

MCR 20

No. 104749

Time : 2 hours

Maximum : 100 marks

Name of the
Candidate :Examination
Centre :Regn. Number :

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Signature of
the Candidate :

INSTRUCTIONS TO CANDIDATES

1. Do not open the Question Book until the Hall Superintendent gives the signal for the commencement of the examination.
2. Write your Name, your Registration Number and the Name of your Examination Centre (as found in the HALL TICKET) and sign in the space provided above. Other than these and what is mentioned in item 6 below, do not write or mark anything anywhere on the Question Book.
3. After the commencement of the examination, open the Question Book and take out the ANSWER SHEET. If the Question Book or the Answer Sheet is not in good condition then ask for immediate replacement. No replacement will be made 5 minutes after the commencement of the examination.
4. Write and shade your Registration Number and Question Book Number and write the Name of the Examination Centre and put your signature in the Answer Sheet in the spaces provided.
5. The Question Book contains 100 questions. Answer all the questions. They carry equal marks.
6. The last few pages of the Question Book are blank except for the words 'FOR ROUGH WORK'. You can make any relevant rough calculations on these pages.
7. Each correct answer carries 1 mark. For every wrong answer $\frac{1}{3}$ mark will be deducted.
8. Shade with black ball point pen one of the four options against each question number in the Answer Sheet which according to you corresponds to the correct answer.
9. Answers with multiple shading will be considered as wrong answer.
10. Use the Answer Sheet carefully. No spare Answer Sheet will be given.
11. At the end of the examination when the Hall Superintendent announces 'Stop Writing', you must stop writing immediately and place the Answer Sheet inside the Question Book and be ready to handover the materials.
12. When you have completed answering, stand up and remain in your place. The Hall Superintendent will come to you and collect your Question Book and Answer Sheet. Under no circumstances should any of these be taken out of the Examination Hall. No candidate shall leave the Hall until the Question Book and Answer Sheet are collected.
13. No candidate can leave the Hall during the first 30 minutes and the last 15 minutes of the examination.
14. No candidate can re-enter the Hall after leaving.
15. Calculator, tables or any other calculating devices, pager and cell phone are strictly prohibited for this examination.

SEAL

MCR 20

1. What is the function of EPROM?
 - a. Erasing and reconstructing the contents of ROM
 - b. Permanently erasing the contents of ROM
 - c. Duplicating the contents of ROM
 - d. All of the above
2. The field that investigates the mechanics of human intelligence is
 - a. History
 - b. Psychology
 - c. Cognitive science
 - d. Sociology
3. Barney is of opinion that it will live up to 150 years and wants to record the voice and other data through the years. Assuming that the data should not be erased, what is the capacity of the hard-drive that Barney has to procure?
 - a. Mega Bytes
 - b. Peta Bytes
 - c. Tera Bytes
 - d. Giga Bytes
4. Find the odd one out
 - a. RJ45 connector
 - b. Bluetooth dongle
 - c. Flash drive
 - d. Wifi dongle
5. SMPS stands for
 - a. Switched Mode Power Supply
 - b. Switch Managing Power System
 - c. Super Mode Power System
 - d. Simple Multiplexing Power System
6. Computer performance is highly dependent on
 - a. Main Memory
 - b. Compiler
 - c. Processor speed
 - d. All of the above
7. JPEG expands to which of the following?
 - a. Joint Photographic Encoding Group
 - b. Joint Pixels Extraction and Grouping
 - c. Joint Photographic Experts Group
 - d. Joint Pixels Embedding Group
8. What is 2's complement representation of -7?
 - a. 0111
 - b. 1001
 - c. 1011
 - d. 1111

9. Which one of the following protocols assigns IP address computers in network?
- DHCP
 - ICMP
 - IPv6
 - ARP
10. If some device requires urgent service, normal execution of programs may sometimes be preempted using
- Interrupt signals
 - Request to memory modules
 - DMA
 - All of these
11. Micro programming is designing of
- ALU
 - CPU
 - ROM
 - Control unit
12. What is the decimal equivalent of the unsigned binary number 10101010?
- 184
 - 170
 - 162
 - 191

