Department of statistics

PG 3rd semester, 2nd year
Paper-P-304(Demography and Vital Statistics)

MULTIPLE QUESTION ON P-304(One Mark)

1). Which of the following is an important determinant of population change in demography.
a) Migration.
b) Human development Report.
c) Net attendance ratio
d) Life expectancy.

2) Which of the following cannot be drawn from the population pyramid of a country?
a) Dependency ratio
b) Population growth rate
c) Gender distribution within population
d) Total population size

3) Which of the following is among the "pull factors of migration?"
a) Security of light
b) Unemployment
c) Poor living condition
d) Unpleasant climate

4) The total fertility rate refer to
a) The number of children a woman has given birth to since marriage
b) Total number of children born -minus total number of children that died in a given year
c) Birth rate minus death rate
d) The number of life births by a woman during the entire productive period

5) What is the definition of Sex Ratio?
a) Number of deaths per 1000 live births of children
b) Number of women for 1000 men
c) Number of women for 100000 men
d) Number of men for 2000 woman

6) What does infant mortality rate means?
a) The number of deaths per 1,000 live births of children under 1 year of age .
b) Death of children under the age of 5 years
c) Death of children before the age of 6 months
d) Death of children under the age of 3 years

7) Which age group is include to calculate child Sex Ratio?
a) 1-6 years   b) 0-5 years   c) 0-6 years   d) 0-6 years

10) What is the Maternal Mortality Rates?
a) Woman's death occurred before 9th month of pregnancy.
b) The annual number of female deaths per 1, 00,000 live births due to pregnancy.
c) The death of woman occurred within 2 years of childbirth.
d) None of the above.

11) Natural increase in population is equal to?
a) Total number of births in a region.
b) Crude Birth Rate - Crude Death Rate.
c) Crude Birth Rate + Crude Death Rate.
d) None of the Above.

13) What is replacement rate?
a) Rate required replacing the Mothers.
b) Rate required replacing the Fathers.
c) Rate required replacing both the parents.

d) None of the Above.

14) Emigration of highly trained, skilled people from the country is called.
a) Immigration Rate. b) Brain drain.   c) Mobility Rate.   d) None of the Above.

15) Neo-Natal mortality rate is
a) (No of Infant deaths in a year/No of live births in a year)*1000.
b) (Deaths under one month/No of live births)*1000.
c) (Deaths between less than 28 days of birth / No of live births)*1000.
d) None of the Above.

16) In a region number of males are 9000, number of females are 11000 and the number of births are 250, Then crude births rate for the region is ?
a) 12.5   b) 11.3   c) 13.5   d) 8.25

17) Specific Death rate is equal to?
a) (No of deaths/Total population)*1000.
b) (No of deaths/Total population in specific class)*1000.
c) (No of deaths in specific class/Total population in specific class)*1000.
d) None of the Above.

18) If Gross Reproductive Rate is less than 1 ?
a) Population will increase in spite of low birth rate.
b) Population will decrease in spite of low birth rate.
c) Population will remain stagnant.
d) None of the above.

19) Morbidity is the increase in the rate of?
a) Births   b) Deaths   c) Sickness   d) None of the above

20) The term democracy has been derived from the two Greek word "Demos" means?
a) Government.
b) Census.
c) People.
d) Measuring.

21) Demography transition is the _____?
a) Shift from low birth rate to high birth rate with minimum education and Technology.
b) Shift from high birth rate and high infant death rate to low birth rate and low infant death rate with minimum education and Technology.
c) Shift from low birth rate and low infant death rate to high birth rate and high infant death rate with minimum education and Technology.
d) None of the above.

22) Which life table construction method is commonly used when age-specific mortality rates are not available?
A) Reed-Merrell method,
B) Lexis diagram method.
C) Coale-Demeny method.
D) Greville method.

23) A stable population is characterized by:
A) Constant birth and death rates.
B) Rapid population growth.
C) Irregular fluctuations in birth rates.
D) Unstable migration patterns.

24) Lotka's equation characterizing a stable population is based on:
A) Fertility rates only.
B) Mortality rates only.
C) Both fertility and mortality rates.
D) Migration rates.

25) The intrinsic growth rate of a population is:
A) The rate at which immigration occurs.
B) The rate at which birth exceeds death.
C) The rate of population growth without migration.
D) The rate of population decline.

26) Which of the following is a characteristic of a stationary population?
A) Rapidly changing age structure.
B) Unchanging birth rates.
C) Unchanging death rates.
D) Continuous population growth.

