



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

**WRITTEN EXAMINATION : 2025
FOR THE POST OF**

**SWITCHBOARD OPERATOR
(P.E)**

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 Tick (✓) Marks.
2. Time : 3 Hours

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

1. What is the smallest prime number?
(a) 1 ☐ (b) 2 ☐
(c) 3 ☐ (d) 5 ☐
2. The natural numbers together with 0 (zero) are called-
(a) Natural Numbers ☐ (b) Composite Numbers ☐
(c) Whole Numbers ☐ (d) Prime Numbers ☐
3. Every rational number is-
(a) Whole Number ☐ (b) Natural Number ☐
(c) Integer ☐ (d) Real Number ☐
4. Simplify: $(-8) \times (-3) + (-35) + 7$
(a) 19 ☐ (b) 30 ☐
(c) 25 ☐ (d) 20 ☐
5. Simplify: $[16 - \{5 + 4(4 - 2)\}]$
(a) 3 ☐ (b) 4 ☐
(c) 5 ☐ (d) 6 ☐
6. Find the value of $24.52 - 11.17 + 10.10$
(a) 23.45 ☐ (b) 20.35 ☐
(c) 18.22 ☐ (d) 25.15 ☐
7. 2 % of 100 km is
(a) 5 Km ☐ (b) 2 Km ☐
(c) 2.5 Km ☐ (d) 3 Km ☐
8. A person, after spending 62% of his monthly income, saves Rs 3135. Find the monthly income of the person.
(a) Rs 8520/- ☐ (b) Rs 8620/- ☐
(c) Rs 8250/- ☐ (d) Rs 8240/- ☐
9. What will be the percentage of increase in salary from Rs 4000 to Rs 4600?
(a) 20% ☐ (b) 15% ☐
(c) 25% ☐ (d) 23% ☐
10. A student gets 450 marks out of 600. Find his percentage.
(a) 75% ☐ (b) 85% ☐
(c) 76% ☐ (d) 55% ☐
11. A person divided his property among his only son and two daughters in the ratio 2 : 1 : 1. If the share of his son's property is worth Rs 60000, then what is the total property of the person?
(a) Rs 1,00,000/- ☐ (b) Rs 1,50,000/- ☐
(c) Rs 80,000/- ☐ (d) Rs 1,20,000/- ☐

12. Distribute 36 chocolates in the ratio of 2 : 1 between X and Y.
 (a) X=12, Y= 24 ☐ (b) X=24, Y= 12 ☐
 (c) X=18, Y= 18 ☐ (d) X=30, Y= 6 ☐
13. Find the fourth proportion to 3, 8, 15.
 (a) 40 ☐ (b) 30 ☐
 (c) 35 ☐ (d) 24 ☐
14. Calculate the simple interest if the rate is given per annum, P=Rs 10000, R=5%, T=3 years.
 (a) Rs 1000/- ☐ (b) Rs 1500/- ☐
 (c) Rs 2000/- ☐ (d) Rs 800/- ☐
15. How long will it take for Rs 2500 at 5% rate of simple interest per year to amount to Rs 3000?
 (a) 3 years ☐ (b) 5 years ☐
 (c) 6 years ☐ (d) 4 years ☐
16. At what rate of simple interest a sum of money will double in 4 years?
 (a) 25% ☐ (b) 15% ☐
 (c) 30% ☐ (d) 35% ☐
17. Find the amount on Rs 8400 for 2 years at 5% per annum, compounded annually.
 (a) Rs 8600/- ☐ (b) Rs 9261/- ☐
 (c) Rs 9300/- ☐ (d) Rs 8760/- ☐
18. At what rate of interest per annum will Rs 6000 amount to Rs 7260 in 2 years, when compounded annually?
 (a) 10% p.a ☐ (b) 15% p.a ☐
 (c) 30% p.a ☐ (d) 12% p.a ☐
19. An oven is sold for Rs 25,000, thereby making a profit of Rs 1389. What was the cost price?
 (a) Rs 22,500/- ☐ (b) Rs 23,611/- ☐
 (c) Rs 21,000/- ☐ (d) Rs 23,000/- ☐
20. The cost price of an article is Rs 250. If it is sold for Rs 280 what is the profit per cent?
 (a) 8% ☐ (b) 15% ☐
 (c) 10% ☐ (d) 12% ☐
21. Teresa purchased a computer for Rs 24000. She sold the computer at 10% loss. What was his actual loss?
 (a) Rs 2200/- ☐ (b) Rs 2400/- ☐
 (c) Rs 2100/- ☐ (d) Rs 2300/- ☐
22. Find the value of 17% of 500
 (a) 85 ☐ (b) 75 ☐
 (c) 80 ☐ (d) 65 ☐
23. The least number by which 986 must be divided to make it a perfect square is
 (a) 3 ☐ (b) 2 ☐
 (c) 6 ☐ (d) 4 ☐
24. Express 0.75 in a vulgar fraction in its smallest form
 (a) $\frac{2}{5}$ ☐ (b) $\frac{3}{4}$ ☐
 (c) $\frac{1}{4}$ ☐ (d) $\frac{4}{3}$ ☐