13. Select the odd man out
- 127.0.0.1
 - 215.256.215.192
 - 1.1.1.1
 - 172.3.4.5
14. Parity bit is added for which of the following?
- Encoding
 - Indexing
 - Error detection
 - Control key
15. Select the odd man out
- Machine Code
 - Compiler
 - Direct Memory Access
 - Instruction Set Architecture
16. Which is the following is not an octal number?
- 49
 - 64
 - 14
 - 134
17. What is the purpose of a Firewall?
- To provide secure off-site data storage for a computer or network.
 - To provide a computer or network with wireless access to the Internet.
 - To protect a computer or network against unauthorized intrusion.
 - To delete temporary Internet files and cookies from a computer or network.

18. Which of the following is characteristics of an operating system?
- Resource management
 - Error recovery
 - Memory management
 - All the above
19. First digit of the decimal constant must be
- A zero
 - A non-zero number
 - A negative number
 - An integer
20. The Computer's capability of distinguishing spoken words is called as
- Voice Analysis
 - Speech Acknowledgement
 - Voice Recognition
 - Speech Interpretation
21. Which of the below is not a Permanent Storage Medium?
- Hard Disk
 - CD-ROM
 - Magnetic Tape
 - RAM

22. Which one of the following is a utility software?
- Word Processor
 - Anti Virus
 - Compiler
 - Desktop publishing tools
23. An operator which compares two values is called as
- Assignment operator
 - Unary operator
 - Relational operator
 - Equal-to operator
24. Information in a memory that is no longer valid is known as
- Non-volatile
 - Volatile
 - Surplus
 - Garbage
25. The time that a device takes to locate data and instructions and make them available to CPU is known as
- Clock Speed
 - CPU Speed
 - Access Time
 - Process in cycle

26. How many sacks are required for filling 1026 kg of rice if each sack is filled with 114 kg of rice?
- 19
 - 15
 - 7
 - 9
27. The average of five numbers is 371.8. The average of the first and second number is 256.5 and the average of the fourth and fifth is 508. Which of the following is the third number?
- 360
 - 310
 - 430
 - 330
28. If a number is multiplied by three-fourth of itself the value so that the result is 1728. What is the number?
- 58
 - 46
 - 44
 - 48
29. 30 cell phone covers and 20 chargers cost Rs. 8500. What will be the cost of 117 cell phone covers and 78 chargers?
- 32150
 - 33510
 - 33550
 - 33150
30. An accurate clock shows 9 o'clock in the morning. Through how many degrees will the hour hand rotate from 8 o'clock in the morning to 2 o'clock in the afternoon?
- 154°
 - 180°
 - 170°
 - 160°
31. Two boys start from the same place walking at the rate of 5 kmph and 5.5 kmph respectively in the same direction. What time will they take to be 8.5 km apart?
- 17 hrs
 - 14 hrs
 - 12 hrs
 - 19 hrs
32. A rectangular field has to be fenced on three sides leaving a side of 20 feet uncovered. If the area of the field is 680 sq. feet, how many feet of fencing will be required?
- 95
 - 92
 - 88
 - 82
33. The average of 20 numbers is zero. Of them, How many of them may be greater than zero, at the most?
- 1
 - 20
 - 0
 - 19
34. An observer 1.6 m tall is $20\sqrt{3}$ away from a tower. The angle of elevation from his eye to the top of the tower is 30° . The height of the tower is
- 21.6
 - 23.2
 - 24.72
 - None of the above
35. The average weight of a class of 24 students is 35 kg. If the weight of the teacher be included, the average rises by 400 g. The weight of the teacher is
- 45
 - 46
 - 47
 - 48
36. The average score of boys in an examination in a school is 81 and that of the girls is 83 and the average score of the school is 81.8. What will be the ratio between the number of girls to the number of boys in the examination?
- 3:2
 - 2:3
 - 4:3
 - 3:4
37. The market price of a chair was Rs. 1200. This price was 20% above the cost price. It was sold at a discount of 10% on the marked price. Find the profit percent.
- 6%
 - 4%
 - 8%
 - 5%
38. A certain motor car starts at the speed of 70 km/hr. It accelerates, increasing its speed every two hours by an amount of 10 km/h. What is the time it will take to cover a distance of 345 km?
- $5\frac{1}{4}$ hrs
 - $3\frac{1}{2}$ hrs
 - $4\frac{1}{2}$ hrs
 - $2\frac{1}{2}$ hrs
39. The speed of a bus is 54 km/h if we don't let it stop at any point. If the bus stops at the bus-stops, the speed of the bus is 45 km/h. What is the time that the bus stops for per hour?
- 7 min
 - 10 min
 - 21 min
 - 22 min
40. 4 women can complete a work in 8 days, whereas 4 children take 20 days to complete the same piece of work. How many days will 2 women and 15 children together take to complete the piece of work?
- 6
 - 10
 - 8
 - 4