27) The Stable Population Model assumes that:
A) Birth and death rates are constantly changing.
B) Birth and death rates are equal.
C) Migration is the main driver of population growth.
D) Birth rates are higher than death rates.

28) Age-sex pyramid is a graphical representation of:
A) Birth rates only.
B) Death rates only .
C) Population structure by age and sex .
D) Migration patterns.

29) The Lorenz curve is used to show the distribution of:
a) Mortality rates.
b) Fertility rates.
c) Income or wealth.
d) Population growth rates.

30) The Coale's Fertility Index is used to measure fertility:
a) Among men.
b) Over a specific age group.
c) Among women.
d) Among married couples.

31) What does PPR stand for in demographic terms?
a) Potential Population Ratio.
b) Population Projection Rate.
c) Proximate Pregnancy Rate.
d) Postpartum Recovery Rate.

32) The Brass Polynomial Model is used for modelling:
a) Mortality rates.
b) Fertility rates.
c) Migration rates.
d) Marriage rates.

32) The Singulate Mean Age at Marriage (SMAM) is estimated using:
a) Deming formula.
b) Hajnal's method.
c) Whipple's index.
d) Lorenz curve.

33) Net Nuptiality Table provides information about:
a) Marriage rates.
b) Divorce rates.
 c) Fertility rates.
d) Mortality rates.

34) Which is the pull factor of Migration?

a) Religious conversion.
b) Natural calamities
c) Political disorder.
d) Employment opportunities.

35) History of a cohort can be understood from
a) Mortality rates.
b) Life Table.
c)Fertility Rates.
d)Population Growth.

MULTIPLE QUESTION ON p-304 ($1\frac{1}{2}$ Mark)

1)In a situation if GRR per woman is greater than 1 and NRR per woman is less than 1 then the population _____.

2) What are the relation exits between GRR and NRR _____.

3) _____ consists in relating the total number of live births to the number of females in the reproductive or child bearing ages.

4) The child-woman ratio relates the number of children aged _____ to woman in their reproductive period at a given point of time .

5) _____ leads to fallacious conclusion as it inflates the number of potential mothers.

6) Give one advantage of general fertility rate.

7) Which approaches would follow the fertility rates _____.

8) Persons who are enumerated at a place other than their birth place are termed as _____.

9) _____ measures the extent to which mothers produce female infants who survive to replace them.

10) If Births > Death rate , then there is a/an _____ trend of Population.

11) _____ is a modified form of total fertility rate.

12) The out-migrants are also known as _____

13) The formula for crude migration rate is equal to _____

14) Given the zero growth of the life table, population is known as a _____ population

15) The _____ is defined as the sum of age-specific fertility rates calculated from female births for each year of reproductive period.

16) Gross reproductive rate is approximately _____ the total fertility rate.

17) Calculate crude marriage rate when the marriages registered were 1,74062 and the estimated population in the mid-year where 4,59,29,000

18) Age, Marriage and Migration affect _____

19) _____ are conventional numerical records of marriages , births ,sickness and deaths by which the health and growth of a community may be studied .

20) _____ can be uses to measure the Death rates due to different kinds of diseases .

21) Vital Index measures _____.

22)The first census report of India was published in _____ Year.

23) The fertility of a woman in India is maximum in the age group _____ year .

24) Age specific mortality rates fails to reveal _____.

25) Standardized death rate are particularly use full for _____.

26) Fertility rate mainly depends on _____.

27) Adequate basis for family planning is provided by _____.

2 MARK QUESTION WITH ANSWER ON p-304(2 Mark)

1. What is vital statistics?
2. Explain the methods of obtaining vital statistics.
3) State the formula to measure the population at time t.
4) State the uses of vital statistics.
5) Define fertility and fecundity
6) Define Mortality.
7) What is Infant mortality rate?
8. What is Neo natal mortality rate?
9. What is maternal mortality rate?
10. Define Cohort?
11. What is Radix?
12. What is longevity?
13. What are vital events?
14. What is Demography?
15. What are the importance and uses of life table?
16. Define Vital Index in demographic?

17). Who is the father of Vital statistics?

18). Are the vital statistics and population statistics totally different?

19. Give the formula to estimate the population for the mid –period of the two censuses?

20. Define Central Mortality Rate?

21). How many type of Life Table is exits?

22) What the other name of Life Table?

23) Define Population Growth Rate?

24) Define Life Expectancy?

25) Define Dependency Ratio?

26) Define Population Pyramid?

27) Define Stillbirth?

28) Define Infant Mortality Rate?

29) Define Maternal Mortality Rate?

30) Define Maternal Mortality Rate?

