

No. of Pages. 16

Code No.

Y – 3048

Register Number :

Time : 2 Hours

Name :

Max.Marks : 100

**Entrance Examination for Admission to the P.G. Courses in the
Teaching Departments, 2026**

CSS

DEMOGRAPHY AND BIOSTATISTICS

GENERAL INSTRUCTIONS

1. The Question Paper is having 100 Objective Questions, each carrying one mark.
2. The answers are to be marked **only** in the “**OMR Sheet**” provided.
3. **Negative marking** : **0.25 marks** will be deducted for each wrong answer .

INSTRUCTIONS FOR FILLING THE OMR SHEET

- The OMR sheet should not be folded or crushed.
- Use only blue/black ball point pen to fill the circles.
- Use of pencil is strictly prohibited.
- Circles should be darkened completely and properly.
- Cutting and erasing on this sheet is not allowed.
- Do not leave any stray marks on the sheet.
- Do not use marker or white fluid to hide the mark.

• **WRONG METHODS**



CORRECT METHOD



DO NOT WRITE HERE

Choose appropriate answer from the options in the questions.

(100 × 1 = 100 marks)

1. World Population Day is observed on _____.
 - A. June 5
 - B. July 11
 - C. August 15
 - D. December 10

2. Which continent has the largest number of countries?
 - A. Asia
 - B. Europe
 - C. Africa
 - D. South America

3. Demography is the study of _____.
A. Economy
B. Population
C. Agriculture
D. Environment
4. IMR stands for _____.
A. Infant Mortality Rate
B. Immigration Rate
C. Infection Rate
D. Income Rate
5. The headquarters of the World Health Organization is in _____.
A. New York
B. Geneva
C. Paris
D. Rome
6. The capital of Kerala is _____.
A. Kochi
B. Kozhikode
C. Thiruvananthapuram
D. Thrissur
7. Which district in Kerala has the highest population (Census 2011)?
A. Ernakulam
B. Malappuram
C. Kollam
D. Thrissur
8. Population pyramids represent _____.
A. Income distribution
B. Age-sex composition
C. Literacy
D. Employment
9. The average number of children a woman would bear is called _____.
A. CBR
B. TFR
C. IMR
D. NRR
10. Which organization deals with global population issues?
A. UNESCO
B. UNFPA
C. UNICEF
D. UNDP
11. The age group for adolescents is
A. 5 – 9
B. 10 – 19
C. 20 – 29
D. 30 – 39

12. Net migration equals _____.
- A. Births — Deaths
B. Immigration — Emigration
C. Deaths — Births
D. Population — Area
13. The Sample Registration System (SRS) provides data on _____.
- A. Migration
B. Births and deaths
C. Employment
D. Education
14. Which Kerala district has the highest sex ratio?
- A. Pathanamthitta
B. Idukki
C. Kasaragod
D. Palakkad
15. The value of $\sin 90^\circ$ is _____.
- A. 0
B. 1
C. -1
D. 1/2
16. The mean of the numbers 2, 4 and 6 is _____.
- A. 3
B. 4
C. 5
D. 6
17. Life expectancy at birth refers to _____.
- A. Average age at death
B. Expected years of life at birth
C. Median age
D. Age at marriage
18. Which disease had a notable outbreak in Kerala in 2018?
- A. Dengue
B. Nipah
C. Cholera
D. Plague
19. The arithmetic mean is also known as _____.
- A. Average
B. Median
C. Mode
D. Range
20. World Health Day is celebrated on _____.
- A. April 7
B. May 1
C. June 5
D. July 11

21. Which vitamin deficiency causes rickets?
A. Vitamin A
B. Vitamin C
C. Vitamin D
D. Vitamin K
22. Fertility in demography refers to _____.
A. Deaths
B. Births
C. Migration
D. Marriage
23. Which organization conducts the Census of India?
A. NSSO
B. Registrar General of India
C. RBI
D. NITI Aayog
24. Primary prevention includes _____.
A. Screening
B. Immunization
C. Rehabilitation
D. Treatment
25. The red ribbon is a symbol of _____.
A. Cancer
B. AIDS
C. Tuberculosis
D. Malaria
26. Which mission upgraded PHCs to Family Health Centres in Kerala?
A. Aardram Mission
B. ICDS
C. NRHM
D. Ayushman Bharat
27. The value of $\cos 0^\circ$ is _____.
A. 0
B. 1
C. -1
D. 1/2
28. A child born without signs of life is called _____.
A. Live birth
B. Stillbirth
C. Neonatal death
D. Abortion
29. Which Kerala district has the lowest population density?
A. Idukki
B. Ernakulam
C. Kozhikode
D. Thrissur

