1) What is the full form of AD, used with dates?
   A. Anno Domini
   B. Assistant Director
   C. Aknowledgement Due
   D. After Date

2) Which of the following planets of our solar system has least mass?
   A. Neptune
   B. Jupitar
   C. Mars
   D. Mercury

3) Ozone gas is present in which layer of atmosphere?
   A. Stratosphere
   B. Troposphere
   C. Ionosphere
   D. Mesosphere

4) Who built the Khajuraho temples ?
   A. Holkars
   B. Scindias
   C. Bundela
   D. Chandela

5) At which the following places is the famous Kailasha Temple located?
   A. Ajanta
   B. Badami
   C. Chittor
   D. Ellora

6) Which of the following is NOT a Union Territory ?
   A. Goa
   B. Lakshadweep
   C. Dadar and Nagar Haveli
   D. Chandigarh

7) How many spokes are there in the Dharma Chakra (Ashok Chakra) depicted on the National Flag of India ?
   A. 16
   B. 20
   C. 24
   D. 32

8) The headquarter of RBI is situated at:
   A. Delhi
   B. Kolkata
   C. Chennai
   D. Mumbai

9) Thar Desert is situated in -
   A. Rajasthan
   B. West Bengal
   C. Tamilnadu
   D. Uttarakhand

10) Which of the following is the highest mountain peak in Maharashtra ?
   A. Taramati
   B. Anjaneri
   C. Salher
   D. Kalsubai

11) National Rural Health Mission (NRHM) was launched in the year :
   A. 2003
   B. 2004
   C. 2005
   D. 2006

12) Who was called the 'Iron Man of India'?
   A. Sardar Ballabhbhai Patel
   B. Surendranath Bannerjee
   C. Bipin Chandra Pal
   D. Lala Lajpat Rai

13) Which sea is to the west of Maharashtra?
   A. Black
   B. Arabian
   C. Labrador
   D. Timor

14) Marathi Language Day is Celebrated on
   A. 15th February
   B. 7th February
   C. 20th February
   D. 27th February

15) The river Koyna joins the river Krishna at ———
   A. Satara
   B. Karad
   C. Kolhapur
   D. Mahabaleshwar

Set - B (Statistical Investigator)

16) A bag contains 7 blue balls and 5 yellow balls. If two balls are selected at random, what is the probability that none is yellow?
   A. $\frac{5}{33}$
   B. $\frac{5}{22}$
   C. $\frac{7}{22}$
   D. $\frac{7}{33}$

17) Damodar is 26 years older than his son. In four years, his age will be twice the age of his son. The present age of his son is :
   A. 16 years
   B. 18 years
   C. 20 years
   D. 22 years

18) Introducing a girl, Niraj said, 'Her mother is the only daughter of my mother-in-law'. How is Niraj related to the girl?
   A. Husband
   B. Brother
   C. Father
   D. Uncle

19) Covid – 19 is caused by _____
   A. Bacteria
   B. Parasite
   C. Virus
   D. Fungus

20) Madhuri, who is facing South turns to her left and walks 15 metres, then she turns to her left and walks 7 metres, then facing west she walks 15 metres. How far is she from her original position?
   A. 7 m
   B. 10 m
   C. 5 m
   D. 8 m

21) If Sunday falls on 30th April, what day would be on 31st May?
   A. Saturday
   B. Sunday
   C. Monday
   D. Wednesday

22)

| 6 | 6 | 8 |
|---|---|---|
| 5 | 7 | 5 |
| 4 | 3 | ? |
| 120 | 126 | 320 |

   A. 12
   B. 8
   C. 14
   D. 16

23) Deepak has some hens and some goats. If the total number of animal heads is 90 and the total number of animal feet is 248, what is the total number of goats Deepak has ?
   A. 32
   B. 36
   C. 34
   D. Cannot be determined

24) In class the average age of 75 students is 7 years. If along with the class teacher, the average is 7.5 years. What is the age of teacher age?
   A. 37.5 years
   B. 45 years
   C. 42 years
   D. 39 years

25) In a factory of 140 machine parts, 5 percent were defective. In a factory of 80 machine parts, 10 percent were defective. For the two factory combined, what percent of the machine parts were defective?
   A. 6.50%
   B. 7%
   C. 7.50%
   D. 8%

26) The correct sequence of communication is .......
   A. Message Sender Receiver
   B. Message Receiver Sender
   C. Sender Message Receiver
   D. Receiver Sender Message

