

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

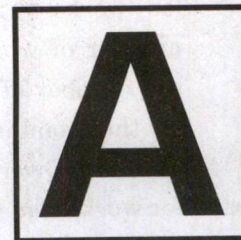
T.B.C. : MHLF-B-GAT



Test Booklet Series

Serial

1001169



TEST BOOKLET
GENERAL ABILITY TEST

Time Allowed : Two Hours

Maximum Marks : 300

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside.
DO NOT write **anything else** on the Test Booklet.
4. This Test Booklet contains **120** items (questions). Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case, you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer Sheet**. You are permitted to take away with you the Test Booklet.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. **Penalty for wrong answers :**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE.
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

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1. Average daily wage (in rupees) for workers in Company A is double the average daily wage for workers in Company B, whereas the number of workers in Company A is half of the number of workers in Company B. What is the combined average wage based on number of workers, if the average daily wage for workers in Company B is θ ?
- $4\theta/3$
 - $2\theta/3$
 - $8\theta/3$
 - 4θ
2. The marks scored by students in a test were found to be normally distributed with mean 60 and standard deviation 5. What is the percentage of students who scored more than 60 marks ?
- 21%
 - 25%
 - 50%
 - 60%
3. In a public examination, the standard of passing is 40%. Out of 9 students, 4 students failed and remaining students got 80, 57, 51, 68 and 79 percentage of marks. What is the median of percentage of marks ?
- 51
 - 57
 - 63
 - 64
4. A population consists of six units with serial numbers 1 to 6 and the value of the variable for a population unit is same as its serial number. What is the mean of systematic sample means for a sample of three units ?
- 2.0
 - 2.5
 - 3.25
 - 3.5
5. A sample of size 2 is drawn from a population of size 10 using SRSWR and SRSWOR methods of sampling. What is the difference between the number of possible samples that can be drawn from the two methods ?
- 10
 - 50
 - 55
 - 90
6. Using systematic sampling with $N = 25$, $n = 5$ and the first selected unit is 4, the possible sequence of selected units is :
- 4, 8, 12, 16, 20
 - 5, 9, 13, 17, 21
 - 4, 9, 14, 19, 24
 - 4, 9, 13, 17, 21
7. While using cluster sampling, the clusters should be formed such that the clusters are :
- distinct and homogeneous.
 - non-overlapping and heterogeneous.
 - of equal size and homogeneous.
 - small in number.
8. From a population of size 50, a systematic sample of size 5 is drawn. If there is a linear trend in the data, then what is $\text{Var}(\bar{y}_{\text{SRS}}) : \text{Var}(\bar{y}_{\text{St}}) : \text{Var}(\bar{y}_{\text{Sy}})$ equal to (approximately) ?
- 5 : 1 : 1/5
 - 5 : 1/5 : 1
 - 1/5 : 1/5 : 1
 - 1 : 1/5 : 5

9. Consider the following statements :

Statement-I :

If the variables are not linearly related but some sort of curvilinear relationship exists between them, then the correlation coefficient r will be misleading.

Statement-II :

Correlation ratio η is the appropriate measure of curvilinear relationship between the two variables.

Which one of the following is correct in respect of the above two statements ?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct but Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

10. Consider the following statements :

- 1. Usually demographic transition provides only a 35 – 45 year demographic window of opportunity with a higher share of population in the working age group. However, in the case of India, this period is likely to be only for 30 years.
- 2. India is experiencing an accelerating demographic transition.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

11. According to Neyman's allocation scheme in stratified sampling procedure, the sample size of the i^{th} stratum is proportional to :

- (a) N_i
- (b) $N_i S_i$
- (c) $N_i S_i^2$
- (d) $N_i^2 S_i$

where the symbols have their usual meaning.

12. The systematic sampling scheme and simple random sampling scheme give the estimate of equal precision if the value of intra class coefficient (ρ) between the units of a systematic sample is :

- (a) $\frac{1}{N-n}$
- (b) $\frac{1}{1-n}$
- (c) $\frac{1}{n-N}$
- (d) $\frac{1}{1-N}$

where the symbols have their usual meaning.

