

**GOVERNMENT OF MIZORAM
PUBLIC HEALTH ENGINEERING
DEPARTMENT**

**COMPETITIVE EXAMINATION FOR RECRUITMENT TO
THE POST OF ANALYST (LAB)
(JUNE-2026)**

**PAPER-II
(SIMPLE ARITHMETIC & BASIC COMPUTER
KNOWLEDGE)**

Full Marks : 200
Time Allowed : 3 Hours

Signature of Invigilator _____

CODE :

(For official use)

SUBJECT	MARK CARRIED BY EACH QUESTION / TOPIC	NO. OF CORRECT ANSWERS	MARKS OBTAINED
Simple Arithmetic	2		
Basic Computer Knowledge	2		
TOTAL			

Signature of Examiner : _____

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All questions carry 2 marks each.

Put a tick (✓) mark against the correct answer in the space given in each question.

If a candidate gives more than one answer to one question, it will be treated as wrong answer even if one of the given answers happens to be correct.

SIMPLE ARITHMETIC - 100 MARKS

1. Marked price = ₹ 15,000, discount 20%, then 12% tax. Find net amount.
(a) ₹ 13,440 ()
(b) ₹ 14,400 ()
(c) ₹ 16,120 ()
(d) ₹ 12,800 ()
2. If the price of an article is reduced from Rs. 500 to Rs. 450, what is the percentage decrease?
(a) 5% ()
(b) 8% ()
(c) 10% ()
(d) 12% ()
3. The mean of 6 numbers is 15. One number is replaced by 21, and the new mean becomes 16. Find the replaced number.
(a) 9 ()
(b) 12 ()
(c) 15 ()
(d) 18 ()
4. The 12th term of the AP: -0.2, -0.4, -0.6, ... is:
(a) -2.4 ()
(b) -2.2 ()
(c) -2.6 ()
(d) -2.0 ()
5. A man sells an article at 10% loss. If he had sold it for Rs. 180 more, he would have gained 10%. Find the cost price.
(a) Rs. 800 ()
(b) Rs. 900 ()
(c) Rs. 1000 ()
(d) Rs. 1200 ()
6. Find the median of the data: 7, 3, 9, 5, 11
(a) 5 ()
(b) 7 ()
(c) 9 ()
(d) 11 ()

7. A number is increased by 20% and then decreased by 20%. Find the net percentage change.
- (a) 0% ()
- (b) 2% decrease ()
- (c) 4% increase ()
- (d) 4% decrease ()
8. A, B, and C invest ₹ 3,000, ₹ 5,000, and ₹ 7,000 respectively for the same period. If the total profit is ₹ 3,000, what is B's share?
- (a) ₹ 800 ()
- (b) ₹ 1,000 ()
- (c) ₹ 1,200 ()
- (d) ₹ 1,400 ()
9. A, B and C together earn Rs. 720. A does half the work done by B, and B does twice the work done by C. Find A's share.
- (a) Rs. 120 ()
- (b) Rs. 380 ()
- (c) Rs. 240 ()
- (d) Rs. 180 ()
10. What is the sum of first 25 odd numbers?
- (a) 620 ()
- (b) 575 ()
- (c) 650 ()
- (d) 625 ()
11. Find the smallest number to be added to 5729 so that it becomes divisible by 11.
- (a) 2 ()
- (b) 3 ()
- (c) 4 ()
- (d) 5 ()
12. The average marks of boys in a class is 70 and that of girls is 80. If there are 20 boys and 30 girls, find the overall average.
- (a) 77 ()
- (b) 76 ()
- (c) 75 ()
- (d) 78 ()
13. The average of 4 numbers is 25. Three of them are 20, 30, and 35. Find the fourth number.
- (a) 15 ()
- (b) 20 ()
- (c) 25 ()
- (d) 30 ()