41. A lady spent Rs.3620 in purchasing sarees and blouses. The cost of each saree is Rs.480 and that of each blouse is Rs.130. If she purchased the maximum number of sarees, what is the ratio between the number of sarees and number of blouses?
- 2:7
 - 4:7
 - 7:2
 - 7:4
42. A money lender lends Rs.2000 for 6 months at 20% per annum whereas the interest is compounded quarterly. After the given period, he will get the amount of
- Rs. 2205
 - Rs. 2200
 - Rs. 2160
 - Rs. 2040
43. Find the least square number which is divisible by 10,12,15 and 18
- 1600
 - 900
 - 3600
 - 2500
44. The salary of a typist was first raised by 20% and then the same was reduced by 10%. If he presently drawn Rs.1100, what was his original salary?
- Rs. 1016.60
 - Rs. 1018.52
 - Rs. 1010.78
 - Rs. 1050.76
45. If $\frac{1}{6}$ of a number is 66 less than twice the number, what will be 200% of that number?
- 72
 - 18
 - 24
 - 142
46. The sum of the squares of three consecutive natural numbers is 2030. What is the middle number?
- 25
 - 27
 - 28
 - 26
47. Two pipes A and B can fill a tank in 6 hours and 4 hours respectively. If they are opened on alternate hours and if Pipe A is opened first, in how many hours, the tank shall be full?
- 4
 - $4\frac{1}{2}$
 - 5
 - $5\frac{1}{2}$
48. A starts business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2:3. What is B's contribution in the capital?
- Rs. 7500
 - Rs. 8000
 - Rs. 8500
 - Rs. 9000
49. The cost of carpeting a room 18 m long with a carpet 75 cm wide at Rs. 4.50 per meter is Rs. 810. The breadth of the room is
- 7 m
 - 7.5 m
 - 8 m
 - 8.5 m
50. Which one of the option strings can be formed from the letters of the following?
- HYDROPNEMOPERICDARIUM
- Geophonics
 - Mastigophobia
 - Cardiograph
 - Pericarp
51. Which one of the given responses would be a meaningful order of the following words:
- (1) Reading (2) Writing (3) Composing (4) Printing
 - 2314
 - 1234
 - 2134
 - 3214
52. Consider the following statement and choose the correct answer: 'Educational level of parents has a significant influence in their children's personality development'.
- Educated parents will have educated children
 - Educated parents can help their children's overall development
 - Educated parents can have healthy children
 - Illiterate parents cannot help their children
53. Consider the following statement and choose the correct answer: 'Population is a main problem in the developing countries'
- Population is the main cause for underdevelopment
 - Population arrests the progress of the developing countries
 - Population is a universal problem
 - Population is a state problem in democratic countries.

54. A fallacious argument is

- a. Misleading
- b. Valid
- c. False
- d. Necessary

55. Fuel : Fire

- a. cold : heat
- b. fire : forest
- c. food : man
- d. wood : tree

56. Cobra is to snake as crocodile is to

- a. Marsh
- b. River
- c. Carnivore
- d. Reptile

57. In some language, "EXAM" is coded as "FYBN". In the same language, how will we code "RESULT"?

- a. SFTVMU
- b. REPTUY
- c. ERICCART
- d. KYLEBROW

58. Pointing to a man, a woman said, "His mother is only daughter of my mother". How is the woman related to the man?

- a. Mother
- b. Daughter
- c. Sister
- d. Sister-in-law

59. 'A' is 12 m west of 'B'. 'C' is 5 m north of 'B'. 'C' is in which direction of 'A'?