13. In SRSWOR, the finite population correlation factor is given by the expression :

- (a) $\frac{N-1}{N-n}$
- (b) $\frac{N-n}{N-1}$
- (c) $\frac{n-1}{N-n}$
- (d) $\frac{N-n}{n-1}$

where the symbols have their usual meaning.

14. The standard deviation of the marks of 109 students obtained in the subject Statistics was found to be 12. What is the standard error of the estimator of population mean for a random sample of size 9 taken with SRSWR ?

- (a) 3
- (b) 4
- (c) 5
- (d) 6

15. What is the linear regression of X on Y if Mean (X) = 2, V(X) = 4, Mean (Y) = 5, V(Y) = 16; and correlation coefficient $r = 0.8$?

- (a) $y = 0.4x + 18$
- (b) $y = 0.4x - 18$
- (c) $x = 0.4y$
- (d) $x = 0.4y - 18$

16. In stratified random sampling $\hat{V}(\bar{y}_{st}) = 200$ and $\hat{V}(\bar{y}) = 250$, then what is the estimate of the relative gain in efficiency due to stratification ?

- (a) 20%
- (b) 25%
- (c) 40%
- (d) 50%

17. Twenty plots form a rectangular shape as shown below, where plots numbered 1, 2, 3 and 4 are along a river :

1	5	9	13	17
2	6	10	14	18
3	7	11	15	19
4	8	12	16	20

To select a sample of 5 plots, the preferred sampling method is :

- (a) Simple random sampling
- (b) Systematic sampling
- (c) Stratified sampling
- (d) Cluster sampling

18. Consider the following statements :

1. The discrepancies between the sample estimates and the population values are called sampling errors.
2. The population value is obtained by enumerating all the units in the population and in the similar manner as sample estimates use all the sample units.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

19. Let $Y = 3.2X + 58$ and $X = 0.2Y - 8$ be the lines of regression of Y on X and X on Y respectively. What is the value of correlation coefficient between X and Y ?

- (a) 0.6
- (b) 0.7
- (c) 0.8
- (d) 0.9

20. If we want to test $H_0 : \mu = 5$ against $H_1 : \mu \neq 5$, then which one of the following statements is correct ?

- (a) Both H_0 and H_1 are simple hypotheses
- (b) Both H_0 and H_1 are composite hypotheses
- (c) H_0 is simple hypothesis and H_1 is composite hypothesis
- (d) H_0 is composite hypothesis and H_1 is simple hypothesis

21. Consider the following statements :
1. Mode can be found using Ogives.
 2. Mode can be found from histogram.
 3. Mean can be found using Ogives.
 4. Variance can be found using histogram.
- How many of the statements given above is/are **not** correct ?
- (a) Only one statement
 - (b) Only two statements
 - (c) Only three statements
 - (d) All four statements

22. Which of the following are correct about Crude Death Rate (CDR) ?
1. It can be used for population comparison over time only for stable populations.
 2. It is a probability rate.
 3. It gives the rate of population depletion over time.
 4. It takes account of differential mortality within the population.

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

23. Which one of the following is correct regarding Infant Mortality Rate (IMR) ?
- (a) It is a probability rate
 - (b) It is computed from the Census data
 - (c) It excludes foetal deaths
 - (d) It is based on the total number of births reported in the same region (as the number of infant deaths) within the same calendar year

24. Which of the following are characteristic features of a stable population ?
1. Rate of overall change in the population is always zero.
 2. Population has a constant age-sex distribution.
 3. Population is closed to emigration or immigration.
 4. Population experiences same mortality and fertility at each age.

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

25. Which of the following statements are correct about construction of Index numbers ?
1. The base year must be a normal year.
 2. The selection of commodities must be representative.
 3. The index number must be for all purposes.
 4. The index number must enable international comparison.