25. A bag marked at a price of Rs. 1600 is available at a discount of 45%. What is the discount given?
- | | | | |
|--------------|--------------------------|--------------|--------------------------|
| (a) Rs 720/- | ☐ | (b) Rs 740/- | ☐ |
| (c) Rs 760/- | ☐ | (d) Rs 780/- | ☐ |
26. _____ is the square of 25.
- | | | | |
|---------|--------------------------|---------|--------------------------|
| (a) 525 | ☐ | (b) 625 | ☐ |
| (c) 125 | ☐ | (d) 645 | ☐ |
27. Find the square root of 225
- | | | | |
|--------|--------------------------|--------|--------------------------|
| (a) 13 | ☐ | (b) 25 | ☐ |
| (c) 15 | ☐ | (d) 9 | ☐ |
28. A speed of 30.6 km/hr is the same as
- | | | | |
|----------------|--------------------------|---------------|--------------------------|
| (a) 13.5 m/sec | ☐ | (b) 12 m/sec | ☐ |
| (c) 10 m/sec | ☐ | (d) 8.5 m/sec | ☐ |
29. A can do a piece of work in 10 days, while B can do it in 15 days. Working together, in how many days, they will complete the work?
- | | | | |
|------------|--------------------------|------------|--------------------------|
| (a) 6 days | ☐ | (b) 5 days | ☐ |
| (c) 4 days | ☐ | (d) 7 days | ☐ |
30. The price of a TV set is Rs 10000. Bena buys it at 10% discount. How much did he pay?
- | | | | |
|-------------|--------------------------|-------------------|--------------------------|
| (a) Rs 8000 | ☐ | (b) Rs 9000 | ☐ |
| (c) Rs 7500 | ☐ | (d) None of these | ☐ |
31. 20% of P= 1000, P is
- | | | | |
|----------|--------------------------|-----------|--------------------------|
| (a) 2000 | ☐ | (b) 1000 | ☐ |
| (c) 5000 | ☐ | (d) 10000 | ☐ |
32. The sum of two number is 25 and their difference is 11. What is the bigger number
- | | | | |
|--------|--------------------------|--------|--------------------------|
| (a) 18 | ☐ | (b) 13 | ☐ |
| (c) 14 | ☐ | (d) 16 | ☐ |
33. Solve for the value of x : $8x - 17 = 5 - 3x$
- | | | | |
|-------|--------------------------|-------|--------------------------|
| (a) 3 | ☐ | (b) 2 | ☐ |
| (c) 5 | ☐ | (d) 4 | ☐ |
34. Para and Siama can do a piece of work in 8 days, which Para alone can do in 12 days. In how many days can Siama alone do the same work.
- | | | | |
|-------------|--------------------------|-------------|--------------------------|
| (a) 20 days | ☐ | (b) 24 days | ☐ |
| (c) 15 days | ☐ | (d) 25 days | ☐ |
35. Solve for x if $5^x = 625$
- | | | | |
|-------|--------------------------|--------|--------------------------|
| (a) 4 | ☐ | (b) 6 | ☐ |
| (c) 5 | ☐ | (d) 20 | ☐ |
36. Additive Inverse of 8 is
- | | | | |
|-----------|--------------------------|-----------|--------------------------|
| (a) $1/8$ | ☐ | (b) - 8 | ☐ |
| (c) 16 | ☐ | (d) $8/1$ | ☐ |
37. A person crosses a 600 metre long street in 5 minutes. What is his speed in km per hour?
- | | | | |
|---------|--------------------------|---------|--------------------------|
| (a) 3.6 | ☐ | (b) 6.5 | ☐ |
| (c) 7.2 | ☐ | (d) 9 | ☐ |