30. The “Kerala Model” refers to _____.
- A. High income and low literacy
 - B. High human development with moderate income
 - C. High fertility
 - D. Rapid industrialization
31. Crude Birth Rate is expressed per _____.
- A. 100 population
 - B. 1,000 population
 - C. 10,000 population
 - D. 100,000 population
32. Neonatal mortality refers to deaths within _____.
- A. First 7 days
 - B. First 28 days
 - C. First year
 - D. First 5 years
33. Which nutrient deficiency causes night blindness?
- A. Vitamin A
 - B. Vitamin B
 - C. Vitamin C
 - D. Iron
34. The full form of PHC is _____.
- A. Public Health Centre
 - B. Primary Health Centre
 - C. Population Health Clinic
 - D. Public Hospital Centre
35. Literacy rate in India is calculated for population aged _____.
- A. 5+
 - B. 6+
 - C. 7+
 - D. 10+
36. Maternal Mortality Ratio is expressed per _____.
- A. 1,000 live births
 - B. 10,000 live births
 - C. 100,000 live births
 - D. 1,000 population
37. The legal age at marriage for women in India is _____.
- A. 18 years
 - B. 19 years
 - C. 20 years
 - D. 21 years

47. Case fatality rate measures _____.
- A. Risk of death among cases B. Risk of disease
C. Prevalence D. Incidence
48. Probability of a sure event is _____.
- A. 0 B. 1
C. 0.5 D. -1
49. Median is the value that _____.
- A. Occurs most frequently
B. Divides the distribution into two equal halves
C. Is the arithmetic mean
D. Represents dispersion
50. Mode refers to the _____.
- A. Middle value B. Most frequent value
C. Average value D. Range
51. Which measure of central tendency is most affected by extreme values?
- A. Mean B. Median
C. Mode D. Range
52. Variance is the square of the _____.
- A. Mean B. Standard deviation
C. Median D. Mode
53. The correlation coefficient ranges between _____.
- A. 0 and 1 B. -1 and 1
C. 0 and ∞ D. $-\infty$ and ∞
54. Chi-square test is used to test _____.
- A. Means
B. Association between categorical variables
C. Variances
D. Medians

55. In a normal distribution, mean, median, and mode are _____.
- A. Equal
 - B. Different
 - C. Mean > Median
 - D. Mode > Mean
56. Which distribution is used for rare events?
- A. Binomial
 - B. Poisson
 - C. Uniform
 - D. Exponential
57. The t-test is appropriate when _____.
- A. Sample size is small
 - B. Data are categorical
 - C. Variance is zero
 - D. Population is infinite
58. ANOVA is used to compare _____.
- A. Two means
 - B. More than two means
 - C. Proportions
 - D. Medians
59. If the mean is 50 and standard deviation is 10, the variance is _____.
- A. 10
 - B. 100
 - C. 50
 - D. 25
60. Kerala is in which stage of the demographic transition?
- A. Stage I
 - B. Stage II
 - C. Stage III
 - D. Stage IV
61. Incidence rate refers to _____.
- A. Total number of cases at a given time
 - B. Number of new cases during a specified period
 - C. Number of deaths
 - D. Number of hospital admissions
62. Prevalence is defined as _____.
- A. New cases only
 - B. Existing cases at a given time
 - C. Deaths
 - D. Births
63. Sensitivity of a screening test refers to _____.
- A. True negatives
 - B. True positives
 - C. False positives
 - D. Prevalence