Select the correct answer using the code given below :

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2 and 3
- (d) 2, 3 and 4

26. Consider the following statements :
1. Ministry of Statistics and Programme Implementation collects economic data in India.
 2. Only five Economic Census have been conducted so far in India.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

27. Which of the following are direct surveys ?

1. Census
2. Time Use Survey of CSO
3. Interview method

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

28. A family spends on food, housing and clothing in the ratio of 5 : 3 : 2. Owing to rise in prices, the expenses of the family in these heads increase by 40, 30 and 20 percent respectively.

The family expenditure will be increased by :

- (a) 25%
- (b) 30%
- (c) 33%
- (d) 35%

29. The price relatives for three commodities are 125, 120 and 130 with their respective weights 5, w and 8. If the price index for the set is 125, then what is the value of w ?

- (a) 8
- (b) 7
- (c) 6
- (d) 5

30. Net monthly salary of an employee was ₹ 3,000 in 2017. The Consumer Price Index number in 2022 is 250 with 2017 as base year. If the employee has to be rightly compensated, then dearness allowance to be paid to the employee is :

- (a) ₹ 4,000
- (b) ₹ 4,300
- (c) ₹ 4,500
- (d) ₹ 5,000

31. Consider the following data :

Commodity	A	B
Price (p_0)-2015	10	5
Quantity (q_0)-2015	3	4
Price (p_1)-2020	20	15
Quantity (q_1)-2020	4	3

If s is the Marshall-Edgeworth Index number for the year 2020, with base year 2015, then what is the value of $3s$?

- (a) 3
- (b) 5
- (c) 7
- (d) 9

32. If we assume linear growth for the population so that $P_t = a + bt$ and $P_0 = 91.97$ million and $P_1 = 105.77$ million, then P_3 (in million) will be :

- (a) 98.87
- (b) 100.57
- (c) 133.37
- (d) 137.37

33. If $y_t = a + bx$ denotes an annual trend equation, then which one of the following denotes a quarterly equation ?

- (a) $4y_t = a + bx$
- (b) $16y_t = a + 4bx$
- (c) $16y_t = 4a + bx$
- (d) None of the above

34. Marshall and Edgeworth price index number formula utilizes the weights as :

- (a) Quantities of the given year.
- (b) Quantities of the base year.
- (c) Average quantities of the base year and given year.
- (d) Square root of the product of the quantities of the base year and the given year.

35. For which of the following, the Census of India presents data regarding India's population ?

1. Ward level
2. Village level
3. Tehsil/Taluka level
4. Parliamentary /Legislative Assembly Constituency level

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

36. Which of the following subjects are covered in the Census of India ?

1. Population Tables
2. Social and Cultural Tables
3. Migration Tables
4. Tables on Other Backward Caste
5. Tables on Scheduled Caste/Scheduled Tribe

Select the correct answer using the code given below :

- (a) 1, 2 and 4
- (b) 2, 3, 4 and 5
- (c) 1, 3, 4 and 5
- (d) 1, 2, 3 and 5

37. Which of the following are "biomarkers" in National Family Health Survey (NFHS) ?

1. Weight
2. Height
3. Blood pressure
4. Name

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

38. Which one of the following is the correct definition of Maternal Mortality Rate (MMR) ?

- (a) Annual number of maternal deaths per 100 live births
- (b) Annual number of maternal deaths per 1000 live births
- (c) Annual number of maternal deaths per 10000 live births
- (d) Annual number of maternal deaths per 100000 live births

39. Consider the following indicators :

1. Child stunting
2. Child wasting
3. Child dropout
4. Child mortality

How many of the following is/are indicators in the compilation of Global Hunger Index (GHI) ?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

40. Consider the following statements :

1. Laspeyres index uses base period quantities as weights.
2. Paasche index uses current period quantities as weights.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

