



OFFICE OF THE ENGINEER-IN-CHIEF
PUBLIC HEALTH ENGINEERING DEPARTMENT
AIZAWL : MIZORAM

WRITTEN EXAMINATION
(Advertisement No.3 of 2025)

FOR THE POST OF
LABORATORY TECHNICIAN
(Regular)

PAPER-II

Code No: _____
(For Official Use)

Signature of Invigilator

SUBJECT (Part)	MARKS OBTAINED
Part-A Simple Arithmetic (50x2=100 marks)	
Part-B Basic Computer Knowledge (50x2=100 marks)	
Total Marks obtained (Full Marks-200)	

Signature of Examiner



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Signature of Candidate

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Instructions:

1. The question paper will also serve as the answer sheet. Candidates are required to answer Parts A, B, directly on the question/answer sheet using Tick (✓) Marks.
2. Time : 3 Hours

PART-A : SIMPLE ARITHMETIC (50X2=100 Marks)

1. Which one of the following is not a prime number?
(a) 31 ☐ (b) 61 ☐
(c) 71 ☐ (d) 91 ☐
2. The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero?
(a) 0 ☐ (b) 1 ☐
(c) 10 ☐ (d) 19 ☐
3. The marked price of a pen and pencil are in the ratio of 5:6. The shopkeeper gives 20% discount on the pen. If the total discount on both the pen and the pencil is 15%, then the discount offered on the pencil is ?
(a) 6.38% ☐ (b) 17.33% ☐
(c) 10.83% ☐ (d) 21.30% ☐
4. What percentage of numbers from 1 to 70 have 1 or 9 in the unit's digit?
(a) 1 ☐ (b) 14 ☐
(c) 20 ☐ (d) 21 ☐
5. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:
(a) 15 ☐ (b) 16 ☐
(c) 18 ☐ (d) 25 ☐
6. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Rs. 1000 more than D, what is B's share?
(a) Rs. 500 ☐ (b) Rs. 1500 ☐
(c) Rs. 2000 ☐ (d) None of these ☐
7. A flagstaff 17.5 m high casts a shadow of length 40.25 m. The height of the building, which casts a shadow of length 28.75 m under similar conditions will be:
(a) 10m ☐ (b) 12.5m ☐
(c) 17.5m ☐ (d) 21.25m ☐
8. If 7 spiders make 7 webs in 7 days, then 1 spider will make 1 web in how many days?
(a) 1 ☐ (b) 7/2 ☐
(c) 7 ☐ (d) 8/2 ☐
9. 36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work?
(a) 12 ☐ (b) 18 ☐
(c) 22 ☐ (d) 24 ☐
10. If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:
(a) 4 days ☐ (b) 5 days ☐
(c) 6 days ☐ (d) 7 days ☐
11. A is 30% more efficient than B. How much time will they, working together, take to complete a job which A alone could have done in 23 days?
(a) 11 days ☐ (b) 13 days ☐
(c) 20 days ☐ (d) 15 days ☐
12. if $a - b = 3$ and $a^2 + b^2 = 29$, find the value of ab .
(a) 10 ☐ (b) 12 ☐
(c) 15 ☐ (d) 18 ☐