- a. East
- b. West
- c. North-East
- d. South-West

60. Which number will complete the series 6, 11, 21, 36, 56, (-) ?

- a. 51
- b. 91
- c. 42
- d. 81

61. Find the missing term in the following series

- DMP, FLN, HKL, JJJ, (-)
- a. MII
 - b. LIH
 - c. III
 - d. MIF

62. Among five friends A is heavier than B.

C is lighter than D. B is lighter than D but heavier than E. Who is the heaviest?

- a. B
- b. C
- c. A
- d. Cannot be determined

63. Five children participate in a game. Each child has to play with every other child. What is the number of games which they will have to play?

- a. 4
- b. 5
- c. 8
- d. 10

64. If SHIP is written as PEFM, Then BOAT may written as

- a. DQCW
- b. ERDX
- c. YLXQ
- d. UMOX

Directions for questions 65 to 67:

Rajesh, Prakash, Mohan and Sathish are musicians. One is a drummer, one a pianist, one a singer and one a violinist, though not necessarily in the same order. Read the clues given below and answer the questions following them:

- i. Rajesh and Mohan were in the audience when the singer performed.
- ii. Both Prakash and the violinist has attended the concerts of their friend, the pianist.
- iii. The violinist often performs with Sathish and Rajesh.
- iv. Rajesh and Mohan have never attended the pianist's concert together.

65. Who among the following was a singer?

- a. Rajesh
- b. Prakash
- c. Sathish
- d. Mohan

66. Who is fond of playing the piano?

- a. Rajesh
- b. Prakash
- c. Sathish
- d. Mohan

67. Who of the following did not attend the Nathush's concert together?

- a. Drummer and pianist
- b. Pianist and singer
- c. Singer and violinist
- d. Drummer and violinist

68. If WHITE is coded as 5209823, Then BLACK will be coded as

- a. 1131122
- b. 1131212
- c. 2121311
- d. 2211311

69. DRIVEN : EIDRVN : BEGUMO?

- a. EUBGMO
- b. MGBEUO
- c. BGMEOU
- d. UEBGMO

Directions for Questions 70 to 72:

Four people: Arti, Banti, Chetan and Dolly have together got Rs 100 with them. Arti and Banti together have got as much money as Chetan and Dolly put together. Arti has got more money than Banti. Chetan has half as much money as Dolly has. Arti has Rs 5 more than Dolly.

70. Who has the most money?

- a. Arti
- b. Dolly
- c. Chetan
- d. Cannot be determined

71. Who has got the second biggest sum?

- a. Arti
- b. Chetan
- c. Dolly
- d. Banti

72. What is the ratio of the amount with Chetan and Dolly?

- a. 2:1
- b. 1:2
- c. 1:3
- d. 1:4

73. Who has got the least amount of money?

- a. Banti
- b. Arti
- c. Chetan
- d. Dolly

Directions for questions 74 to 76:

Consider the following statement

In a certain code, "218" means "I have test" "184" means "Tests are over" and "8256" means "I finished the test"

74. How is "test" written in the above code?

- a. 2
- b. 8
- c. 3
- d. 5

75. How is "I" written in the above code?

- a. 2
- b. 8
- c. 3
- d. 5

76. How is "have" written in the above code?

- a. 2
- b. 8
- c. 3
- d. 5

77. Ram does not wear white dress and Arun does not wear blue dress. Ram and Shyam wear different coloured dresses. Only Sundar wears red dress. If everyone wears different coloured dresses, then what is the colour of Shyam's dress?

- a. White
- b. Blue
- c. Red
- d. Data is inadequate

78. Arrange the following words according to the dictionary.

- (1) INSIGHT
- (2) INSINCERE
- (3) ITALICS
- (4) INVEST

- a. 1234
- b. 3124
- c. 4312
- d. 1243

79. A person X is twice as efficient as another person Y. The person X can complete a job 30 days before Y. If they work together, how long will it take them to finish the job?
- a. 15 days
 - b. 12 days
 - c. 22 days
 - d. 20 days
80. In a certain code, "Delhi is capital" is coded as "7 5 9". The sentence "capital are beautiful" is coded as "3 6 9", and "Delhi is beautiful" is coded as "6 7 5". Also "Patna also capital" is coded as "9 2 4". What is the code for "beautiful" in this code?
- a. 2
 - b. 4
 - c. 5
 - d. 6
81. Insert the missing number in the following sequence:
- 7, 26, 63, 124, 215, 342, (....)
- a. 391
 - b. 421
 - c. 481
 - d. 511
82. What is the next number in 5, 6, 14, 45, 184?
- a. 927
 - b. 932
 - c. 925
 - d. 918