41. Which one of the following is a preferred indicator of inflation in India ?
- Household Price Index
 - Consumer Price Index
 - Wholesale Price Index
 - Weighted average of Consumer Price Index and Wholesale Price Index
42. Consider the following index numbers :
- Index number of Agricultural Production
 - Index number of Wholesale Prices
 - Index number of Foreign Trade
 - Index number of Service Sector
- How many of the index numbers given above is/are published by the Government of India ?
- Only one
 - Only two
 - Only three
 - All four
43. Which of the following about "Demographic Dividend" are correct ?
- It refers to the growth in an economy resulting from the change in the age structure of population.
 - The change in age structure is due to decline in both the fertility and mortality rates.
 - Fewer births imply, the number of young dependents grows smaller relative to the working population, which boosts productivity.
 - The benefits from demographic dividend are automatic and guaranteed in the future.
- Select the correct answer using the code given below :
- 1, 2, 3 and 4
 - 2 and 4 only
 - 1 and 3 only
 - 1, 2 and 3 only
44. Which one of the following terms best denotes the average number of children that would be born to a woman in a country if she experiences the current fertility pattern in that country throughout her child-bearing years (15 – 49 years) ?
- Crude Birth Rate
 - Gross Reproduction Rate
 - Net Reproduction Rate
 - Total Fertility Rate
45. Which of the following statements are correct ?
- Population Surveys are included in List-II (State List) of the Constitution.
 - Census, inquiries, surveys and statistics are included in List-I (Union List).
 - Vital statistics including registration of births and deaths and some inquiries and statistics are included in List-III (Concurrent List).
 - The Collection of Statistics Act, 2008 facilitates the collection of statistics on demographic aspects as well.
- Select the correct answer using the code given below :
- 1 and 4 only
 - 2 and 3 only
 - 2, 3 and 4 only
 - 1, 2, 3 and 4

46. Which of the following statements regarding population ageing in India are correct ?

1. Older people are a valuable resource for the Indian society.
2. Ageing is a natural phenomenon with opportunities and challenges.
3. According to Census 2011, the number of 60+ years population is more than 100 million.
4. Among the number of 60+ years persons, females outnumber males.

Select the correct answer using the code given below :

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

47. Which of the following statements regarding population ageing are correct ?

1. Population ageing refers to an increasing median age in a population due to rising life expectancy and declining fertility rates.
2. The United Nations agreed cut off is 60+ years to refer to the older/elderly population, whereas some countries have accepted the chronological age of 65 years as a definition of elderly or older person.
3. Population ageing is poised to become one of the most significant social transformations of the twenty-first century.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

48. Which one of the following compiles the Index of Industrial Production ?

- (a) Central Statistical Office
- (b) Department for Promotion of Industry and Internal Trade
- (c) Department of Economic Affairs
- (d) Reserve Bank of India

49. Which of the following statements about Population Census in India are correct ?

1. The first complete Population Census was conducted in 1881 on a uniform basis throughout the country.
2. According to Census Act 1948, the Census must be conducted after every 10 years compulsorily.
3. The Socio-Economic Caste Census (SECC) was conducted in 2011 in addition to the Population Census of 2011.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

50. Which of the following statements about sampling error are correct ?

1. The probability of Type-I error is called alpha and the probability of Type-II error is called beta.
2. In a Type-I error, the Null Hypothesis should be accepted.
3. Generally reducing the possibility of committing a Type-I error increases the possibility of committing a Type-II error.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

51. What are the sources of error in a survey that need to be controlled ?

1. Sampling error
2. Researcher bias
3. Problems with reliability and validity
4. Oversight and other mistakes

Select the correct answer using the code given below :

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

52. Which of the following are the objectives of National Population Policy, 2000 ?

1. Address the unmet needs for contraception, health care infrastructure, and personal health care
2. Provide integrated service delivery for basic reproductive and child health care
3. Bring TFR to replacement levels by 2010 and achieve stable population by 2045
4. Surpass China to be the world's largest democracy by 2024

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

53. Consider the following statements :

1. RBI can achieve monetary tightening by reducing the repo rate.
2. RBI can reduce liquidity in the economy by reducing the cash-reserve ratio.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

54. Which of the following levied by the Central Government on petrol and diesel are non-shareable with the States ?

1. Basic excise duty
2. Additional excise duty
3. Special additional excise duty

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

55. Consider the following :

1. Petroleum products
2. Alcoholic liquor for human consumption
3. Tobacco and tobacco products

How many of the above are currently being taxed under the GST regime ?

