GENERAL INSTRUCTIONS

1. Please turn your mobile phones off and keep them into your pockets/handbags.

2. Admission test for MS consists of following two parts:
   a. Objective
   b. Descriptive

   Following instructions are for objective part of the test. Guidelines for descriptive section of the test will be given at the end of objective part of the test.

3. Objective part of the test will evaluate your skills in three areas: 1) English 2) Analytical and 3) Mathematics. There are 26 MCQs for English section whereas number of MCQs in Analytical and Mathematics sections are 27 in each section. Thus total numbers of questions are 80.

4. Five choices are given for each question. For every question there is only one correct answer.

5. Use a pen to mark the answers on the answer sheet.

6. Please clearly fill the circle indicating your choice on the answer sheet. For example if you think C is the correct answer, then shade it completely.

   A  B  C  D  E

7. In case you filled more than one option (partially or wholly) for an answer, the answer will be deemed cancelled

8. Please keep the answer sheets flat on the surface and do not folded. No other marks should be made on the answer sheet except as instructed.

9. Start and end the test promptly as instructed. If you continue to work on the test after instruction has been given to stop working, there is possibility to cancel the test. The discipline is necessary to provide equal and fair chance to every candidate.

10. Time allowed for the test is 80 minutes.

11. Select your choices carefully. There is negative marking @25% for each incorrect answer.
ENGLISH (Question 1-26)

In the following questions choose the word which best expresses the meaning of the given word.

1. DEIFY
   A. Flatter
   B. Challenge
   C. Worship
   D. Face
   E. Deny

2. INFAMY
   A. Dishonor
   B. Glory
   C. Integrity
   D. Reputation
   E. Balance

3. ENTRENCHED
   A. Established
   B. Disinterred
   C. Conflicting
   D. Loud
   E. Relevant

4. AUGUST
   A. Common
   B. Ridiculous
   C. Dignified
   D. Petty
   E. Wrong

5. COMBAT
   A. Conflict
   B. Quarrel
   C. Feud
   D. Unfold
   E. Fight
In the following questions choose the word which is the exact OPPOSITE of the given words.

6. **ALLAY**
   A. Guide
   B. Mislead
   C. Intensify
   D. Reject
   E. Reinstate

7. **ESCHEW**
   A. Embrace
   B. Gulp
   C. Reject
   D. Transgress
   E. Follow

8. **INCLEMENT**
   A. Reverent
   B. Generous
   C. Unmerciful
   D. Mortal
   E. Favorable

9. **IMPASS**
   A. Resurgence
   B. Breakthrough
   C. Continuation
   D. Combination
   E. Thrifty

10. **CAJOLE**
    A. Persuade
    B. Motivate
    C. De motivate
    D. Resurrection
    E. Re-emergence
Pick out the most effective word(s) from the given words to fill in the blank to make the sentence meaningfully complete.

11. The ruling party will have to put its own house ...... order.
   A. In
   B. On
   C. To
   D. Into
   E. With

12. He became enamored ..... her grace when he first saw her dance.
   A. With
   B. Of
   C. By
   D. In
   E. At

13. Brothers must live in harmony. They must never fall.....
   A. Off
   B. Apart
   C. Away
   D. In
   E. Out

14. We had .... Wonderful time at the party last night.
   A. Such a
   B. So
   C. Such
   D. Very
   E. Too
Questions 15-17 are sentence completions. Choose the answer which contains the words that best fit the blanks and complete the meaning of the given sentence.

15. It is true that ageing is an ____ process, yet there no need to ____ despair: there is much that we can do to delay the worst effects of old age.
   A. Upsetting – refuse to
   B. Inexorable - wallow in
   C. Interminable - agree to
   D. Inevitable - gloss over
   E. Uplifting - succumb to

16. There was no need to read the ___ : we knew only one journalist who dared to use such ___ expressions in a publication known for its formal language.
   A. Work - conservative
   B. Title - cryptic
   C. Publication - grotesque
   D. Byline - colloquial
   E. Article – strong

17. The new lecture hall’s _____ design reflected the architect’s minimalist influences.
   A. Unadorned
   B. Posh
   C. Intricate
   D. Refulgent
   E. Grandiose

In each sentence below, four words which are lettered (A), (B), (C) and (D) have been printed in bold type, one which may be either inappropriate in the context of the sentence or wrongly spelt. The letter of that word is answer. If all the four words are appropriate and also correctly spelt, mark 'E', i.e., 'All Correct' as the answer.