14. Two trains of length 120 m and 180 m are moving in opposite directions at speeds of 54 km/h and 36 km/h. Find the time taken to cross each other.
- (a) 10 sec ()
- (b) **12 sec** ()
- (c) 15 sec ()
- (d) 20 sec ()
15. A man covers a certain distance partly on foot at 6 km/h and partly by bicycle at 12 km/h. If he takes 2 hours in total and travels equal distances, find the total distance.
- (a) 12 km ()
- (b) 18 km ()
- (c) **16 km** ()
- (d) 20 km ()
16. A boat goes 24 km downstream in 2 hours and returns upstream in 4 hours. Find speed of stream.
- (a) 2 km/h ()
- (b) **3 km/h** ()
- (c) 4 km/h ()
- (d) 5 km/h ()
17. A and B can complete a work in 8 days. B and C can complete it in 12 days. A and C can complete it in 24 days. In how many days can A, B, and C together complete the work?
- (a) 4 days ()
- (b) 6 days ()
- (c) **8 days** ()
- (d) 12 days ()
18. A pipe can fill a tank in 10 hours and a leak can empty it in 15 hours. In how many hours will the tank be filled?
- (a) 20 ()
- (b) 25 ()
- (c) 35 ()
- (d) **30** ()
19. The perimeter of a semicircle is 36 cm (including diameter). Find its radius.
- (a) 5 ()
- (b) 6 ()
- (c) **7** ()
- (d) 8 ()
20. The radius of a circle is 13 cm and the distance of the chord from the centre is 5 cm. Find the length of the chord.
- (a) 20 ()
- (b) **24** ()
- (c) 26 ()
- (d) 30 ()

21. A rectangular floor is $20\text{ m} \times 1000\text{ cm}$. It is covered with square tiles of side 2000 mm . How many tiles are required?
- (a) 50 ()
(b) 60 ()
(c) 70 ()
(d) 80 ()
22. Which term of the AP 4, 9, 14, ... will be 60 more than its 10th term?
- (a) 20 ()
(b) 26 ()
(c) 24 ()
(d) 22 ()
23. If the n^{th} term of an AP is $3n+5$. Then, the common difference is:
- (a) 3 ()
(b) 5 ()
(c) 8 ()
(d) 2 ()
24. If α and β are the roots of the equation $x^2 - 7x + 10 = 0$, find the value of $\alpha^2 + \beta^2$.
- (a) 45 ()
(b) 33 ()
(c) 29 ()
(d) 49 ()
25. Simplify: $(\sqrt{5} + \sqrt{3})^2 - (\sqrt{5} - \sqrt{3})^2$
- (a) $4\sqrt{15}$ ()
(b) $2\sqrt{15}$ ()
(c) $8\sqrt{15}$ ()
(d) $6\sqrt{15}$ ()
26. If $x + \frac{1}{x} = 3$, find the value of $x^3 + \frac{1}{x^3}$.
- (a) 9 ()
(b) 18 ()
(c) 21 ()
(d) 27 ()
27. Three bells ring at intervals of 12 min, 15 min and 20 min. If they ring together now, after how many minutes will they ring together again?
- (a) 40 ()
(b) 120 ()
(c) 180 ()
(d) 60 ()

28. What is the LCM of 0.06, 0.15, and 0.10?

- (a) **0.30** ()
- (b) 0.60 ()
- (c) 0.15 ()
- (d) 0.45 ()

29. A sum of ₹ 2,000 becomes ₹ 2,420 in 2 years compounded annually. Find the rate of interest.

- (a) 8% ()
- (b) **10%** ()
- (c) 12% ()
- (d) 15% ()

30. In how many years will a sum double itself at 12.5% per annum simple interest?

- (a) 6 ()
- (b) 7 ()
- (c) **8** ()
- (d) 9 ()

31. If the ratio of milk to water in a mixture is 3 : 1, how much water must be added to 8 litres of the mixture to make the ratio 3 : 2?

- (a) 1 litre ()
- (b) **2 litres** ()
- (c) 3 litres ()
- (d) 4 litres ()

32. A vessel contains 64 litres of milk. 16 litres of the mixture is removed and replaced with water. This process is repeated once again. Find the quantity of milk left in the vessel.

- (a) **36 litres** ()
- (b) 38 litres ()
- (c) 32 litres ()
- (d) 48 litres ()

33. There are 60 cards numbered from 1 to 60. One card is drawn. Find the probability that the number is not divisible by 3.

