HALL TICKET NO:

M.B.A (Business Analytics)
Entrance Examination - 2019
(75 Marks)

INSTRUCTIONS

1. Write your Hall Ticket Number in the OMR Answer sheet given to you. Also write the Hall Ticket Number in the space provided above.

2. The question paper booklet consists of 75questions. Each question carries one (1) mark.

3. There is negative marking. Each wrong answer carries - 0.33 marks.

4. Answers are to be marked on the OMR answer sheet following the instructions provided there upon.

5. Hand over OMR answer sheet to the invigilator before leaving the examination hall.

6. No additional sheets will be provided Rough work can be done in the question paper itself or in the space provided at the end of the booklet.

7. Calculators, mobile phones and electronic gadgets are not allowed

Direction for the questions 1 to 5: each of the questions consists of two words that have a certain relationship to each other, followed by four pairs of words. Select the pair of words that has the same relationships as the original pair of words.

1. Propensity: Tendency

    A. Prologue: Epilogue
    B. Audacity: Impudence
    C. Master: Slave
    D. Conduct: Immorality

2. Preamble: Constitution

    A. Word: Dictionary
    B. Contents: Magazine
    C. Explanation: Poetry
    D. Preface: Book

3. Intimidate: Wheedle
    A. Resolute: Impetuous
    B. Coordinate: Disinter
    C. Defile: Rebuke
    D. Extol: Disparage

4. Plaintiff: Defendant
    A. Judge: Jury
    B. Court: law
    C. Attorney: Lawyer
    D. Injured: Accused

5. Money: Transaction
    A. Life : Death
    B. Ideas : Exchange
    C. Language : Conversation
    D. Water : Drink

Directions for questions 6 to 10: From The given words, choose a word which means almost the same as given below

6. Debunked
    A. Validated
    B. Exposed
    C. Dismissed
    D. Approved

7. Ascend

    A. Leap
    B. Grow
    C. Deviate
    D. Mount

8. Indict

    A. Condemn
    B. Reprimand
    C. Accuse
    D. Allege

9. Admonish

    A. Punish
    B. Reprimand
    C. Punish
    D. Curse

10. Circumscribed

    A. Limited
    B. Eroded
    C. Entangled
    D. Destroyed

·**Directions for questions 11 to 15: From the given words, choose a word which means the almost opposite as the given word.**

11. Native

    A. Alien
    B. Innate
    C. Aboriginal
    D. Fragile

12. Ostentation

    A. semblance
    B. flourish
    C. modesty
    D. boasting

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13. Amenity
    A. Abomination
    B. advantage
    C. comfort
    D. Enrichment

14. Fervent
    A. Intense
    B. Religious
    C. Apathetic
    D. Fiery

15. Belittle
    A. Exaggerate
    B. flatter
    C. Criticise
    D. Adore

Directions: Choose the appropriate word relationship from the following to fill in the blanks.

16. Gravity is related to Pull in the same way as Magnetism is related to -------------

    A. Repulsion
    B. Separation
    C. Attraction
    D. Push

17. Earth is related to Axis in the same way as Wheel is related to ------

    A. Tyre
    B. Car
    C. Road
    D. Hub

18. Indiscreet is related to Imprudent in the same way as Indisposed is related to ------

    A. Concerned
    B. Crucial
    C. Clear
    D. Reluctant

19. Hygrometer is to Humidity as Sphygmomanometer is to -------------

    A. Pressure
    B. Blood Pressure
    C. Precipitation
    D. Heart beat

20. Magnalium is to Aluminium as Brass is to ----------

    A. Lead
    B. Copper
    C. Magnesium
    D. Iron

21. A can complete a work in 12 days and B can complete in 8 days. A works for 8 hours every day while B works for 10 hours every day. If A and B together start working 8 hours per day, in how many days will they complete the work?