27) AB, DE, GH, ? , MN
   A. IJ
   B. III
   C. JK
   D. None

28) Pick the odd one
   A. Bengali
   B. Marathi
   C. English
   D. Kannad

29) In a row of trees, one tree is seventh from either end of the row. How many trees are there in the row?
   A. 8
   B. 13
   C. 14
   D. 11

30) In a class of 45 students, a boy is ranked 20th. When two boys joined, his rank was dropped by one. What is his new rank from the end?
   A. 25th
   B. 26th
   C. 27th
   D. 28th

31) अशुध्द शब्द ओळखा
   A. तथापि
   B. परंतु
   C. आणि
   D. यापैकी नाही

32) 'दुभत्या गाईच्या लाथा गोड' या म्हणीचा अर्थ खालीलपैकी कोणता?
   A. दुभत्या गाईची लाथ लागत नाही.
   B. फायदयासाठी अपमान सहन करणे.
   C. अडथळे आले तरी प्रयत्न करावा.
   D. दुभत्या गाईच्या लाथा खाणे.

33) 'अर्थ नसणे' या अर्थाचा योग्य वाकप्रचार कोणता?
   A. गाशा गुंडाळणे
   B. फुगडी घालणे
   C. वा-यावर सोडणे
   D. राम नसणे

34) 'कृपण' या शब्दाच्या विरुध्दार्थी शब्द ओळखा
   A. उदार
   B. कृतघ्न
   C. गरीव
   D. अपूर्व

35) गटात न वसणारा शब्द ओळखा?
   A. सूत
   B. भ्राता
   C. वंधू
   D. भाऊ

36) रामवाण
   A. अचूक गुणकारी
   B. रागाचा वाण
   C. थोर पुरुष
   D. राजा

37) दिलेल्या शब्दाचा रामानार्थी नरालेला शब्द ओळखा.
   निखिल
   A. सर्व
   B. निर्गीड
   C. पूर्ण
   D. सगळा

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38) अधोरेखित शब्दांच्या विभक्तीचा अर्थ ओळखा.

   अ) तो <u>घरातून</u> बाहेर पडला.

   A. कर्ता

   B. कर्म

   C. अपादान

   D. संप्रदान

39) 'सूर्य मावळत आहे' – पूर्ण भविष्यकाळ करा.

   A. सूर्य मावळेल.

   B. सूर्य मावळत असेल.

   C. सूर्य मावळलेला असेल

   D. सूर्य मावळला.

40) 'अमुक झाले तर अमुक होईल' असे काल्पनिक विधान करावयाचे असेल तर भूतकाळी आणि भविष्यकाळी कोणत्या अर्थाच्या क्रियापदाची योजना करावी लागते?

   A. आज्ञार्थी

   B. संकेतार्थी

   C. प्रश्नार्थक

   D. यांपैकी नाही

41) तो पेरुचे फळ सावकाश खात आहे, या वाक्यातील क्रियाविशेषण कोणते?

   A. पेरुचे फळ

   B. फळ

   C. सावकाश

   D. खात आहे

42) अधोरेखित शब्दाचा प्रकार ओळखा. तू माझ्यावरोवर प्रार्थना म्हण.

   A. उभयान्वयी अव्यय

   B. शब्दयोगी अव्यय

   C. क्रियाविशेषण

   D. केवलप्रयोगी अव्यय

43) कर्ता – कर्म – क्रियापद यांच्या परस्परसंबंधांना ........... म्हणतात.

   A. वाक्य

   B. शब्दसमूह

   C. कर्तरी प्रयोग

   D. प्रयोग

44) सावळाच रंग तुझा पावसाळी नभापरी ! (अलंकार ओळखा)

   A. श्लेष अलंकार

   B. यमक अलंकार

   C. अतिशयोक्ती अलंकार

   D. उपमा अलंकार

45) लहानपण देगा देवा | मुंगी साखरेचा रवा | ऐरावत रत्न थोर | त्यासी अंकुशाचा मार || वरील कडव्यातील अलंकार ओळखा.

