ $v = 354{,}53$ m.s^{-1} ✓ The velocity is greater than the velocity of sound in air given. It is not suitable. ✓	$v = f\lambda$ $v = 499{,}38 \times 0{,}71$ ✓ $v = 354{,}56$ m.s^{-1} ✓ The velocity is greater than velocity of sound in air given. It is not suitable. ✓

OPTION 7

$v = f\lambda$

$340 = f \times 0{,}71$ ✓

$f = 478{,}87$ Hz ✓

The frequency is less than the frequency produced by the tuning fork. It is not suitable. ✓

QUESTION 7

7.3	Inadequate data had been provided in the question. This makes it impossible for learners to answer the question. An assumption about the filed being uniform should at least been made. The question must not be marked, and the total marks for the paper should - by implication - be reduced to **137 marks**.

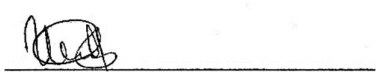
QUESTION 8

8.2	The graph on the question paper had been resized during the process of material development. This resulted in the memo not being in correlation to the question paper. **NOTE:** Markers are advised to mark learners' responses based on the graph as it appears on the question paper. Markers must read learners responses and also read the graph to judge the learners' ability in accurately reading the graph, and, credit learners accordingly.

8.3	As a means of assisting learners to score marks, it had been agreed that any attempt made a learner to calculate both resistance and emf must benefit a learner to score marks. If those calculated values are used correctly in 8.3, a learner must be given full marks.

We request that this must be brought to the attention of all educators marking these papers and sincerely apologise for the inconvenience.

Yours in education.



07 October 2020

MS N. MBELEKI **DATE**