

**EXERCISES**

**STAT – 109**

**BIOSTATISTICS**

Explanation of (level) in the variables:

Blood pressure level (mmHg) **quantitative continues**

Blood pressure level ( $120 < x < 170$ ) **quantitative continues**

Blood pressure level **qualitative ordinal**

**Q1: For each of the following variables indicate whether it is quantitative or qualitative variable:**

- (a) The blood type of some patient in the hospital. (**qualitative nominal**)
  - (b) Blood pressure level of a patient. (**qualitative ordinal**)
  - (c) Weights of babies born in a hospital during a year. (**Quantitative continues**)
  - (d) Gender of babies born in a hospital during a year. (**qualitative nominal**)
  - (e) The distance between the hospital to the house. (**Quantitative continues**)
  - (f) Under-arm temperature of day-old infants born in a hospital. (**Quantitative continues**)
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**Q2: For each of the following situations, answer questions (a) through (d):**

- (a) What is the population?
- (b) What is the sample in the study?
- (c) What is the variable of interest?
- (d) What is the type of the variable?

**Situation A:** A study of 300 households in a small southern town revealed that if she has school-age child present.

- a- All households in a small southern town
- b- 300 households in a small southern town
- c- Does households had school age child present
- d- Variable is qualitative nominal

**Situation B:** A study of 250 patients admitted to a hospital during the past year revealed that, Distance the patient live away from the hospital .

- a- All patients admitted to a hospital during the past year.
- b- 250 patients admitted to a hospital during the past year.
- c- Distance the patient live away from the hospital
- d- Variable is Quantitative continuous.

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**Q3:Choose the right answer:**

**1-The variable is a**

- a. subset of the population.
- b. parameter of the population.
- c. relative frequency.
- d. characteristic of the population to be measured.**
- e. class interval.

**2-Which of the following is an example of discrete variable**

- a. the number of students taking statistics in this term at KSU.**
- b. the time to exercise daily.
- c. whether or not someone has a disease.
- d. height of certain buildings.
- e. Level of education.

**3-Which of the following is not an example of discrete variable**

- a. the number of students at the class of statistics.
- b. the number of times a child cry in a certain street.
- c. the time to run a certain distance.**
- d. the number of buildings in a certain street.
- e. number of educated persons in a family.

**4-Which of the following is an example of qualitative variable**

- a. the blood pressure in (mmHg).
- b. the number of times a child brush his/her teeth.
- c. whether or not someone fail in an exam.**
- d. Weight of babies at birth.
- e. the time to run a certain distance.

**5-The continuous variable is a**

- a. variable with a specific number of values.
- b. variable which can't be measured.
- c. variable takes on values within intervals.**
- d. variable with no mode.
- e. qualitative variable.

**6- which of the following is an example of continuous variable**

- a. The number of visitors of the clinic yesterday.
- b. The time to finish the exam.**
- c. The number of patients suffering from certain disease.

d. Whether or not the answer is true.

**7- The discrete variable is**

a-qualitative variable.

b-variable takes on values within interval.

**c-variable with a specific number of values.**

d-variable with no mode.

**8-Which of the following is an example of nominal variable :**

a-age of visitors of a clinic.

b-The time to finish the exam.

**c-Whether or not a person is infected by influenza.**

d-Weight for a sample of girls .

**9-The nominal variable is a**

a-A variable with a specific number of values

**b-Qualitative variable that can't be ordered.**

c-variable takes on values within interval.

d-Quantitative variable .

**10-Which of the following is an example of nominal variable :**

a-The number of persons who are injured in accident.

b-The time to finish the exam.

**c-Whether or not the medicine is effective.**

d-Socio-economic level.

**11-The ordinal variable is :**

a-variable with a specific number of values.

b-variable takes on values within interval.

**c-Qualitative variable that can be ordered.**

d-Variable that has more than mode.