13. A works twice as fast as B. If B can complete a work in 12 days independently, the number of days in which A and B can together finish the work in :
 (a) 4 days ☐ (b) 6 days ☐
 (c) 8 days ☐ (d) 18 days ☐
14. A sum fetched a total simple interest of Rs. 4016.25 at the rate of 9 p.c.p.a. in 5 years. What is the sum?
 (a) Rs. 4462.50 ☐ (b) Rs. 8032.50 ☐
 (c) Rs. 8900 ☐ (d) Rs. 8925 ☐
15. The sum of three numbers is 98. If the ratio of the first to second is 2 :3 and that of the second to the third is 5 : 8, then the second number is:
 (a) 20 ☐ (b) 30 ☐
 (c) 48 ☐ (d) 58 ☐
16. There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs. 12,000 after 3 years at the same rate?
 (a) Rs. 2160 ☐ (b) Rs. 3120 ☐
 (c) Rs. 3972 ☐ (d) Rs. 6240 ☐
17. A person crosses a 600 m long street in 5 minutes. What is his speed in km per hour?
 (a) 3.6 ☐ (b) 7.2 ☐
 (c) 8.4 ☐ (d) 10 ☐
18. A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?
 (a) Rs 1090 ☐ (b) Rs 1160 ☐
 (c) Rs 1190 ☐ (d) Rs 1202 ☐
19. Which one of the following can't be the square of natural number ?
 (a) 30976 ☐ (b) 28561 ☐
 (c) 75625 ☐ (d) 143642 ☐
20. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour?
 (a) 9 ☐ (b) 10 ☐
 (c) 12 ☐ (d) 15 ☐
21. A Rs 750 tin of cheese is offered at 8% discount and a Rs 1,250 tin of butter at 20% discount. If we buy 5 tins of cheese and 3 tins of butter, what is the effective discount we get (in %)?
 (a) 12 ☐ (b) 16 ☐
 (c) 15 ☐ (d) 14 ☐
22. The least perfect square, which is divisible by each of 21, 36 and 66 is:
 (a) 213444 ☐ (b) 214344 ☐
 (c) 214434 ☐ (d) 231444 ☐
23. What will be the compound interest on a sum of Rs. 25,000 after 3 years at the rate of 12 p.c.p.a.?
 (a) Rs. 9000.30 ☐ (b) Rs. 9720 ☐
 (c) Rs. 10123.20 ☐ (d) Rs. 10483.20 ☐
24. The angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 4.6 m away from the wall. The length of the ladder is:
 (a) 2.3m ☐ (b) 4.6m ☐
 (c) 7.8m ☐ (d) 9.2m ☐
25. In how many different ways can the letters of the word 'MATHEMATICS' be arranged so that the vowels always come together?
 (a) 10080 ☐ (b) 4989600 ☐
 (c) 120960 ☐ (d) 1458756 ☐

26. The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is:
- | | | | |
|--------------|--------------------------|-------------------|--------------------------|
| (a) 35 years | ☐ | (b) 40 years | ☐ |
| (c) 50 years | ☐ | (d) None of these | ☐ |
27. Two number are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is:
- | | | | |
|--------|--------------------------|--------|--------------------------|
| (a) 27 | ☐ | (b) 33 | ☐ |
| (c) 49 | ☐ | (d) 55 | ☐ |
28. A began a business with Rs. 85,000. He was joined afterwards by B with Rs. 42,500. For how much period does B join, if the profits at the end of the year are divided in the ratio of 3 : 1?
- | | | | |
|--------------|--------------------------|--------------|--------------------------|
| (a) 4 months | ☐ | (b) 5 months | ☐ |
| (c) 6 months | ☐ | (d) 8 months | ☐ |
29. Divide Rs 171 between A and B in the ratio 2 : 7, A's share will be
- | | | | |
|-----------|--------------------------|-----------|--------------------------|
| (a) Rs 50 | ☐ | (b) Rs 40 | ☐ |
| (c) Rs 35 | ☐ | (d) Rs 38 | ☐ |
30. A group of students decided to collect as many paise from each member of group as is the number of members. If the total collection amounts to Rs. 59.29, the number of the member of the group is:
- | | | | |
|--------|--------------------------|--------|--------------------------|
| (a) 57 | ☐ | (b) 67 | ☐ |
| (c) 77 | ☐ | (d) 87 | ☐ |
31. The curved surface of the cylinder is 88 cm². The height of the cylinder is 5 m, what is the radius of the cylinder?
- | | | | |
|---------|--------------------------|---------|--------------------------|
| (a) 6cm | ☐ | (b) 4cm | ☐ |
| (c) 1cm | ☐ | (d) 2cm | ☐ |
32. A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned?
- | | | | |
|-------------|--------------------------|--------------------------|--------------------------|
| (a) Rs. 35 | ☐ | (b) 245 | ☐ |
| (c) Rs. 350 | ☐ | (d) Cannot be determined | ☐ |
33. A fires 5 shots to B's 3 but A kills only once in 3 shots while B kills once in 2 shots. When B has missed 27 times, A has killed:
- | | | | |
|--------------|--------------------------|--------------|--------------------------|
| (a) 3 birds | ☐ | (b) 60 birds | ☐ |
| (c) 72 birds | ☐ | (d) 90 birds | ☐ |
34. If the radius of a sphere is increased by 5%, then the volume will be increased approximately by:
- | | | | |
|------------|--------------------------|------------|--------------------------|
| (a) 15.76% | ☐ | (b) 29.30% | ☐ |
| (c) 23.75% | ☐ | (d) 35.64% | ☐ |
35. A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B?
- | | | | |
|-------|--------------------------|--------|--------------------------|
| (a) 7 | ☐ | (b) 8 | ☐ |
| (c) 9 | ☐ | (d) 10 | ☐ |
36. In an election between two candidates, one got 55% of the total valid votes, 20% of the votes were invalid. If the total number of votes was 7500, the number of valid votes that the other candidate got, was:
- | | | | |
|----------|--------------------------|----------|--------------------------|
| (a) 2700 | ☐ | (b) 2900 | ☐ |
| (c) 3000 | ☐ | (d) 3100 | ☐ |
37. A, B, C rent a pasture. A puts 10 oxen for 7 months, B puts 12 oxen for 5 months and C puts 15 oxen for 3 months for grazing. If the rent of the pasture is Rs. 175, how much must C pay as his share of rent?
- | | | | |
|------------|--------------------------|------------|--------------------------|
| (a) Rs. 45 | ☐ | (b) Rs. 50 | ☐ |
| (c) Rs. 55 | ☐ | (d) Rs. 60 | ☐ |

38. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?
- (a) 4 years ☐ (b) 35 years ☐
(c) 10 years ☐ (d) 20 years ☐
39. From a point P on a level ground, the angle of elevation of the top tower is 30° . If the tower is 100 m high, the distance of point P from the foot of the tower is:
- (a) 149m ☐ (b) 156m ☐
(c) 173m ☐ (d) 200m ☐
40. Find the side of the cube whose surface area is 384m^2 .
- (a) 5m ☐ (b) 6m ☐
(c) 8m ☐ (d) 7m ☐
41. What is the single percentage discount equivalent to two successive discounts of 15% and 5%?
- (a) 15.00% ☐ (b) 19.00% ☐
(c) 18.00% ☐ (d) 19.25% ☐
42. The compound interest on a certain sum for 2 years at 10% per annum is Rs. 525. The simple interest on the same sum for double the time at half the rate percent per annum is:
- (a) Rs. 400 ☐ (b) Rs. 500 ☐
(c) Rs. 600 ☐ (d) Rs. 800 ☐
43. A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest?
- (a) 3% ☐ (b) 4% ☐
(c) 5% ☐ (d) 6% ☐
44. Three partners shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?
- (a) 5:7:8 ☐ (b) 20:49:64 ☐
(c) 38:28:21 ☐ (d) 10:5:65 ☐
45. A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is:
- (a) No profit, No loss ☐ (b) 5% ☐
(c) 8% ☐ (d) 10% ☐
46. In a regular week, there are 5 working days and for each day, the working hours are 8. A man gets Rs. 2.40 per hour for regular work and Rs. 3.20 per hours for overtime. If he earns Rs. 432 in 4 weeks, then how many hours does he work for ?
- (a) 160 ☐ (b) 175 ☐
(c) 180 ☐ (d) 195 ☐
47. Three candidates contested an election and received 1136, 7636 and 11628 votes respectively. What percentage of the total votes did the winning candidate get?
- (a) 57% ☐ (b) 60% ☐
(c) 65% ☐ (d) 90% ☐
48. If the average marks of three batches of 55, 60 and 45 students respectively is 50, 55, 60, then the average marks of all the students is:
- (a) 53.33 ☐ (b) 54.68 ☐
(c) 55 ☐ (d) None of these ☐
49. How many two-digit numbers satisfy this property.: The last digit (unit's digit) of the square of the two-digit number is 8 ?
- (a) 1 ☐ (b) 2 ☐
(c) 3 ☐ (d) None of these ☐
50. What least number must be added to 1056, so that the sum is completely divisible by 23 ?
- (a) 2 ☐ (b) 3 ☐
(c) 18 ☐ (d) 21 ☐

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PART-B : BASIC COMPUTER KNOWLEDGE : (50X2=100 Marks)

