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ERRATUM

TO: CHIEF EDUCATION SPECIALISTS
DISTRICT CURRICULUM COORDINATORS
DISTRICT ASSESSMENT OFFICIALS (DAOs)
DISTRICT SUBJECT ADVISORS (DSAs)
PROVINCIAL SUBJECT COORDINATORS
CIRCUIT MANAGERS
DEPUTY CHIEF EDUCATION SPECIALISTS
SENIOR EDUCATION SPECIALISTS
PRINCIPALS OF SCHOOLS IN THE FET BAND

SUBJECT: ERRATUM – MECHANICAL TECHNOLOGY: WELDING GRADE 12 SEPTEMBER PREPARATORY EXAMINATION 2024

DATE: 23 AUGUST 2024

The Mechanical Technology: Welding Grade 12 September Preparatory Examination was written on Tuesday, 20 August 2024. We were made aware of certain amendments and omissions that were discovered during the marking process and memorandum discussion on the provided marking guideline.

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 regarding marking was prepared in conjunction with the examiner and moderator.

QUESTION/VRAAG 7

7.3 Stress and Strain:

7.3.1 Stress

$$stress = \frac{Force}{Area} \quad \checkmark \quad Area = \frac{\pi \times (38)^2}{4 \times 10^6} \quad \checkmark$$

$$= 1,134 \times 10^6 \quad \checkmark$$

$$Stress = \frac{100 \times 10^3}{1,134 \times 10^{-3}} \quad \checkmark \quad \text{OR} \quad \frac{100 \times 10^3}{\frac{\pi \times (38)^2}{4 \times 10^6}}$$

$$= 88174483,71 \text{ Pa } \checkmark$$

$$= 88,17 \text{ MPa } \checkmark$$

(6)

7.3.2 Strain

$$\text{strain} = \frac{\Delta l}{l} \checkmark$$

$$\text{strain} = \frac{0,5}{150} \checkmark$$

$$= 3,333333333 \times 10^{-3} \checkmark$$

$$= 3,33 \times 10^{-3}$$

(3)

7.3.3 Young's modulus of elasticity

$$\text{Young's modulus of elasticity} = \frac{\text{Stress}}{\text{Strain}} \checkmark$$

$$E = \frac{88174483,71}{3,33333 \times 10^{-3}} \checkmark$$

$$E = 2,645234511 \times$$

$$10^{10} \text{ Pa } \checkmark$$

OR

$$E = 2,65 \text{ GPa}$$

(3)

We sincerely apologise for any inconvenience we might have caused.

Yours in education.



MRS P.E. JAPHTA
(A) CES: AIDIBM SUBDIRECTORATE

23 August 2024

DATE