- (a) None
- (b) Only one
- (c) Only two
- (d) All three

56. Which of the following are the features of GST ?

1. It is an origin-based tax.
2. It is a destination-based tax.
3. It is a consumption tax.
4. It is a value added tax.

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

57. Consider the following statements :

1. The Fifteenth Finance Commission introduced a new parameter of demographic performance as a criterion for horizontal sharing.
2. The Fifteenth Finance Commission used the need-based criterion like income-distance in determining horizontal sharing.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

58. The impact of population age structure on economic growth of GDP per capita can be captured by analyzing which of the following factors ?

1. Proportion of working age population in the total population
2. Work Participation Rate
3. Per-capita productivity

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

59. Which of the following are indicators of debt vulnerability of a country ?

1. GDP
2. Total Debt/GDP
3. Short-term Debt to Total Debt Ratio
4. Level of Foreign Exchange Reserves

Select the correct answer using the code given below :

- (a) 1, 2 and 4
- (b) 1, 2 and 3
- (c) 2, 3 and 4
- (d) 1, 3 and 4

60. The salary of an employee is ₹ 10,000. After four successive equal percentage rises in salary in four consecutive years, his salary becomes ₹ 14,641. What is the percentage rise in the salary in each year ?

- (a) 8%
- (b) 9%
- (c) 10%
- (d) 11%

61. A number $44n$, where n is a natural number when divided by 500, leaves no remainder. What is the minimum value of n ?
- (a) 500
(b) 250
(c) 125
(d) 100
62. What is the sum of the largest and smallest numbers obtained by using the single digit prime numbers (each digit being used only once) ?
- (a) 87678
(b) 73573
(c) 9998
(d) 9889
63. If m is a positive integer such that $(5m + 96)$ is divisible by m , then what is the number of possible values of m ?
- (a) 13
(b) 12
(c) 11
(d) 10
64. If $9 \# 13 = 4$, $6 \# 12 = 9$, $7 \# 21 = 10$, then what is $7 \# 17$ equal to ?
- (a) 6
(b) 7
(c) 8
(d) 9
65. Let A , B and C be three non-zero distinct digits. Let $x = A3B$ be a 3-digit number. When x is multiplied by B , the resulting number becomes $C17B$. How many are the possible values of A ?
- (a) Four
(b) Three
(c) Two
(d) One

Consider the following for the next five (05) items that follow :

Each item contains a Question followed by two Statements. Answer each item using the following instructions :

Choose option (a) if the Question can be answered by one of the Statements alone but not by the other.

Choose option (b) if the Question can be answered by either Statement alone.

Choose option (c) if the Question can be answered by using both the Statements together, but cannot be answered by using either Statement alone.

Choose option (d) if the Question cannot be answered even by using both Statements together.

66. Question :

What is the value of the positive integer m ?

Statement-I :

The least common multiple of m and 31 is 1147.

Statement-II :

The greatest common divisor of m and 31 is 1.

67. Question :

What is the annual growth rate of a given population ?

Statement-I :

The population is 200000 at the end of the year 2021.

Statement-II :

The population is 204000 at the end of the year 2022.

68. In a graduate course, students must opt one or more subjects among Statistics, Economics and Mathematics.

Question :

What is the number of students who opted two or more subjects ?

Statement-I :

30% opted only Statistics, 35% opted only Economics and 25% opted only Mathematics.

Statement-II :

10 students opted all the three subjects.

69. A family comprises 3 women.

Question :

How is the youngest related to the eldest ?

Statement-I :

Two of them are mothers in the family.

Statement-II :

Two of them are daughters in the family.

70. P, Q, R and S are four brothers.

Question :

What is the order of their ages ?

Statement-I :

Average age of P and S is equal to average age of Q and R.

Statement-II :

Average age of P and Q is greater than average age of R and S.