31) Define Migration?

32) State the formula to measure the population at time t?

33) State the uses of vital statistics?

34) What is Radix?

35) What are vital events ?

36) What is Demography?

37) What are the importance and uses of life table?

38) . Which is the pull factor of Migration?

Answer:-

1) Vital statistics is the science applied to the analysis and interpretation of numerical Facts regarding vital events occurring in a human population.

2) Different methods of obtaining vital statistics are
a) registration method-here vital events such as births, deaths etc are continuously recorded. The government etc authorities like gram panchayats, municipality's etc record the data of vital events. This method is successful when registration becomes compulsory.
b) census enumeration method-in most of the countries census enumeration is conducted once in ten years. Here data is collected regarding religion, educational status etc. information is obtained only for census year.

3) Pt = P0 +(B-D) +(I-E).

4) a) They are useful in medical research.
b) They are essential in demographic research.

5) Fertility refers to the births occurring to women of child bearing age(15-49 years).
Fecundity refers to the capacity of a woman to bear children.

6) Mortality refers to deaths occurring in the population due to sickness, accident etc.

7) : Infant mortality rate is defined as average number of infant deaths per thousand live births in a year Or children die before they attain age of one year.

8) : Neo-natal mortality rate is defined average number of neo natal deaths (death before the child attains 1 month of age)per 1000 live births in a year.

9) Maternal mortality rate is defined as average number of deaths among mother due to child birth per 1000 births in a year.

10) :Radix is the size of the cohort(Generally 100000).

11) : Cohort is a group of individuals who are born at the same time & who experience the same mortality conditions.

12) : Longevity is the expected number of years that a new born baby would live.

13) Vital events are births deaths, marriage , divorce, etc.,

14) Demography concerned with human population and it is also concerned with the social implication of population variance.

15) Life tables are useful in planning, administration , population control, public health care etc.,

16) It is define the ratio between number of birth to the number of death in a population during a given time period.

17) Jhon Graunt F.R.S is the father of vital statistics.

18) No, vital statistics and population statistics in general sense are interchangeable and cover all the topics under either head.

19) If P1 and P2 are the populations of two consecutive censuses, then the estimated population of mid-period is given by $P_{1-2} = \sqrt{P1 X P2}$.

20) The CMR or death rate is the probability that a person whose exact age is not known but lies in between x to x+1 will die within one year.

21) Two types 1) cross-sectional or time specific or period base 2) Lonitudinal or generation or cohort based,
22) Mortality table or Actuarial table.

6 MARK QUESTION WITH ANSWER ON P-305(6 Mark)

1. What is the difference between census and vital statistics?
2. What are the uses of vital statistics?
3. What is the source of collection of vital statistics?
4. What is the procedure to be followed to collection of vital statistics?
5. What the balancing equation to estimate the population for an intercensal year t with given birth, death and migration?
6. Is specific death rates is better than crude death rates explain the answer?
7. Define and discus age specific death rates?
8. What are the purpose of standard death rates and how can they calculated?
9. What is general fertility rate, how can it be determined?
10. In what sense are age specific fertility rates better than general fertility rates and how to calculate them?
11. Define and formulate total fertility rates?
12. Explain the different measure of population growth?
13. What is reproduction rates explain?
14. Explain different values of net reproduction rates?
15. What is revealed by a life table?
16. What are the assumptions or factors used in the construction of life table?
17. What are the various uses of life table?
18. How can life table is constructed?
19. Under what conditions a population is said to be a stationary population?
20. What is the concept of life table?
21. What are the difference between stable population and stationary population?
22. Explain the abridged life table?
23. Define central mortality rates and derived the formula for calculation?
24. Explain force mortality?
25. What is the approach of Reed-Merrel towards constructing the abridged life table?
26).Explain the concept of the Coale's Fertility Index. How is it calculated, and what does it represent?
27) Define the Parity Progression Ratio (PPR). How is it calculated, and what information does it offer about fertility behaviour?
28) Define the Net Nuptiality Rate. What does a positive or negative net rate indicate about marriage patterns?
29) Explain Hajnal's method of estimating the Singulate Mean Age at Marriage (SMAM).
30) Define Whipple's Index, Mayer's Index, and the UN Index in the context of demographic measures.
31) Describe Population Projection Methods:
32) Define the Lorenz curve and its significance in representing population distribution.
33) Explain how the Gini concentration ratio is derived from the Lorenz curve.
34) Define internal migration and international migration. What are the main factors that drive these types of migration?
35) Define a stationary population and a stable population. How are these concepts related?