83. What is the next number in 8, 4, 4, 6, 12?
- a. 50
 - b. 20
 - c. 90
 - d. 30
84. Which letter will be the fifth to the right of the eleventh letter from the right end of the following alphabet?
- ABCDEFGHIJKLMNOPQRSTUVWXYZ
- a. K
 - b. V
 - c. J
 - d. U
- Directions for questions 85 to 87:
- Consider the following Seating Arrangements:
- Six persons A, B, K, D, E and P are standing in a row. B is between D and P. A does not stand next to either P or D. K does not stand next to D. E stands between A and K.
85. P stands between
- a. B and K
 - b. E and A
 - c. D and B
 - d. A and K
86. Who occupies the extreme end of the row?
- a. D and E
 - b. D and A
 - c. A and P
 - d. B and E

87. K stands between
- a. P and B
 - b. P and D
 - c. P and E
 - d. E and A
88. If the day after tomorrow is Saturday, what day was three days before yesterday?
- a. Sunday
 - b. Monday
 - c. Thursday
 - d. Saturday
- Directions for questions 89 to 93:
- In each of the questions below are given two statements followed by two conclusions numbered I and II. You have to take the given statements to be true (even if they seem to be at variance from commonly known facts) and decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.
89. Statements: All pencils are hens
All dogs are hens
- Conclusions: (I) Some dogs are pencils
(II) Some hens are pencils
- a. Only conclusion I follows
 - b. Only conclusion II follows
 - c. Both I and II follows
 - d. Neither I nor II follows
90. Statements: All cats are dogs
All dogs are men
- Conclusions: (I) All cats are men.
(II) All men are cats.
- a. Only conclusion I follows
 - b. Only conclusion II follows
 - c. Both I and II follows
 - d. Neither I nor II follows
91. Statements: All rich are married.
Some rich are tall.
- Conclusions: (I) Some married are tall.
(II) Some tall are married.
- a. Only conclusion I follows
 - b. Only conclusion II follows
 - c. Both I and II follows
 - d. Neither I nor II follows
92. Statements: Some papers are water.
No water is clock.
- Conclusions: (I) Some papers are clocks.
(II) No paper is clock.
- a. Only conclusion I follows
 - b. Only conclusion II follows
 - c. Both I and II follows
 - d. Neither I nor II follows

93. Statements: Some buses are living beings.
Some non-living beings are cats.

Conclusions: (I) Some buses are cats.

(II) Some buses are not cats.

- a. Only conclusion I follows
- b. Only conclusion II follows
- c. Both I and II follows
- d. Neither I nor II follows

94. A statement which is always true is called

- a. Argument
- b. Hypothesis
- c. Tautology
- d. None of these

95. Which of the following is not a desert?

- a. ATHR
- b. BGOI
- c. ALKHARIA
- d. PASIACN

96. In a row of children, Shirish is 7th from the left and Govind is 4th from the right. When Shirish and Govind exchange positions, Shirish will be 15th from the left. Which will be Govind's position from the right?

- a. 11
- b. 12
- c. 9
- d. 5

97. $4 \times 6 \times 2 = 351$

$3 \times 9 \times 8 = 287$

$9 \times 5 \times 6 = ?$

- a. 845
- b. 245
- c. 596
- d. 659

98. A father gives money to his five sons as given below. How much does he give to Son V?

Son I	Son II	Son III	Son IV	Son V
Rs. 145	Rs. 100	Rs. 64	Rs. 37	?

- a. 29
- b. 18
- c. 22
- d. 25

99. North East Monsoon blows during

- a. October – December
- b. November – January
- c. May – September
- d. None of the above

100. Choose the one that is different from the rest

- a. Green
- b. Orange
- c. Violet
- d. Red