64. Specificity of a screening test refers to _____.
- A. True positives
 - B. True negatives
 - C. Incidence
 - D. Prevalence
65. Which sampling method gives every unit an equal chance of selection?
- A. Convenience
 - B. Simple random
 - C. Purposive
 - D. Snowball
66. Systematic sampling involves selecting every _____.
- A. k^{th} unit
 - B. Cluster
 - C. Volunteer
 - D. Stratum
67. Cluster sampling is useful when the population is _____.
- A. Homogeneous
 - B. Widely dispersed
 - C. Small
 - D. Qualitative
68. The standard error decreases when _____.
- A. Sample size decreases
 - B. Sample size increases
 - C. Variability increases
 - D. Bias increases
69. A 95% confidence interval implies _____.
- A. 95% of observations lie within it
 - B. The population parameter is likely within the interval
 - C. The null hypothesis is true
 - D. The sample mean is exact
70. Positive predictive value refers to _____.
- A. Probability that a positive test truly has the disease
 - B. Probability that a negative test is disease-free
 - C. Sensitivity
 - D. Specificity
71. Negative predictive value refers to _____.
- A. Probability that a positive test has disease
 - B. Probability that a negative test is disease-free
 - C. Incidence
 - D. Prevalence

72. Relative risk compares _____.
- A. Odds
 - B. Risk in exposed vs. unexposed
 - C. Prevalence
 - D. Mortality
73. Odds ratio is commonly used in _____.
- A. Cohort studies
 - B. Case-control studies
 - C. Cross-sectional studies
 - D. Ecological studies
74. Attributable risk represents _____.
- A. Total risk
 - B. Difference in incidence between groups
 - C. Ratio of risks
 - D. Mortality
75. The demographic dividend refers to _____.
- A. High fertility
 - B. Economic growth from a larger working-age population
 - C. High mortality
 - D. Migration
76. Population ageing is mainly due to _____.
- A. High fertility
 - B. Declining fertility and increased life expectancy
 - C. Migration
 - D. Infant mortality
77. Epidemiological transition describes _____.
- A. Shift from communicable to non-communicable diseases
 - B. Fertility changes
 - C. Urbanization
 - D. Migration
78. Which indicator is most sensitive to socio-economic development?
- A. Crude Birth Rate
 - B. Infant Mortality Rate
 - C. Sex Ratio
 - D. Population Density

79. Dependency ratio is the ratio of _____.
- A. Males to females
 - B. Dependents to working-age population
 - C. Urban to rural population
 - D. Births to deaths
80. A scatter diagram is used to study _____.
- A. Distribution
 - B. Relationship between two variables
 - C. Frequency
 - D. Trends
81. Regression analysis is used to _____.
- A. Compare means
 - B. Predict one variable from another
 - C. Test independence
 - D. Measure dispersion
82. In hypothesis testing, the p-value represents _____.
- A. Probability that the null hypothesis is true
 - B. Probability of observing the data assuming the null hypothesis is true
 - C. Significance level
 - D. Power
83. Type II error occurs when _____.
- A. True null hypothesis is rejected
 - B. False null hypothesis is not rejected
 - C. Both hypotheses are rejected
 - D. Sample size is large
84. Statistical power is the probability of _____.
- A. Rejecting a true null hypothesis
 - B. Failing to reject a false null hypothesis
 - C. Correctly rejecting a false null hypothesis
 - D. Making a Type I error

85. Skewness measures _____.
- A. Central tendency B. Symmetry of distribution
C. Dispersion D. Correlation
86. A positively skewed distribution has _____.
- A. Tail to the left B. Tail to the right
C. Symmetrical tails D. No tail
87. Kurtosis describes the _____.
- A. Direction of association B. Peakedness of distribution
C. Spread D. Central value
88. The interquartile range (IQR) is calculated as _____.
- A. $Q1 + Q3$ B. $Q3 - Q1$
C. Median – Mean D. Max – Min
89. Logistic regression is used when the dependent variable is _____.
- A. Continuous B. Binary
C. Ordinal D. Nominal
90. Universal Health Coverage (UHC) means _____.
- A. Free healthcare for all
B. Access to needed health services without financial hardship
C. Insurance for government employees only
D. Hospital-based care only
91. If $P(A) = 0.6$ and $P(B) = 0.5$ and A and B are independent, then $P(AB)$ equals _____.
- A. 0.3 B. 0.6
C. 0.5 D. 1.1
92. If the sample mean is 50, population mean is 45, and the standard error is 5, the Z value is _____.
- A. 1 B. -1
C. 5 D. 10

ROUGH WORK

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