   A. यमक अलंकार

   B. अनुप्रास अलंकार

   C. रुपक अलंकार

   D. दृष्टांत अलंकार

46) "I'm sure I've met your father.
   A. Verb
   B. Preposition
   C. Pronoun
   D. Interjection

47) Make the adjective of the word 'occasion.'
   A. occasioned
   B. accusational
   C. occasional
   D. occasionally

48) Choose the correct conjunction :
   She bought a car, _____ she was too young to

   learn to drive.
   A. if
   B. because
   C. although
   D. if not

49) I will sing if he _____
   A. will ask me
   B. asks me
   C. asked me
   D. has asked me

50) He said, "Please help me."
   Choose the option with the correct indirect from of

   the above.
   A. He pleased me to help me.
   B. He requested me to help him.
   C. He ordered me about helping.
   D. He said I need help

51) Choose appropriate antonym for the word
   'Gloomy'
   A. Idle
   B. Wise
   C. Cheerful
   D. Sad

52) Choose the correct answer from the following and

   fill in the blank:
   A doctor who studies and treats mental illness

   _____.
   A. psychiatrist
   B. psychologist
   C. psychoanalyst
   D. psychiatry

53) Give the meaning of 'To call it a day'.
   A. To have a good day.
   B. To work all the day.
   C. To have a free day.
   D. To stop doing work of the day.

54) Choose the correct meaning of the given phrase or

   idiom:
   Look into –
   A. to examine thoroughly
   B. to watch
   C. to observe
   D. to follow

55) Which of the following word is correctly spelt?
   A. administration
   B. convorsation
   C. creatyre
   D. devolop

56) Meaning of "Fly by night"
   A. Night journey
   B. A Bird busy in night
   C. Cat's eye
   D. Swindler

57) I _____ the apartment all day yesterday.
   A. Clear
   B. Washed out
   C. Cleaned Up
   D. None of these

58) Choose the word spelt correctly.
   A. Substandial
   B. Substantial
   C. Substential
   D. Substendial

59) He competed _____ me for the prize.
   A. Off
   B. With
   C. To
   D. Off

60) He _____ a very good grade in the examination.
   A. Earned
   B. Given
   C. Received
   D. None of these

Set - B (Statistical Investigator)

61. Find median and mode of the messages received on 9 consecutive days 15, 11, 9, 5, 18, 4, 15, 13, 17.
    A. 13, 6
    B. 13, 18
    C. 18, 15
    D. 15, 16

62. Which of the following mentioned standard Probability density functions is applicable to discrete Random Variables?
    A. Gaussian Distribution
    B. Poisson Distribution
    C. Rayleigh Distribution
    D. Exponential Distribution

63. When do the conditional density functions get converted into the marginally density functions?
    A. Only if random variables exhibit statistical dependency
    B. Only if random variables exhibit statistical independency
    C. Only if random variables exhibit deviation from its mean value
    D. If random variables do not exhibit deviation from its mean value

64. The variable that assigns a real number value to an event in a sample space is called _____
    A. Random variable
    B. Defined variable
    C. Uncertain variable
    D. Static variable

65. Consider the following statements:
    i) A.M. is not affected by extreme observations.
    ii) Median is affected by extreme observations.
    A. i true and ii false
    B. i false and ii true
    C. i and ii are true

66. Variance of a certain set of data containing 10 values is 200. If number 10 is added to all the values in the data, what will be the variance of new set of values?
    A. 210
    B. 190
    C. 200
    D. 20

67. For a certain frequency distribution mean is 10 and variance is 400. The second raw moment of this distribution
    A. 20
    B. 200
    C. 400
    D. 300

68. If X denotes number of boys born in a series of 30 births with the probability that the birth being a boy is 0.51, the probability distribution of X is
    A. Hypergeometric(30, 10, 6)
    B. Uniform(30)
    C. B(30, 0.51)
    D. B(30, 0.5)

69. A fair coin is tossed four times, the probability of getting four heads is
    A. 0.25
    B. 0.125
    C. 0.0625
    D. 1

70. If X follows Poisson distribution with parameter 4 then the first and the third cumulant of X is given by:
    A. 20 and 25
    B. 4 and 4
    C. 5 and 20

71. A numerical value used as a summary measure for a sample, such as a sample mean, is known as a
A. Population Parameter
B. Sample Parameter
C. Sample Statistic
D. Population Mean

72. To enhance a procedure the control charts and procedures of descriptive statistics are classified into
A. Behavioural Tools
B. Serial Tools
C. Industry Statistics
D. Statistical Tools

73. The variables whose calculation is done according to the weight, height and length and weight are known as:
A. Flowchart Variables
B. Discrete Variables
C. Continuous Variables
D. Measuring Variables

74. A method used to examine inflation rate anticipation, unemployment rate and capacity utilisation to produce products is classified as
A. Data Exporting Technique
B. Data Importing Technique
C. Forecasting Technique
D. Data Supplying Technique