- (a) $\frac{1}{3}$ ()
- (b) $\frac{2}{3}$ ()
- (c) $\frac{1}{2}$ ()
- (d) $\frac{3}{5}$ ()

34. A bag contains 9 red balls and some blue balls. If the probability of drawing a blue ball is four times that of a red ball, find the number of blue balls.
- (a) 18 ()
(b) 27 ()
(c) 32 ()
(d) 36 ()
35. If $\sin \theta + \cos \theta = \sqrt{2}$, find the value of $\sin \theta \times \cos \theta$.
- (a) 0 ()
(b) $1/4$ ()
(c) $1/2$ ()
(d) 1 ()
36. From the top of a building 50 m high, the angle of depression of a point on the ground is 30° . Find the horizontal distance of the point from the base of the building.
- (a) 25 m ()
(b) 50 m ()
(c) $100\sqrt{3}$ m ()
(d) $50\sqrt{3}$ m ()
37. The angle between a tangent and radius at the point of contact is:
- (a) 30° ()
(b) 45° ()
(c) 60° ()
(d) 90° ()
38. Each interior angle of a regular pentagon is:
- (a) 108° ()
(b) 120° ()
(c) 135° ()
(d) 144° ()
39. Find the coordinates of the point dividing the line joining A(2, 4) and B(10, 8) internally in the ratio 1 : 3.
- (a) (3, 5) ()
(b) (6, 6) ()
(c) (8, 7) ()
(d) (4, 5) ()
40. Find the value of k if the points (1, 2), (3, 6), and (k, 10) are collinear.
- (a) 5 ()
(b) 6 ()
(c) 7 ()
(d) 8 ()

41. The exterior angle of a triangle is 110° and one interior opposite angle is 40° . Find the other interior opposite angle.
- (a) 60° ()
(b) **70°** ()
(c) 80° ()
(d) 90° ()
42. A ladder of length 13 m is placed against a wall. The foot of the ladder is 5 m away from the wall. Find the height reached by the ladder.
- (a) 10 m ()
(b) 11 m ()
(c) **12 m** ()
(d) 13 m ()
43. In how many ways can 3 students be selected and arranged from 5 students?
- (a) 30 ()
(b) **60** ()
(c) 120 ()
(d) 20 ()
44. The sum of the present ages of a mother and her daughter is 50 years. Five years ago, the mother's age was 4 times the daughter's age. Find the present age of the daughter.
- (a) 10 ()
(b) 15 ()
(c) 20 ()
(d) **13** ()
45. Two parallel lines are cut by a transversal. If one angle is $(4x + 10)^\circ$ and its interior angle on the same side is $(6x - 30)^\circ$, find x .
- (a) 15 ()
(b) **20** ()
(c) 25 ()
(d) 30 ()
46. A box contains 5 red, 4 blue, and 3 green balls. One ball is drawn at random. Find the probability that it is neither red nor blue.
- (a) **$1/4$** ()
(b) $1/3$ ()
(c) $1/6$ ()
(d) $1/12$ ()
47. A cone and a cylinder have the same base radius and height. What is the ratio of their volumes (cone : cylinder)?
- (a) 1 : 2 ()
(b) **1 : 3** ()
(c) 2 : 3 ()
(d) 3 : 1 ()

48. The production (in units) of a factory in 4 months is:

Jan = 200, Feb = 250, Mar = 300, Apr = 250

By what percentage did production increase from January to March?

- (a) 25% ()
- (b) 40% ()
- (c) **50%** ()
- (d) 60% ()

49. If the areas of two similar triangles are in the ratio 9 : 16, find the ratio of their corresponding sides.

- (a) **3 : 4** ()
- (b) 9 : 16 ()
- (c) 16 : 9 ()
- (d) 4 : 3 ()

50. A man travels a certain distance at 40 km/h and returns at 60 km/h. Find his average speed for the whole journey.

- (a) **48 km/h** ()
- (b) 50 km/h ()
- (c) 52 km/h ()
- (d) 55 km/h ()

BASIC COMPUTER KNOWLEDGE - 100 MARKS

51. In Microsoft Word, an error in spelling is marked by:

- (a) Green wavy line ()
- (b) **Red wavy line** ()
- (c) Purple wavy line ()
- (d) Yellow wavy line ()

52. A computer network confined to a localised area such as an office or school is called a:

- (a) **LAN** ()
- (b) WAN ()
- (c) BAN ()
- (d) MAN ()

53. A slide Master in Microsoft Powerpoint is a:

- (a) Title slide ()
- (b) **First slide in the deck** ()
- (c) Title and Content slide ()
- (d) None of these ()

