UACE S101 General Paper section B: Logic Quiz 10

Study the information provided below and answer the questions that follow:

Dr . Salome is a Medical Researcher collecting data on four patients'height, weight and blood pressure. The patients are Christina, Caleb, Kyalie and Emmy.

In her research, she adopted the following categorisation for blood pressure;

Pressure Category	mmHg
Optimal	Less than 120/80
Normal	Less than 130/90
High normal	Between 130/90 – 139/90
high	Above 140/120

Thepatients' blood pressure is to be correlated to their body weight and height.

In the processof data collection, the researcher mixed up the variables. On one sheet, she has height of her patients in centimetres as 127, 180, 137, 175. On another sheet, she has weight in kilograms as 85, 55, 54 and 69. On the third sheet, she has blood pressure in millimetres of mercury (mmHg) as: 114/80, 144/120, 138/90, 143/120

She only recalls the following information:

1. **Christina's blood pressure is neither 144/120 nor 138/90 mmHG.**
2. **Caleb's blood pressure lies in the optimal category.**
3. Kyalie is less than 152 cm tall with a weight of either 54kg or 55kg. his blood pressure lies in the high normal category.
4. Emmy's weight is either 55kg or 54kg. His height is either 180cm or 127 cm. His blood pressure is neither 143/120 nor 114/80 mmHg.
5. **The patient who weight 85 kg has optimal blood pressure.**
6. The patient who is 175cm tall has the heaviest weight
7. **The patient weighing 69 kg is 137cm tall**
8. **The patient weighing 55 kg has the highest blood pressure.**

Questions

(a) Draw a table to organize and match the patients to their respective records (12 marks)
(b) Identify the patient with the:
  (i)   Heaviest weight (01mark)
  (ii)   Highest blood pressure (01mark)
  (iii) Shortest height (01 mark)
(c) Explain the importance of collecting and keeping medical records. (10marks)
(d) Examine the causes and effects of high blood pressure in your community. (15 marks)

Spellings, Punctuations, Gramatical Expressions (SPGE)   (10marks)

Suggested solution

(a) Draw a table to organize and match the patients to their respective records (12 marks)

Variable Patients	Height	Weight	Blood pressure
Christina	137	69	143/120
Caleb	180	85	114/80
Kyalie	127	54	138/90
Emmy	175	55	144/120

(b) Identify the patient with the:
  (i)   Heaviest weight (01mark) - Caleb
  (ii)   Highest blood pressure (01mark) - Emmy
  (iii) Shortest height (01 mark) - Kyalie
(c) Explain the importance of collecting and keeping medical records. (10marks)
  - Provide patient's medical history
  - Provide patient's health status
  - To show drugs being used for chronic diseases.
  - Help a physician to decide on current treatment based on previous treatment.
  - Help a physician for prompt treatment
  - Documentation could be used in as evidence in legal procedures
  - Could be used research
  - Provide evidence of adequate treatment
  - Medical record contain patients'contact Information and demographic Information,
  - Effectiveness of therapies and treatments can be monitored and tracked
  - Comprehensive and accurate medical records empower healthcare professionals to treat patients to the best of their ability.
  - Medical records can be used to access insurance cover.
(d) Examine the causes and effects of high blood pressure in your community. (15 marks)

Definition: High blood pressure occurs when the force of blood pushing against the artery walls is consistently too high. It's measured in millimeters of mercury (mm Hg). Hypertension is generally defined as a blood pressure reading of 130/80 mm Hg or higher.

Causes of high blood pressure

Exact causes of high blood pressure are not known. Hypertension can be categorized into two types; each type has a different cause.

(a) Primary hypertension (essential hypertension): This type of blood pressure usually takes many years to develop and probably is a result of lifestyle, environment, and age.
- Lifestyle -sedentary lifestyle
- Environment - poor diet, stress
- Age - More common after 50 years of age
(b) Secondary hypertension: High blood pressure caused due to health problem or certain medications.
- Family history may increase the risk for primary hypertension.
- High salt intake or salt sensitivity
- Smoking
- Overweight or obesity
- Lack of physical activity
- Too much of alcohol consumption
- Stress
- Age - above 50 years
- Factors which may cause secondary hypertension include:
- Diabetes
- Kidney problems
- Sleep apnoe

Effects of high blood pressure

Headache

Chest pain

Blurred vision

Nose bleeding

Shortness of breath

Severe anxiety

Uncontrolled high blood pressure may lead to stroke, heart attack, kidney damage and heart failure.

Spellings, Punctuations, Gramatical Expressions (SPGE)   (10marks)

What is your comment? Please say something.

Thank you
Dr. Bbosa Science