75. Graphical and numerical methods are specialized processes utilised in
A. Education Statistics
B. Descriptive Statistics
C. Business Statistics
D. Social Statistics

76. Review of performance appraisal, labour turnover rates, planning of incentives and training programs and are examples of
A. Statistics in Production
B. Statistics in Marketing
C. Statistics in Finance
D. Statistics in Personnel Management

77. What is the arithmetic mean of the data set: 4, 5, 0, 10, 8, and 3?
A. 4
B. 5
C. 6
D. 7

78. Which of the following cannot be the probability of an event?
A. 0.0
B. 0.3
C. 0.9
D. 1.2

79. What is the geometric mean of: 1, 2, 8, and 16?
A. 4
B. 5
C. 6
D. 7

80. Which test is applied to Analysis of Variance (ANOVA)?
A. t test
B. z test
C. F test
D. $\chi 2$ test

81. The arithmetic mean of all possible outcomes is known as
A. expected value
B. critical value
C. variance
D. standard deviation

82. Which of the following cannot be the value of a correlation coefficient?
A. −1
B. −0.75
C. 0
D. 1.2

9

Set - B (Statistical Investigator)

83. What is variance of the data set: 2, 10, 1, 9, and 3?
    A. 15.5
    B. 17.5
    C. 5.5
    D. 7.5

84. In a module, quiz contributes 10%, assignment 30%, and final exam contributes 60% towards the final result. A student obtained 80% marks in quiz, 65% in assignment, and 75% in the final exam. What are average marks?
    A. 64.5%
    B. 68.5%
    C. 72.5%
    D. 76.5%

85. What is the average of 3%, 7%, 10%, and 16% ?
    A. 8%
    B. 9%
    C. 10%
    D. 11%

86. Which of the following statement is true about the following two data sets?
    Data Set 1: 4, 3, 5, 7, 6
    Data Set 2: 2, 10, 1, 9, 3
    A. mean and variance are equal
    B. mean and variance are not equal
    C. mean is equal but variance is not
    D. variance is equal but mean is not

87. If an experiment is repeated independently for a large number of times, it converges to a/an
    A. expected value
    B. variance – mean
    C. normal distribution
    D. uniform distribution

88. Which statistical method is used to estimate the relationship between two variables?
    A. Correlation
    B. Regression
    C. Covariance
    D. ANOVA

89. The value of R2, the coefficient of determination, is always between
    A. 0 and 1, including 0 and 1
    B. 0 and 1, excluding 0 and 1
    C. −1 and 1, including −1 and 1
    D. −1 and 1, excluding −1 and 1

90. If 40% of boys opted for maths and 60% of girls opted for maths, then what is the probability that maths is chosen if half of the class's population is girls?
    A. 0.5
    B. 0.6
    C. 0.7
    D. 0.4

91. Suppose 5 men out of 100 men and 10 women out of 250 women are colour blind, then find the total probability of colour blind people. (Assume that both men and women are in equal numbers.)
    A. 0.45
    B. 0.045
    C. 0.05
    D. 0.5

92. In a colony, there are 55 members. Every member posts a greeting card to all the members. How many greeting cards were posted by them?
    A. 990
    B. 890
    C. 2970
    D. 1980

93. Find the sum of all four digit numbers that can be formed by the digits 1, 3, 5, 7, 9 without repetition.
    A. 666700
    B. 666600
    C. 678860
    D. 665500

Set - B (Statistical Investigator)

94. If the values taken by a random variable are negative, the negative values will have
    A. Positive probability
    B. Negative Probability
    C. May have negative or positive probabilities
    D. Insufficient data

95. The variable that assigns a real number value to an event in a sample space is called _____
    A. Random variable
    B. Defined variable
    C. Uncertain variable
    D. Static variable

96. In a discrete probability distribution, the sum of all probabilities is always?
    A. 0
    B. Infinite
    C. 1
    D. Undefined

97. The weight of persons in a state is a _____
    A. Continuous random variable
    B. Discrete random variable
    C. Irregular random variable
    D. Not a random variable

98. GCD of (3,13) is......
    A. 2
    B. 3
    C. 1
    D. None of these

99. For a discrete r.v. X , mean is 3.5 and second factorial moment is 12.5 . Second raw moment is
    A. 16
    B. 9
    C. 10
    D. -9

100. Consider the following statements:
    i) In nominal scale the order of observations is important.
    ii) In ordinal scale the observations are ranked.
    A. i true and ii false
    B. i false and ii true
    C. i and ii are true
    D. i and ii are false

—————— × ——————

# Rough Work