54. Which of the following is not an input device?

- (a) Keyboard ()
- (b) Mouse ()
- (c) Scanner ()
- (d) **Plotter** ()

55. Which technology is most suitable to connect a laptop to a modem wirelessly?
- (a) **Wi-Fi** ()
 - (b) Bluetooth ()
 - (c) Infrared ()
 - (d) 2G ()
56. The extension used for Microsoft Powerpoint file is:
- (a) **.pptx** ()
 - (b) .pp ()
 - (c) .powerpoint ()
 - (d) .point ()
57. The correct formula to find sum of cell A5 and B5 is:
- (a) **=(A5 + B5)** ()
 - (b) (A5 + B5) ()
 - (c) = (A + B) ()
 - (d) (A + B) ()
58. Anti virus is a type of:
- (a) System software ()
 - (b) Application software ()
 - (c) **Utility software** ()
 - (d) All of the above ()
59. The latest version of Internet protocol address system is:
- (a) IPv3 ()
 - (b) IPv4 ()
 - (c) IPv5 ()
 - (d) **IPv6** ()
60. Before saving, a word document resides in:
- (a) Secondary memory ()
 - (b) **Primary memory** ()
 - (c) Read only memory ()
 - (d) Cache memory ()
61. What is an APK in Android?
- (a) App Programming Kit ()
 - (b) **Application Package** ()
 - (c) Apple Package ()
 - (d) Android Package ()
62. Which of the following helps change the settings and customise the functionality of your computer?
- (a) Default programs ()
 - (b) Devices and printers ()
 - (c) **Control panel** ()
 - (d) Documents ()

63. A powerful computer on the Internet that stores web pages and delivers web pages to the users is called:
- (a) **Web server** ()
 - (b) Web browser ()
 - (c) Web page ()
 - (d) Website ()
64. Modem stands for:
- (a) Modern demodulator ()
 - (b) Modular demodulator ()
 - (c) Modulation demodulation ()
 - (d) **Modulator demodulator** ()
65. Which of these is an Internet domain name?
- (a) **.net** ()
 - (b) .dns ()
 - (c) .exe ()
 - (d) .txt ()
66. Unsolicited mail is called:
- (a) Spasm ()
 - (b) Scam ()
 - (c) **Spam** ()
 - (d) Stam ()
67. The keyboard shortcut key for closing a window is:
- (a) **Alt+F4** ()
 - (b) Alt+F2 ()
 - (c) Esc ()
 - (d) Ctrl+F4 ()
68. Hiding a window is called:
- (a) Maximising ()
 - (b) Dragging ()
 - (c) **Minimising** ()
 - (d) Restoring ()
69. A temporary holding area for copied data which can be pasted is called:
- (a) **Clipboard** ()
 - (b) RAM ()
 - (c) ROM ()
 - (d) Hard disk ()
70. To rectify a mistake, you can:
- (a) Use Delete key ()
 - (b) Use Backspace key ()
 - (c) Select the incorrect word and type again ()
 - (d) **Any of these** ()

71. A command that shows how a document would look when printed is:

- (a) **Print Preview** ()
- (b) Web layout ()
- (c) Draft ()
- (d) Print View ()

72. When text flow is equally balanced between left and right margins, it is called:

- (a) Aligned ()
- (b) **Justified** ()
- (c) Balanced ()
- (d) Automatic ()

73. Word count box displays:

- (a) Number of pages ()
- (b) Number of characters ()
- (c) Number of paragraphs ()
- (d) **All of these** ()

74. Menu bar is located underneath the:

- (a) Address bar ()
- (b) Toolbar ()
- (c) **Title bar** ()
- (d) Library pane ()

75. Where are the scrollbars located?

- (a) On the left side of a window ()
- (b) On the right side of a window ()
- (c) **On both right side and bottom of a window** ()
- (d) On both right side and left sides of a window ()

76. The key which helps in renaming a file is:

- (a) F1 key ()
- (b) **F2 key** ()
- (c) F3 key ()
- (d) F5 key ()

77. The default name of a new folder is:

- (a) **New folder** ()
- (b) Default folder ()
- (c) User folder ()
- (d) Folder 1 ()