71. If * indicates '+' or 'x', then what is the maximum value of $1 * 2 * 3 * 4 * 5$?

- (a) 62
- (b) 81
- (c) 120
- (d) 121

72. How many 2-digit numbers are there in all that get increased by 45 on reversing the digits ?

- (a) 2
- (b) 3
- (c) 4
- (d) 5

73. Let P be the difference between the two 3-digit numbers ABC and CBA. Consider the following statements in respect of P :

1. If the value of B is changed, then the value of P changes.
2. P is divisible by 9.
3. P is divisible by 11.

Which of the statements given above are correct ?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

74. Suppose n is a fixed positive integer. If x is the largest value of the remainder and y is the smallest value of the remainder when n divides any positive integer, then what is $(x - y)$ equal to ?

- (a) n
- (b) $n - 1$
- (c) $n - 2$
- (d) 1

75. What is the maximum value of the sum of number of Sundays, number of Mondays and number of Tuesdays which fall in three consecutive years ?

- (a) 468
- (b) 469
- (c) 470
- (d) 471

76. The salary of X is 10% lower than that of Y. The salary of Y is 20% more than that of Z. The salary of Z is 30% lower than that of W. By how much per cent is the salary of X less than that of W ?

- (a) 42.4
- (b) 32.625
- (c) 25
- (d) 24.4

Consider the following for the next two (02) items that follow :

Country	Population (in million)	GNP (in billion rupees)	Expenditure on health as percentage of GNP
P	50	400	3.5
Q	55	500	3.0
R	60	350	5.0
S	50	300	4.5
T	65	400	4.0

77. In which one of the following countries is per person expenditure on health, expressed in rupees, the third highest ?

- (a) P
- (b) Q
- (c) R
- (d) S

78. If Countries Q and S spend equal number of units of their currencies on health, then what is the ratio of the rupee value of 1 unit of currency of Country Q to the rupee value of 1 unit of currency of Country S ?

- (a) 1 : 1
- (b) 9 : 10
- (c) 10 : 9
- (d) None of the above

Consider the following for the next two (02) items that follow :

In a cricket match, Sri Lanka playing against India scored in the following manner :

Partner-ship	1 st wicket	2 nd wicket	3 rd wicket	4 th wicket	5 th wicket
Runs scored	12	22	14	12	16

It may be noted that no extra runs were conceded during their partnerships.

79. What could be the average runs scored by the first five batsmen ?

- (a) 9.6
- (b) 12.0
- (c) 15.2
- (d) Cannot be determined due to insufficient data

80. What could be the minimum average runs scored by the first four batsmen if one of the openers got out at the end of the 4th wicket partnership ?

- (a) 10
- (b) 12
- (c) 16
- (d) Cannot be determined due to insufficient data

81. If standard error of a set of 100 observations was found to be 0.04, then what is the population variance of data set ?

- (a) 1.04
- (b) 0.4
- (c) 0.24
- (d) 0.16

82. A sample of size 20 was taken from a population of size 101 with variance 5. What is the standard error of sample mean ?

- (a) 0.5
- (b) 0.45
- (c) 0.19
- (d) 0.16

83. Consider the following statements :

1. Wholesale Price Index can measure the cost of living.
2. Index of Industrial Production can measure productivity.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

84. Which of the following do *not* need current year quantity as weights for construction of index numbers ?

1. Laspeyres method
2. Drobish-Bowley method
3. Fisher's method

Select the correct answer using the code given below :

- (a) 1 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 2 and 3

85. Which of the following index numbers are based on the principle of geometric mean ?

- (a) Kelly's Index number
- (b) Fisher's Index number
- (c) Drobish-Bowley Index number
- (d) Marshall-Edgeworth Index number

86. What is the average of all prime numbers that lie between 100 and 120 ?

- (a) 104.0
- (b) 106.6
- (c) 108.4
- (d) 105.8

87. If σ_x and σ_y are the standard deviations of two correlated random variables X and Y, and $w = \frac{\sigma_x}{\sigma_y} + \frac{\sigma_y}{\sigma_x} + 1$, then what is the minimum value of w ?