    A. 8 days
    B. 60/11 days
    C. 39/12 days
    D. 15/8 days

22. A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?

    A. Rs. 375
    B. Rs. 400
    C. Rs. 600
    D. Rs. 800

23. Hari took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?

    A. 3.6
    B. 6
    C. 18
    D. 5

24. Let N be the greatest number that will divide 1305, 4665 and 6905, leaving the same remainder in each case. Then sum of the digits in N is:

    A. 4
    B. 5
    C. 6
    D. 8

25. The greatest possible length which can be used to measure exactly the lengths 7 m, 3 m 85 cm, 12 m 95 cm is:

A.   15 cm
B.   25 cm
C.   35 cm
D.   42 cm

26. A train can travel 50% faster than a car. Both start from point A at the same time and reach point B 75 kms away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is:

A.   100 kmph
B.   110 kmph
C.   120 kmph
D.   130 kmph

27. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, son's age will be:

A.   12 years
B.   14 years
C.   18 years
D.   20 years

28. How many times are the hands of a clock at right angle in a day?

A.   22
B.   24
C.   44
D.   48

29. An error 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is:

A.   2%
B.   2.02%
C.   4%
D.   4.04%

Direction for questions 30 to 34: look carefully for the pattern and complete the series

30. Look at this series: 22, 21, 23, 22, 24, 23, _____What number should come next?

A.   22
B.   24
C.   25
D.   26

31. FAG, GAF, HAI, IAH, ____ which series should come next?

A. JAK
B. HAL
C. HAK
D. JAI

32. QAR, RAS, SAT, TAU, _____ which series should come next?

A. UAV
B. UAT
C. TAS
D. TAT

33. ZA5, Y4B, XC6, W3D, _____ which series should come next?

A. E7V
B. V2E
C. VE5
D. VE7

34. Look at this series: 4, 7,12,19,28 _____ what number should come next?

A. 39
B. 30
C. 32
D. 36

35. Amit said - "This girl is the wife of the grandson of my mother". How is Amit related to the girl?

A. Brother
B. Grandfather
C. Husband
D. Father-in-law

36. A man has Rs.480 in the denominations of one-rupee notes, five-rupee notes and ten-rupee notes. The number of notes of each denomination is equal. What is the total number of notes that he has?

A. 45
B. 60
C. 75
D. 90

37. In certain code TEACHER is written as VGCEJGT. The code of CHILDREN will be

A. EKNJFTGP
B. EJKNFTGP
C. KNJFGTP
D. None of these

38. A man pointing to a lady said, "The son of her only brother is the brother of my wife". The lady is related to the man as

A. Mother's sister
B. Grand mother
C. Mother-in-law
D. Sister of Father-in-law

39. The next term in the following series YEB, WFD, UHG, SKI____? Will be

A. TLO
B. QOL
C. QLO
D. GQP

40. A is sister of B. F is daughter of G. C is mother of B. D is father of C. E is mother of D. A is related to D as

A. Grand daughter
B. Daughter
C. Daughter-in-law
D. Sister

41. A person has to buy both apples and mangoes. The cost of one apple is Rs 7/- whereas that of a mango is Rs 5/-.If the person has Rs 38, the number of apples he can buy is

A. 1
B. 2
C. 3
D. 4

42. The mean marks obtained by a class of 40 students is 65. The mean marks of half of the students is found to be 45. The mean marks of the remaining students is

   A. 85
   B. 60
   C. 70
   D. 65

43. Ali buys a glass, a pencil box and a cup and pays Rs 21 to the shopkeeper. Rakesh buys a cup, two pencil boxes and a glass and pays Rs 28 to the shopkeeper. Preeti buys two glasses, a cup and two pencil boxes and pays Rs 35 to the shopkeeper. The cost of 10 cups will be

   A. Rs 40
   B. Rs 60
   C. Rs 80
   D. Rs 70

44. Two railway tickets from city A to B and three tickets from city A to C cost Rs 177. Three tickets from city A to B and two tickets from city A to C cost Rs 173. The fare for city B from city A will be Rs.

   A. 25
   B. 27
   C. 30
   D. 33

45. A person walks 10 m in front and 10 m to the right. Then every time turning to his left, he walks 5, 15 and 15 m respectively. How far is he now from his starting point?

   A. 20 m
   B. 15 m
   C. 10 m
   D. 5 m

46. Anil played 8 cricket matches. The mean (average) of the runs was found to be 80. After playing four more matches, the mean of the runs of all the matches was found to be 70. The total runs made in the last four matches is

   A. 400
   B. 300
   C. 200
   D. 100

47. The integers 49966 and 52231 when divided by a three digit number 'n' give the same remainder. What is the value of n?

    A. 367
    B. 453
    C. 462
    D. 298

48. The HCF of two numbers is 21 and their LCM is 4641. If one of the numbers is between 200 and 300, find the other number.