18. Solve as per the direction given above.
   A. They were quiet
   B. Amazed at the
   C. Turn of
   D. Events
   E. All correct

19. Solve as per the direction given above
   A. The philosophers
   B. Believe that by making men see
   C. Reason through argument, society would be changed and human behavior
   D. Improved
   E. All correct
20. Solve as per the direction given above:
   A. The non-availability
   B. Of unprocessed natural
   C. Resources in a country should not be the
   D. Basic for rejecting that possibility of export industry
   E. All correct

Read the given paragraph and answer the questions (Q 21 to 25);

Speech is a great blessing but it can also be a great curse, for while it helps us to make our intentions and desires known to our fellows, it can also if we use it carelessly, make our attitude completely misunderstood. A slip of the tongue, the use of unusual word, or of an ambiguous word, and so on, may create an enemy where we had hoped to win a friend. Again, different classes of people use different vocabularies, and the ordinary speech of an educated may strike an uneducated listener as pompous. Unwittingly, we may use a word which bears a different meaning to our listener from what it does to men of our own class. Thus speech is not a gift to use lightly without thought, but one which demands careful handling. Only a fool will express himself alike to all kinds and conditions to men.

21. A 'slip of the tongue' means something said
   A. Wrongly by choice
   B. Unintentionally
   C. Without giving proper thought
   D. To hurt another person
   E. Harshly

22. While talking to an uneducated person, we should use
   A. Ordinary speech
   B. His vocabulary
   C. Simple words
   D. Polite language
   E. Our common way of talking

23. Speech can be curse, because it can
   A. Hurt others
   B. Lead to carelessness
   C. Bring problems for us
   D. Create misunderstanding
   E. Reveal our intentions
24. If one used the same style of language with everyone, one would sound
   A. Flat
   B. Boring
   C. Foolish
   D. Democratic
   E. Sincere

25. The best way to win a friend is to avoid
   A. Irony in speech
   B. Pomposity in speech
   C. Verbosity in speech
   D. Ambiguity in speech
   E. Slang language

In questions given below out of four alternatives, choose the one which can be substituted for the given word/sentence.

26. That which cannot be corrected
   A. Unintelligible
   B. Indelible
   C. Illegible
   D. Incorrigible
   E. Incorrect
ANALYTICAL (Questions 27-53)

Direction (Qs 27-31)
Answer questions 27 to 31 on the basis of the information below.

Five roommates—Rehman, Salman, Tahir, Usman, and Vaqas—each doing one housekeeping task—mopping, sweeping, laundry, vacuuming, or dusting—one day a week, Monday through Friday.

i. Vaqas does not vacuum and does not do his task on Tuesday.
ii. Salman does the dusting, and does not do it on Monday or Friday.
iii. The mopping is done on Thursday.
iv. Tahir does his task, which is not vacuuming, on Wednesday.
v. The laundry is done on Friday, and not by Usman.
vi. Rehman does his task on Monday.

27. When does Salman do the dusting?
   A. Friday
   B. Monday
   C. Tuesday
   D. Wednesday
   E. Thursday

28. What task does Tahir do on Wednesday?
   A. Vacuuming
   B. Dusting
   C. Mopping
   D. Sweeping
   E. Laundry

29. What day is the vacuuming done?
   A. Friday
   B. Monday
   C. Tuesday
   D. Wednesday
   E. Thursday

30. What task does Vaqas do?
   A. Vacuuming
   B. Dusting
   C. Mopping
   D. Sweeping
   E. Laundry

31. What day does Usman do his task?
   A. Monday
   B. Tuesday
   C. Wednesday
   D. Thursday
   E. Friday
Direction (Qs 32-35)
Answer questions 32 to 35 on the basis of the information below.

Ahmed is in-charge of managing the seating plan for the speakers at a table. In addition to the moderator, there will be a pilot, a writer, an attorney, and an explorer. The speakers' names are Ghani, Hamza, Jameel, Kashif, and Latif.

A. The moderator must sit in the middle, on seat #3.
B. The attorney cannot sit next to the explorer.
C. Latif is the pilot.
D. The writer and the attorney sit on either side of the moderator.
E. Hamza, who is not the moderator, sits between Kashif and Jameel.
F. The moderator does not sit next to Jameel or Latif.
G. Ghani, who is the attorney, sits on seat #4.

32. Who is the moderator?
   A. Latif
   B. Ghani
   C. Hamza
   D. Kashif
   E. Jameel

33. Where does Jameel sit?
   A. Seat #1
   B. Seat #2
   C. Seat #3
   D. Seat #4
   E. Seat #5

34. What occupation does Jameel hold?
   A. A moderator
   B. A pilot
   C. A writer
   D. An attorney
   E. An explorer

35. Who is the writer?
   A. Ghani
   B. Hamza
   C. Jameel
   D. Kashif
   E. Latif
Direction (Qs 36-40)
Choose the correct option [A to E] that will continue the same pattern and fill the blank in the given series.