- (a) 1
- (b) 2
- (c) 3
- (d) 16

88. If $r = \sqrt{2}/3$ is simple correlation between two variables X and Y, then standard error in estimating Y for given X when $\text{Var}(Y) = 7$ is :

- (a) $5/3$
- (b) $\sqrt{7}/3$
- (c) $7/3$
- (d) $3/7$

89. In a frequency distribution with coefficient of variation 10, Karl Pearson's coefficient of skewness 0.05 and standard deviation 2; the value of sum of mean and mode is :

- (a) 39.9
- (b) 39
- (c) 29.9
- (d) 21

90. For the same data Laspeyre's and Paasche's index numbers are 107.12 and 127.51 respectively. Which one of the following can be Fisher's ideal index for the same data set ?

- (a) 101.12
- (b) 121.27
- (c) 129.52
- (d) 181.71

91. Which of the following malicious software replicate themselves through infection ?

- 1. Worms
- 2. Trojan Horse
- 3. Virus
- 4. Rootkit

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

92. In Internet the URL (Uniform Resource Locator) is used to :

- (a) fetch web address
- (b) find hypertext documents
- (c) perform instant messaging
- (d) find address of the search engine

93. Utility software is a small program that provides additional capabilities to the operating system. Which of the following are utility software ?

- 1. System profiler
- 2. Debugger
- 3. Backup
- 4. Virus scanner

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

94. In a cloud computing environment, the partitioning of single physical server into multiple logical servers is generally termed as :

- (a) Public cloud
- (b) Hybrid cloud
- (c) Private cloud
- (d) Virtualization

95. The device used to read the characters written on the cheques is :

- (a) Barcode reader
- (b) OCR device
- (c) OMR device
- (d) MICR device

96. Two-dimensional pattern of dark rectangles are QR codes that have become popular nowadays. What does "QR" stand for in QR codes ?

- (a) Quotient Redundant
- (b) Quality Representation
- (c) Quick Response
- (d) Quantum Reliable

97. Which shortcut key is used for pasting text from clipboard ?

- (a) Ctrl+X
- (b) Ctrl+V
- (c) Ctrl+C
- (d) Ctrl+D

98. In the context of computer graphics, which of the following are Raster formats ?

- 1. JPEG
- 2. TIFF
- 3. SVG
- 4. PNG

Select the correct answer using the code given below :

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 1, 3 and 4
- (d) 2, 3 and 4

99. Which of the following are correct regarding a debugger ?

- 1. Step-by-step execution of program.
- 2. Back tracking for checking the previous steps.
- 3. Stopping the execution of the program until the errors are corrected.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

100. Which one of the following is the extension used for MS PowerPoint files ?

- (a) .doc
- (b) .cpp
- (c) .ppt
- (d) .pwpt

101. Which one of the following metals is extracted from monazite sand found in plenty in India ?

- (a) Gold
- (b) Thorium
- (c) Uranium
- (d) Copper

102. The Amarkantak Hills is the source of two rivers flowing in two different directions. They are :

- (a) Betwa and Tapi
- (b) Narmada and Son
- (c) Narmada and Mahanadi
- (d) Tapi and Son

103. Consider the following pairs :

Reservoir *State*

- 1. Ghataprabha Telangana
- 2. Gandhi Sagar Madhya Pradesh
- 3. Indira Sagar Andhra Pradesh
- 4. Maithon Chhattisgarh

How many of the pairs given above is/are correctly matched ?

- (a) Only one pair
- (b) Only two pairs
- (c) Only three pairs
- (d) All four pairs

104. "The trees have specially adapted aerial and salt-filtering roots; and their seeds germinate in fruits while still attached to parent plants." These trees are most abundantly found in :

- (a) Mangrove forests
- (b) Thorn and scrub forests
- (c) Tropical deciduous forests
- (d) Tropical rain forests

105. Consider the following pairs :

- 1. Nokrek Biosphere ... Garo Hills
- 2. Loktak Lake Barail Range
- 3. Namdapha National Park Dafla Hills

How many of the pairs given above is/are correctly matched ?

