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THE ULTIMATE MATHEMATICS AMBASSADOR 2018 (Annual Mathematics Competition)

STAGE 2 - ROUND 1

TIME ALLOWED: 60 minutes

INSTRUCTIONS

1. This Round consists of 4 theory questions.
2. This Round is worth 40 marks.
3. Each question is worth 10 marks.
4. Please ensure that you show all necessary workings before arriving at your final answer.
5. Orderliness, neatness and clarity is encouraged.

INSTRUCTION: Answer all questions in this section. Show all your workings in this section clearly, neatly and orderly.

1. Royal Star buses have seventeen rows of 4 seats each and four rows of 3 seats each. 20 of such buses are used for conveying spectators to and from a football stadium. It was also observed that five of the buses each had 8 faulty seats, which cannot be used.
- (a) If each bus makes a total of 2 trips to the stadium. How many spectators were conveyed?
- (b) If all the spectators taken are returned using 13 of the buses with full carrying capacity, how many trips will each bus have to take to move them?

(10 marks)

2. A one-kobo coin in the shape of a cylinder is of radius 2cm and thickness 0.7cm.
- (a) Find in cm^3 , the space occupied by a one-kobo coin
- (b) Find the value (in Naira) of a pile of such coins with a total volume of $13\,200cm^3$

(10 marks)

3. (a) Simplify $5\frac{5}{8} - 3\frac{1}{5} \div 1\frac{1}{7} + \frac{7}{10} \times 2\frac{6}{7}$
- (b) When a number is increased by 12 and then the result multiplied by two, it yields a result of 86. Find the number

(10 marks)

4. Mr. Ade's salary of ₦25 000 was increased by 10%, Mr. Phillip's salary of ₦15,000 was increased by 30%, while Mr. Ogechi's salary of ₦30,000 was increased by 15%.

- (a) Find the ratio of their new salaries.
- (b) Find the increase in the average salary of the three men (correct to the nearest Naira)

(10 marks)