36. Look at this series: 14, 28, 20, 40, 32, 64, ___. What number should come next?
   A. 44
   B. 52
   C. 56
   D. 96
   E. 128

37. Look at this series: 1,000, 200, 40, ___. What number should come next?
   A. 2
   B. 8
   C. 10
   D. 15
   E. 20

38. Look at this series: 2, 6, 18, 54, ___. What number should come next?
   A. 92
   B. 108
   C. 148
   D. 162
   E. 216

39. QPO NML KJI _____ EDC
   A. HGF
   B. CAB
   C. JKL
   D. GHI
   E. JIF

40. ELFA GLHA ILJA _____ MLNA
   A. OLPA
   B. KLMA
   C. LLMA
   D. KLLA
   E. ALBA
**Direction (Qs 41-45)**
In each of the following questions find out the alternatives which will replace the question mark

41. CUP: LIP:: BIRD : ?
   A. Bush
   B. Grass
   C. Forest
   D. Beak
   E. Nest

42. Flow: River:: Stagnant : ?
   A. Rain
   B. Stream
   C. Pool
   D. Canal

43. Paw: Cat:: Hoof : ?
   A. Lamb
   B. Elephant
   C. Lion
   D. Horse
   E. Snail

44. Ornithologist: Bird:: Archeologist : ?
   A. Islands
   B. Mediators
   C. Archeology
   D. Aquatic
   E. Animals

45. Eye: Myopia :: Teeth : ?
   A. Pyorrhrea
   B. Cataract
   C. Trachoma
   D. Eczema
   E. Ischemia
Directions (Qs 46-48)

Each of the following questions contains a capitalized pair of words followed by five pairs of words letter A to E. The capitalized words bear some meaningful relationship to each other. Choose the pair, whose relationship is most similar to that expressed by the capitalized pair.

46. PETAL: FLOWER
   A. Salt : Pepper
   B. Tire : Bicycle
   C. Base : Ball
   D. Sandals : Shoes
   E. Puppy : Dog

47. BRISTLE: BRUSH
   A. Arm : Leg
   B. Stage : Curtain
   C. Recline : Chair
   D. Key : Piano
   E. Art : Sculpture

48. FISH: SCHOOL
   A. Wolf : Pack
   B. Elephant : Jungle
   C. Beagle : Clan
   D. Herd : Peacock
   E. Cow : Farm
Direction (Qs49-53)
In each of the following questions, five words have been given out of which four are alike in some manner, while the fifth one is different. Choose the word which is different from the rest.

49. Choose the word which is different from the rest.
   A. Chicken
   B. Snake
   C. Swan
   D. Crocodile
   E. Frog

50. Choose the word which is different from the rest.
   A. Cap
   B. Turban
   C. Helmet
   D. Veil
   E. Hat

51. Choose the word which is different from the rest.
   A. Kiwi
   B. Eagle
   C. Emu
   D. Ostrich
   E. Hen

52. Choose the word which is different from the rest.
   A. Curd
   B. Butter
   C. Oil
   D. Cheese
   E. Cream

53. Choose the word which is different from the rest.
   A. Tea
   B. Cinchona
   C. Rubber
   D. Cardamom
   E. Chalk
MATHEMATICS (Questions 54-80)

54. If a sweater sells for $48 after a 25 percent markdown, what was its original price?
   A. $56
   B. $60
   C. $64
   D. $68
   E. $72

55. If \( x + y = 8 \) and \( y - x = -2 \), then \( y = \)
   A. -2
   B. 3
   C. 5
   D. 8
   E. 10

56. If there are 14 women and 10 men employed in a certain office, what is the probability that one employee picked at random will be a woman?
   A. 1/6
   B. 1/14
   C. 7/12
   D. 1
   E. 7/5

57. If an object travels at five feet per second, how many feet does it travel in one hour?
   A. 30
   B. 300
   C. 720
   D. 1800
   E. 18000

58. In a class of 78 students 41 are taking French, 22 are taking German. Of the students taking French or German, 9 are taking both courses. How many students are not enrolled in either course?
   A. 6
   B. 15
   C. 24
   D. 33
   E. 54