    A. 221
    B. 273
    C. 357
    D. 441

49. From a circular sheet of paper with a radius 20 cm, four circles of radius 5 cm each are cut out. What is the ratio of the uncut to the cut portion?

    A. 1: 3
    B. 4: 1
    C. 3: 1
    D. 4: 3

50. X does half as much work as Y in one-sixth of the time. If together they take 10 days to complete a work, how much time shall B alone take to do it?

    A. 70 days
    B. 30 days
    C. 40 days
    D. 50 days

51. Kamala can do a work in 15 days. Bimala is 50% more efficient than Kamala. The number of days, Bimala will take to do the same piece of work, is

    A. 14
    B. 12
    C. 10
    D. 21/2

52. Three houses are available in a locality. Three persons apply for the houses. Each applies for one house without consulting others. The probability that all the three apply for the same house, is

    A. 7/9

    B. 8/9

    C. 1/9

    D. 2/9

53. Five horses are in a race. Mr. A selects two of the horses at random and bets on them. The probability that Mr. A selected the winning horse, is

    A. 4/5

    B. 3/5

    C. 1/5

    D. 2/5

54. In how many of the distinct permutations of the letters in the word 'MISSISSIPPI' do the 4 I's not come together?

    A. 39916800

    B. 34650

    C. 33810

    D. 840

55. Find the area below $f(x) = -x^2 + 4x + 3$ and above $g(x) = -x^3 + 7x^2 - 10x + 5$ over the interval $1 \leq x \leq 2$:

    A. 23

    B. 49/12

    C. 56/3

    D. Can't be found

56. The minimum value of $3 \cos x + 4 \sin x + 8$ is:

    A. 5

    B. 9

    C. 7

    D. 3

57. For the matrix $A = \begin{bmatrix} 2 & -1 \\ -1 & 2 \end{bmatrix}$ what is correct about its Eigen vectors, with respect to $\lambda = 1$?

   A. $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$ and $\begin{bmatrix} -1 \\ 1 \end{bmatrix}$ can be the eigen vectors

   B. $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$ and $\begin{bmatrix} -1 \\ -1 \end{bmatrix}$ can be the eigen vectors

   C. Only $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$ can be the eigen vector

   D. None of the above

58. What is the inverse of the matrix $A = \begin{bmatrix} 5 & -1 \\ 1 & 2 \end{bmatrix}$?

   A. $\frac{1}{11} \begin{bmatrix} 2 & 1 \\ -1 & 5 \end{bmatrix}$

   B. $\frac{1}{11} \begin{bmatrix} 5 & -1 \\ 1 & 2 \end{bmatrix}$

   C. $\frac{1}{11} \begin{bmatrix} -5 & 1 \\ 1 & -2 \end{bmatrix}$

   D. Inverse does not exist

59. Suppose that a test for using a particular drug is 99% sensitive and 99% specific. That is, the test will produce 99% true positive results for drug users and 99% true negative results for non-drug users. Suppose that 0.5% of people are users of the drug. What is the probability (%) that a randomly selected individual with a positive test is a user?

   A. 43.5

   B. 33.2

   C. 31.8

   D. 25.4

60. If for the real values of x, $\cos\alpha = x \frac{1}{x} + \frac{1}{x-1}$, then:

   A. α is an acute angle

   B. α is an obtuse angle

   C. α is an right angle

   D. No conclusion can be drawn

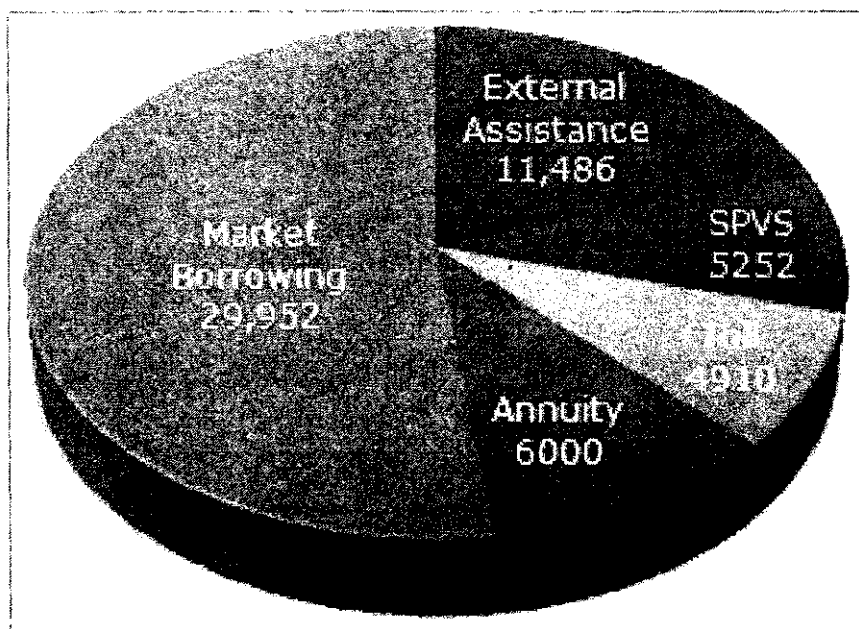61. If $\log_{10}x - \log_{10}\sqrt{x} = 2 \log_x 10$ then x is:

   A. 10

   B. 1/10

   C. 1/100

   D. 1/1000

62. When 4^{96} is divided by 6 leaves a remainder of:

    A. 0

    B. 2

    C. 4

    D. 3

63. If $13x + 1 < 2z$ and $z + 3 = 5y^2$ then:

    A. $x < y$

    B. $x > y$

    C. $x = y$

    D. none of the above

64. The mean of a distribution is 14 and the standard deviation is 5. What is the value of the coefficient of variation?

    A. 60.4%

    B. 48.3%

    C. 35.7%

    D. 27.8%

65. According to the empirical rule, approximately what percent of the data should lie within $\mu\pm2\sigma\mu\pm2\sigma$?

    A.95%

    B.85%

    C.68%

    D.99%

66. The sum of the deviations about the mean is always:

    A. One

    B. Zero

    C. Positive

    D. Negative

67. Which of the following divides a group of data into four subgroups?

    A. Percentiles

    B. Deciles

    C. Median

    D. Quartiles

68. If the standard deviation of a population is 9, the population variance is:

    A. 9

    B. 3

    C. 21

    D. 81

69. The number of accidents in a city during a given year is

    A. Discrete variable

    B. Continuous variable

    C. Qualitative variable

    D. Constant

70. A parameter is a measure which is computed from

    A. Population data

    B. Sample data

    C. Test statistics

    D. None of these

Directions for questions 71 to 75. Please read the following and the pie chart and answer the questions from 71 to 75

The following pie-chart shows the sources of funds to be collected by the National Highways Authority of India (NHAI) for its Phase II projects. Study the pie-chart and answers the question that follow.

• 71. Nearly about 20% of the funds are to be arranged through:

    A. SPVS

    B. External Assistance

    C. Annuity

    D. Market Borrowing

72. If NHAI could receive a total of Rs. 9695 crores as External Assistance, by what percent (approximately) should it increase the Market Borrowing to arrange for the shortage of funds?

    A. 4.5%

    B. 7.5%

    C. 6%

    D. 8%

73. If the toll is to be collected through an outsourced agency by allowing a maximum 10% commission, how much amount should be permitted to be collected by the outsourced agency, so that the project is supported with Rs. 4910 crores?

    A. Rs. 6213 crores

    B. Rs. 5827 crores

    C. Rs. 5401 crores

    D. Rs. 5316 crores

74. The central angle corresponding to Market Borrowing is

    A. 52°

    B. 137.8°

    C. 187.2°

    D. 192.4°

75. The approximate ratio of the funds to be arranged through Toll and that through Market Borrowing is.

    A. 2: 9

    B. 1: 6

    C. 3: 11

    D. 2: 5

MBA Business Analytics Entrance Exam 2019-Key

Q.No.	Key	Q.No.	Key
1	B	50	C
2	D	51	C
3	D	52	C
4	D	53	D
5	C	54	C
6	B	55	B
7	D	56	D
8	C	57	B
9	B	58	A
10	A	59	B
11	A	60	D
12	C	61	C
13	A	62	C
14	C	63	D
15	A	64	C
16	C	65	A
17	D	66	B
18	D	67	D
19	B	68	D
20	B	69	A
21	B	70	A
22	B	71	B
23	B	72	C
24	A	73	C
25	C	74	C
26	C	75	B
27	D		
28	C		
29	D		
30	C		
31	A		
32	A		
33	D		
34	A		
35	D		
36	D		
37	B		
38	D		
39	B		
40	A		
41	D		
42	A		
43	D		
44	D		
45	D		
46	C		
47	A		
48	C		
49	C		