- (a) None of the pairs
- (b) Only one pair
- (c) Only two pairs
- (d) All three pairs

106. Which of the following features is the most approximate characterization of India's political system ?

- (a) Parliamentary-Federal
- (b) Presidential-Federal
- (c) Parliamentary-Unitary
- (d) Presidential-Unitary

107. Which among the following fundamental rights is/are available to aliens along with citizens of India ?

- 1. Right to freedom of speech and expression
- 2. Right to equality before law
- 3. Cultural and educational rights

Select the correct answer using the code given below :

- (a) 1 only
- (b) 2 only
- (c) 2 and 3
- (d) 1 and 3

108. With reference to the International Court of Justice, which of the following is/are correct ?

1. It has compulsory jurisdiction all over the world
2. It is a major organ of the United Nations

Select the correct answer using the code given below :

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

109. Which one among the following parts of the Constitution of India embodies the concept of Panchayati Raj System ?

- (a) Preamble
- (b) Fundamental Duties
- (c) Directive Principles of State Policy
- (d) First Schedule

110. Article 1 of the Indian Constitution describes India as a :

- (a) Federation
- (b) Confederation
- (c) Union of States
- (d) Unitary State

111. What are the "White Label Automated Teller Machines" ?

- (a) Those owned and operated by Scheduled Commercial Banks
- (b) Those owned and operated by private non-banking firms
- (c) Those set up and operated in remote and not so easily accessible areas
- (d) Small and lightweight ATMs which can be carried and operated by Banking Correspondents

112. With the increase in the bank rate by the RBI :

- (a) credit will become cheaper
- (b) the terms of credit will remain unaffected
- (c) credit will become costlier
- (d) the terms of inter-bank credit will become cheaper

113. In India, which one of the following is responsible for price stability ?

- (a) Department of Consumer Affairs
- (b) Expenditure Management Commission
- (c) Financial Stability and Development Council
- (d) Reserve Bank of India

114. Incremental capital-output ratio is a measure of which of the following ?

- (a) Economic growth of the economy
- (b) Aggregate capital intensity of production
- (c) Productivity of the economy
- (d) Export-competitiveness of the economy

115. In the context of economy, the term "capital goods" refers to :

- (a) any asset
- (b) any durable good that is owned for pleasure or income
- (c) any durable or non-durable good that helps to increase the productivity of labour
- (d) any commodity which is used to produce goods and services including itself

116. Parliament has recently passed the Registration of Births and Deaths (Amendment) Bill, 2023. Consider the following statements in respect of the Bill :

1. The Bill makes it obligatory for States to register births and deaths on the Central Civil Registration System (CRS) portal and to share the data with the Registrar General of India, which functions under the Union Home Ministry.
2. The Bill introduces the concept of digital birth certificates and intends to serve as a comprehensive document for multiple purposes.

Which of the statements given above is/are correct ?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

117. The Union Ministry of Jal Shakti recently released the findings of India's first Water Bodies Census, which provides a comprehensive database of ponds, tanks, lakes and reservoirs in the country. Which of the following are the key findings ?

1. More than 24 lakh water bodies have been enumerated.
2. Among the different types of water bodies, reservoirs constitute the majority.
3. West Bengal has the highest number of ponds and reservoirs.

Select the correct answer using the code given below :

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

118. The first Methane-fuelled space rocket was launched by :

- (a) India
- (b) China
- (c) Russia
- (d) The United States of America

119. Consider the following pairs in respect of the 69th National Film Awards :

1. Best Feature Film Rocketry : The Nambi Effect
2. Best Hindi Film Sardar Udham
3. Best Actor Allu Arjun

Which of the above pairs are correctly matched ?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

120. Consider the following statements in respect of Chandrayaan :

1. Landing site of Chandrayaan-3 on the lunar south pole is named as "Shiv Shakti Point".
2. Crash site of Chandrayaan-2 is named as "Tiranga Point".
3. Lander (Vikram) is a six-legged vehicle while Rover (Pragyan) is a four-legged vehicle.

Which of the statements given above are correct ?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

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