**Name : Keren Joseph Ishaya**

**Matric No: 19/mhs08/004**

**Level : 200LEVEL**

**Course : BCH**

**Department: Public Health**

1. Write on the factors affecting basal metabolic rate .

**Factors that influence basal metabolic rate are:**

**Body size:** Metabolic rate increases as weight, height, and surface area increase.

**Body composition:** Fat tissue has a lower metabolic activity than muscle tissue. As lean muscle mass increases, metabolic rate increases.

**Gender:** The basal metabolic rate (BMR) averages 5 to 10 percent lower in women than in men. This is largely because women generally possess more body fat and less muscle mass than men of similar size.

**Age:** A decrease in lean muscle mass during adulthood results in a slow, steady decline of roughly 0 3 percent per year in BMR after the age of about 30. This can be largely avoided by strength training throughout adulthood.

**Climate and body temperature:** The BMR of people in tropical climates is generally 5 to 20 percent higher than their counterparts living in more temperate areas because it takes energy to keep the body cool. Exercise performed in hot weather also imposes an additional metabolic load. Body fat content and effectiveness of clothing determine the magnitude of increase in energy metabolism in cold environments; it takes energy to keep the body warm if you work or exercise in very cold weather.

**Hormonal levels:** Thyroxine (T4), the key hormone released by the thyroid glands has a significant effect upon metabolic rate. Hypothyroidism is relatively common, especially in women near or after menopause. Everyone with a weight problem should have their thyroid function checked by their doctor and treated appropriately if it turns out to be low.

**Health:** Fever, illness, or injury may increase resting metabolic rate two-fold.

2. What do you understand by protein energy malnutrition.

**Protein-energy malnutrition** is the state of decreased body pools of protein with or without fat depletion, or a state of diminished functional capacity caused at least in part by inadequate nutrient intake relative to nutrient demand.

3. Distinguish between marasmus and kwashiorkor

**Characteristics of Kwashiorkor**

1. It develops in children whose diets are deficient of protein.

2. It occurs in children between 6 months and 3 years of age.

3. Subcutaneous fat is preserved.

4. Oedema is present.

5. Enlarged fatty liver.

6. Ribs are not very prominent.

7. Lethargic

8. Muscle wasting mild or absent.

9. Poor appetite.

10. The person suffering from Kwashiorkor needs adequate amounts of proteins.

**Characteristics of Marasmus**

1. It is due to deficiency of proteins and calories.

2. It is common in infants under 1 year of age.

3. Subcutaneous fat is not preserved.

4. Oedema is absent

5. No fatty liver.

6. Ribs become very prominent.

7. Alert and irritable.

8. Severe muscle wasting

9. Voracious feeder.

10. The person suffering from Marasmus needs adequate amount of protein, fats and carbohydrates.