1. ALU stands for
(a) Arithmetic Logic Unit ☐ (b) Application Logic Unit ☐
(c) Array Logic Unit ☐ (d) None of above ☐
2. The list of coded instructions is called
(a) Computer Program ☐ (b) Algorithm ☐
(c) Utility Program ☐ (d) Flowchart ☐
3. The Programs which are as permanent as hardware and stored in ROM is known as
(a) Hardware ☐ (b) Software ☐
(c) Firmware ☐ (d) ROMware ☐
4. _____ is non volatile memory
(a) RAM ☐ (b) EERAM ☐
(c) ROM ☐ (d) PROM ☐
5. _____ consists of set of programs
(a) Scanner ☐ (b) VDU ☐
(c) Software ☐ (d) All of the above ☐
6. LSI,VLSI & ULSI chips were used in which generation?
(a) Fifth ☐ (b) Second ☐
(c) Third ☐ (d) Fourth ☐
7. Resolution of laser printer is specified in terms of
(a) DPI ☐ (b) LPM ☐
(c) CPM ☐ (d) PPM ☐
8. The vast network of computers that connects million of people all over the world is called
(a) LAN ☐ (b) Hypertext ☐
(c) Web ☐ (d) Internet ☐
9. which browser comes with linux by default
(a) Mozilla Firefox ☐ (b) Chrome ☐
(c) Opera ☐ (d) IE ☐
10. _____ is HTTP web server
(a) Lucene ☐ (b) Fedora ☐
(c) Perl ☐ (d) Apache ☐
11. A system call is a method by which a program makes a request to the
(a) Input Management ☐ (b) Interrupt processing ☐
(c) Output Management ☐ (d) Operating System ☐
12. Who is the father of Computer science?
(a) Allen Turing ☐ (b) Charles Babbage ☐
(c) Simur Cray ☐ (d) Augusta Adaming ☐
13. UNIVAC is
(a) Universal Automatic Computer ☐ (b) Universal Array Computer ☐
(c) Unique Automatic Computer ☐ (d) Unvalued Auto Computer ☐
14. MICR stands for
(a) Magnetic Ink Character Recognition ☐ (b) Magnet Inkpot Case Reader ☐
(c) Magnetic Ink Cases Reader ☐ (d) Magnetic Ink Code Reader ☐
15. Example of non-numeric data is
(a) Employee address ☐ (b) Bank Balance ☐
(c) Examination score ☐ (d) All of these ☐

16. Which of the following is not anti- viruses' software?
 (a) NAV ☐ (b) F-Port ☐
 (c) Oracle ☐ (d) McAfee ☐
17. Which of the following is first generation of computer?
 (a) EDSAC ☐ (b) IBM-1401 ☐
 (c) ICL-2900 ☐ (d) CDC-1604 ☐
18. Who invented the high level language "C"?
 (a) Dennis M.Ritchie ☐ (b) Donald Kunth ☐
 (c) Niklaus Writh ☐ (d) Seymour Papert ☐
19. Which unit in the CPU is responsible for fetching instructions from memory?
 (a) ALU ☐ (b) Register ☐
 (c) Control Unit ☐ (d) Cache Memory ☐
20. Which file format is commonly used for images with a transparent background in image editing?
 (a) JPEG ☐ (b) BMP ☐
 (c) PNG ☐ (d) GIF ☐
21. What is the meaning of PDF?
 (a) Pure document format ☐ (b) Pure document font ☐
 (c) Portable document format ☐ (d) None of the above ☐
22. By using which of below functionality temporary files of the computer can be removed
 (a) Disk Clean up ☐ (b) Disk Eraser ☐
 (c) Clean disk ☐ (d) Disk Clear ☐
23. What is System Software?
 (a) Word Processing ☐ (b) Browser ☐
 (c) Program language ☐ (d) Graphics ☐
24. Which of the following features is not seen in the WORD APPLICATION?
 (a) Data filter ☐ (b) WordArt ☐
 (c) Space Check ☐ (d) Word Count ☐
25. Which of the following features is not seen in the EXCEL APPLICATION?
 (a) Goal Seek ☐ (b) Filter ☐
 (c) Mail Merge ☐ (d) None of these ☐
26. The process of taking the mouse at desired place is known as
 (a) Pointing ☐ (b) Click ☐
 (c) Double Click ☐ (d) Dragging ☐
27. Operating System is which type of Software?
 (a) Application Software ☐ (b) System Software ☐
 (c) Program Software ☐ (d) User Software ☐
28. What is the short cut key for Thesaurus ?
 (a) F7 ☐ (b) Ctrl + F7 ☐
 (c) Shift + F7 ☐ (d) Alt + F7 ☐
29. How many bits used by computer to store one character?
 (a) 1 ☐ (b) 4 ☐
 (c) 16 ☐ (d) 8 ☐