59. \( (\sqrt{2} - \sqrt{3})^2 = \)
   A. 5 - 2\sqrt{6}
   B. 5 - \sqrt{6}
   C. 1 - 2\sqrt{6}
   D. 1 - \sqrt{2}
   E. 1
60. Helpers are needed to prepare for the fete. Each helper can make either 2 large cakes or 35 small cakes per hour. The kitchen is available for 3 hours and 20 large cakes and 700 small cakes are needed. How many helpers are required?
   A. 10
   B. 15
   C. 20
   D. 25
   E. 30

61. n and p are integers greater than 1
   5n is the square of a number
   75np is the cube of a number.
The smallest value for n + p is
   A. 14
   B. 18
   C. 20
   D. 30
   E. 50

62. Sana's collection contains US, Canadian and British stamps. If the ratio of US to Canadian stamps is 5 to 2 and the ratio of Canadian to British stamps is 5 to 1, what is the ratio of US to British stamps?
   A. 5 : 1
   B. 10 : 5
   C. 15 : 2
   D. 20 : 2
   E. 25 : 2

63. If the product of 6 integers is negative, at most how many of the integers can be negative?
   A. 2
   B. 3
   C. 4
   D. 5
   E. 6
64. In the figure below the square has two sides which are tangent to the circle. If the area of the circle is $4a^2\pi$, what is the area of the square?

A. $2a^2$
B. $4a$
C. $4a^2$
D. $16a^2$
E. $64a^2$

65. If $a^2 = 12$, then $a^4 =$
A. 144
B. 72
C. 36
D. 24
E. 16

66. A certain animal in the zoo has consumed 39 pounds of food in six days. If it continues to eat at the same rate, in how many more days will its total consumption be 91 pounds?
A. 14
B. 11
C. 10
D. 9
E. 8

67. A perfect cube is an integer whose cube root is an integer. For example, 27, 64 and 125 are perfect cubes. If $p$ and $q$ are perfect cubes, which of the following will not necessarily be a perfect cube?
A. $8p$
B. $pq$
C. $pq + 27$
D. $-p$
E. $(p - q)^6$

68. How many real roots does the polynomial $2x^5 + 8x - 7$ have?
A. None
B. One
C. Two
D. Three
E. Five
69. For how many positive integers k does the ordinary decimal representation of the integer end in exactly 99 zeros?
   A. None
   B. One
   C. Four
   D. Five
   E. Twenty-four

70. \((3 \times 10^4) + (2 \times 10^3) + (4 \times 10) =\)
   A. 302400
   B. 32400
   C. 30240
   D. 3240
   E. 324

71. Which of the following describes the relationship between A and B as shown in the pair of numbers in the table below?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>26</td>
</tr>
</tbody>
</table>

   A. \(B = A + 4\)
   B. \(B = 2A + 1\)
   C. \(B = 3A - 1\)
   D. \(B = A^2 + 1\)
   E. \(B = A^2 - 1\)

72. If \(x^2 - y^2 = 55\), and \(x - y = 11\), then \(y =\)
   A. 8
   B. 5
   C. 3
   D. -8
   E. -3

73. In a sports club with 30 members, 17 play badminton and 19 play tennis and 2 do not play either. How many members play both badminton and tennis?
   A. 7
   B. 8
   C. 9
   D. 10
   E. 11
74. What is the greatest of 3 consecutive integers whose sum is 24?
   A. 6
   B. 7
   C. 8
   D. 9
   E. 10

75. 6 portions of a 20 percent solution of apple cider vinegar in water are mixed with
4 portions of a 10 percent apple cider vinegar in water solution. The percentage apple
   cider vinegar in the new solution is
   A. 16
   B. 15
   C. 14
   D. 13
   E. 12

76. √5 percent of 5√5 =
   A. 0.05
   B. 0.25
   C. 0.5
   D. 2.5
   E. 25

77. Six years ago Sara was P times as old as Sana was. If Sara is now 17 years old, how old
   is Sana now in terms of P?
   A. 11/P + 6
   B. P/11 + 6
   C. 17 - P/6
   D. 17/P
   E. 11.5P

78. A time lapse camera takes pictures once every 40 seconds. How many pictures does it
   take in a 24 hour period? (Assume that it takes its first picture 40 seconds after the start of
   the time period.)
   A. 2160
   B. 2600
   C. 3020
   D. 2132
   E. 2260
79. The sum of three numbers is 6. Each number is increased by 20 and the new numbers are multiplied by 10. What is the sum of the resulting numbers?
   A. 660
   B. 870
   C. 770
   D. 560
   E. 450

80. What is the largest odd-numbered factor of 4500?
   A. 1125
   B. 2225
   C. 1120
   D. 2250
   E. 2150

END OF THE TEST