78. Which of the following is not a size of icons in Windows?

- (a) Extra large ()
- (b) Large ()
- (c) Small ()
- (d) **Extra small** ()

79. When a window is maximised, the Maximize button becomes:
- (a) Minimize button ☐
 - (b) Close button ☐
 - (c) **Restore down button** ☐
 - (d) Start button ☐
80. The type of Operating System in which different users can concurrently log on to the machine is called:
- (a) **Multi – user OS** ☐
 - (b) Multi – tasking OS ☐
 - (c) Virtual memory OS ☐
 - (d) Embedded OS ☐
81. The first mobile OS developed is:
- (a) **Palm OS** ☐
 - (b) Android ☐
 - (c) Windows pocket PC ☐
 - (d) iOS ☐
82. Which operating system was developed by Linus Torvalds?
- (a) DOS ☐
 - (b) UNIX ☐
 - (c) **LINUX** ☐
 - (d) LINOS ☐
83. The first screen that you will see after you switch on your computer and Windows has been loaded is:
- (a) **Desktop** ☐
 - (b) Icons ☐
 - (c) Start button ☐
 - (d) My computer ☐
84. If the Windows key is not working on your keyboard, which alternative shortcut combination can you use to open the Start Menu?
- (a) **Ctrl + Esc** ☐
 - (b) Ctrl + Shift ☐
 - (c) Alt + Spacebar ☐
 - (d) Ctrl + Alt + Del ☐
85. The shortcut key combination to carry out Find and Replace Command in MS Word is:
- (a) **Ctrl + H** ☐
 - (b) Ctrl + F ☐
 - (c) Ctrl + Z ☐
 - (d) Ctrl + S ☐
86. Which of the following is not a mouse action on Windows desktop?
- (a) Clicking ☐
 - (b) Dragging ☐
 - (c) **Pushing** ☐
 - (d) Right – clicking ☐

87. All printers can be classified into which two categories?

- (a) **Impact and non-impact** ()
- (b) Barrel and chain ()
- (c) Digital and mechanical ()
- (d) Dot matrix and line ()

88. Coding scheme used in bar code reader is called:

- (a) BPC ()
- (b) PPC ()
- (c) **UPC** ()
- (d) APC ()

89. Mobile Legend app is:

- (a) **An application software** ()
- (b) A utility software ()
- (c) A system software ()
- (d) An operating system ()

90. A process of converting sensitive data into a form that cannot be read easily by unauthorised people is:

- (a) Decryption ()
- (b) Hacking ()
- (c) **Encryption** ()
- (d) Coding ()

91. An operating system is a type of:

- (a) **System software** ()
- (b) Utility software ()
- (c) General purpose application software ()
- (d) Specific purpose application software ()

92. RTOS stands for:

- (a) **Real Time Operating System** ()
- (b) Ready Time Operating System ()
- (c) Rapid Time Operating System ()
- (d) Rising Time Operating System ()

93. Mozilla Firefox is a:

- (a) Search engine ()
- (b) **Web browser** ()
- (c) Web server ()
- (d) Web page ()

94. The most used web browser in the world as of today is:

- (a) **Google Chrome** ()
- (b) Firefox ()
- (c) Safari ()
- (d) Opera ()

95. The web browser Internet Explorer was replaced with:
- (a) **Edge** ()
 - (b) Safari ()
 - (c) Firefox ()
 - (d) Google Chrome ()
96. The World Wide Web (WWW) was invented by:
- (a) Bill Gates ()
 - (b) **Tim Berners Lee** ()
 - (c) Ted Nelson ()
 - (d) Elon Musk ()
97. The global system of computer networks interconnected through telecommunication and optical networking is called:
- (a) **Internet** ()
 - (b) World wide web ()
 - (c) E-mail ()
 - (d) Server ()
98. The world's first search engine is called:
- (a) Google ()
 - (b) Bing ()
 - (c) **Archie** ()
 - (d) Yahoo! ()
99. GUI stands for:
- (a) **Graphical User Interface** ()
 - (b) Graphic User Interface ()
 - (c) Graphical Union Interface ()
 - (d) Graphic User Interim ()
100. Which of the following is not a hardware component?
- (a) Mouse ()
 - (b) **Device driver** ()
 - (c) Chip ()
 - (d) Integrated circuit ()

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