30. _____ printer is a non-impact printer and is quite in working.
- | | | | |
|----------------|--------------------------|-------------|--------------------------|
| (a) Inkjet | ☐ | (b) Laser | ☐ |
| (c) Dot Matrix | ☐ | (d) Thermal | ☐ |
31. In which type of computer, data are represented as discrete signals.
- | | | | |
|-----------------------|--------------------------|----------------------|--------------------------|
| (a) Analog computer | ☐ | (b) Digital computer | ☐ |
| (c) Printing Computer | ☐ | (d) Hybrid Computer | ☐ |
32. Malicious software is known as:
- | | | | |
|-------------|--------------------------|-------------------|--------------------------|
| (a) Badware | ☐ | (b) Maliciousware | ☐ |
| (c) Malware | ☐ | (d) Illegalware | ☐ |
33. Which of the following does not store data permanently?
- | | | | |
|-----------------|--------------------------|---------------|--------------------------|
| (a) ROM | ☐ | (b) RAM | ☐ |
| (c) Floppy Disk | ☐ | (d) Hard Disk | ☐ |
34. DNS in internet technology stand for-
- | | | | |
|-----------------------------|--------------------------|------------------------|--------------------------|
| (a) Distributed Name System | ☐ | (b) Data Name System | ☐ |
| (c) Dynamic Name System | ☐ | (d) Domain Name System | ☐ |
35. _____ are used to identify a user who returns to a Website.
- | | | | |
|--------------|--------------------------|------------|--------------------------|
| (a) Cookies | ☐ | (b) ASPs | ☐ |
| (c) Plug-ins | ☐ | (d) Script | ☐ |
36. Servers are computers that provide resources to other computers connected to a :
- | | | | |
|-------------------|--------------------------|---------------|--------------------------|
| (a) networked | ☐ | (b) mainframe | ☐ |
| (c) supercomputer | ☐ | (d) client | ☐ |
37. USB Stand for-
- | | | | |
|--------------------------|--------------------------|------------------------------|--------------------------|
| (a) Universal Serial Bus | ☐ | (b) Universal Sequential Bus | ☐ |
| (c) Unique Serial Bus | ☐ | (d) Unique Sequential Bus | ☐ |
38. Which storage device has no moving parts and uses NAND flash memory?
- | | | | |
|-----------------------|--------------------------|-------------------|--------------------------|
| (a) Hard Drive | ☐ | (b) Magnetic Tape | ☐ |
| (c) Solid State Drive | ☐ | (d) Optical Drive | ☐ |
39. What is the term for a collection of files and folders stored on a computer's storage device?
- | | | | |
|----------------|--------------------------|---------------|--------------------------|
| (a) Database | ☐ | (b) Directory | ☐ |
| (c) Repository | ☐ | (d) Archive | ☐ |
40. What does "GUI" stand for in the context of file management?
- | | | | |
|---------------------------------|--------------------------|--------------------------------|--------------------------|
| (a) Graphical User Interface | ☐ | (b) General User Interaction | ☐ |
| (c) Graphical Utility Interface | ☐ | (d) Global Utility Integration | ☐ |
41. What is the term for a shortcut or reference to a file or folder located in a different directory?
- | | | | |
|--------------|--------------------------|--------------|--------------------------|
| (a) Alias | ☐ | (b) URL | ☐ |
| (c) Zip File | ☐ | (d) Bookmark | ☐ |
42. Which key combination is commonly used to select multiple non-contiguous files or folders in a file manager?
- | | | | |
|------------------|--------------------------|--------------|--------------------------|
| (a) Ctrl + A | ☐ | (b) Ctrl + C | ☐ |
| (c) Ctrl + Shift | ☐ | (d) Alt + F4 | ☐ |

43. What does DRAM stands for -
 (a) Data Random Access Memory ☐ (b) Data Random Active Memory ☐
 (c) Dynamic Random Access Memory ☐ (d) Double Random Active Memory ☐
44. What does "BSOD" stand for in the context of computer errors?
 (a) Basic System Overload ☐ (b) Blue Screen of Death ☐
 (c) Broken Software on Drive ☐ (d) Bad Sector on Disk ☐
45. If you receive a "No bootable device" error message on startup, what should you check first?
 (a) Monitor connection ☐ (b) Hard drive status ☐
 (c) Keyboard functionality ☐ (d) RAM modules ☐
46. What type of data can be represented in a spreadsheet cell?
 (a) Text ☐ (b) Images ☐
 (c) Videos ☐ (d) All of the above ☐
47. Which feature allows you to organize and sequence slides in a presentation?
 (a) Spell check ☐ (b) Slide transition ☐
 (c) Slide sorter ☐ (d) Word art ☐
48. What is the primary purpose of principal component analysis (PCA) in machine learning?
 (a) Classification ☐ (b) Dimensionality reduction ☐
 (c) Clustering ☐ (d) Regression ☐
49. What does the acronym "SSID" stand for in the context of Wi-Fi networks?
 (a) Secure System Identifier ☐ (b) Service Set Identifier ☐
 (c) System Security Identifier ☐ (d) Signal Strength Indicator ☐
50. Which one of the following is an example of Operating System
 (a) Microsoft Word ☐ (b) Microsoft Excel ☐
 (c) Microsoft Access ☐ (d) Microsoft Windows ☐

----ooOoo----