38. A man got a 10% increase in his salary. If his new salary is Rs 154000, find his original salary.
- | | | | |
|---------------|--------------------------|---------------|--------------------------|
| (a) Rs 140000 | ☐ | (b) Rs 130000 | ☐ |
| (c) Rs 125000 | ☐ | (d) Rs 150000 | ☐ |
39. The average of the first five multiples of 9 is
- | | | | |
|--------|--------------------------|--------|--------------------------|
| (a) 28 | ☐ | (b) 27 | ☐ |
| (c) 25 | ☐ | (d) 20 | ☐ |
40. The average age of three boys is 15 years. If their ages are in ratio of 3 : 5 : 7, the age of the youngest boy is
- | | | | |
|--------------|--------------------------|--------------|--------------------------|
| (a) 18 years | ☐ | (b) 21 years | ☐ |
| (c) 12 years | ☐ | (d) 9 years | ☐ |
41. Find the value of $72.305 + 8.67 + 0.7895$
- | | | | |
|-------------|--------------------------|-------------|--------------------------|
| (a) 81.7645 | ☐ | (b) 79.7545 | ☐ |
| (c) 81.067 | ☐ | (d) 80.067 | ☐ |
42. Find the square root of 186624
- | | | | |
|---------|--------------------------|---------|--------------------------|
| (a) 442 | ☐ | (b) 432 | ☐ |
| (c) 542 | ☐ | (d) 352 | ☐ |
43. The length of a rectangular garden is 85 ft and its width is 75 ft. Find the area of the garden.
- | | | | |
|----------------|--------------------------|----------------|--------------------------|
| (a) 6375 sq ft | ☐ | (b) 5775 sq ft | ☐ |
| (c) 6265 sq ft | ☐ | (d) 20 Sq ft | ☐ |
44. Find the cube- root of 343
- | | | | |
|--------|--------------------------|-------|--------------------------|
| (a) 5 | ☐ | (b) 7 | ☐ |
| (c) 13 | ☐ | (d) 9 | ☐ |
45. Find the area of a square whose diagonal measures 12 metre
- | | | | |
|-------------|--------------------------|-------------|--------------------------|
| (a) 73 sq m | ☐ | (b) 82 sq m | ☐ |
| (c) 72 sq m | ☐ | (d) 36 sq m | ☐ |
46. Find the area of a triangle whose base is 20 m and height is 25 m
- | | | | |
|------------------------|--------------------------|------------------------|--------------------------|
| (a) 250 m ² | ☐ | (b) 230 m ² | ☐ |
| (c) 320 m ² | ☐ | (d) 195 m ² | ☐ |
47. If a man covers 9 km in 3 hrs, find the distance covered by him in 5 hours.
- | | | | |
|-----------|--------------------------|-----------|--------------------------|
| (a) 12 km | ☐ | (b) 15 km | ☐ |
| (c) 14 km | ☐ | (d) 17 km | ☐ |
48. The length and breadth of a rectangle is 63 m and 40 m. Find its perimeter.
- | | | | |
|-------------|--------------------------|-------------|--------------------------|
| (a) 73 sq m | ☐ | (b) 206 m | ☐ |
| (c) 103 m | ☐ | (d) 36 sq m | ☐ |
49. The angle of elevation of a ladder leaning against a wall is 60 degree and the foot of the ladder is 4.6 m away from the wall. Find the length of the ladder.
- | | | | |
|-----------|--------------------------|-----------|--------------------------|
| (a) 5.5 m | ☐ | (b) 9.2 m | ☐ |
| (c) 7.8 m | ☐ | (d) 6.6 m | ☐ |
50. In how many ways 4 boys and 3 girls can be seated in a row so that they are alternate.
- | | | | |
|---------|--------------------------|--------|--------------------------|
| (a) 144 | ☐ | (b) 78 | ☐ |
| (c) 286 | ☐ | (d) 14 | ☐ |

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

1. A light sensitive device that converts drawing, printed text or other images into digital form is
 (a) Keyboard ☐ (b) Plotter ☐
 (c) Scanner ☐ (d) OMR ☐
2. Which protocol provides e-mail facility among different hosts?
 (a) FTP ☐ (b) SMTP ☐
 (c) TELNET ☐ (d) SNMP ☐
3. The basic architecture of computer was developed by
 (a) John Von Neuman ☐ (b) Charles Babbage ☐
 (c) Blaise Pacsal ☐ (d) Garden Moore ☐
4. In order to tell Excel that we are entering a formula in cell, we must begin with an operator such as
 (a) \$ ☐ (b) @ ☐
 (c) + ☐ (d) = ☐
5. In how many generations a computer can be classified?
 (a) 3 ☐ (b) 4 ☐
 (c) 5 ☐ (d) 6 ☐
6. Fifth generation computers are based on
 (a) Artificial Intelligence ☐ (b) Programming Intelligence ☐
 (c) System Knowledge ☐ (d) VVLSI ☐
7. First generation of computer was based on which technology?
 (a) Transistor ☐ (b) LSI ☐
 (c) VLSI ☐ (d) Vacuum Tube ☐
8. Microprocessor was introduced in which generation of computer?
 (a) Second Generation ☐ (b) Fourth Generation ☐
 (c) Both (A) and (B) ☐ (d) Third Generation ☐
9. Second generation computers are made of
 (a) Vacuum Tubes ☐ (b) Transistors ☐
 (c) LSI ☐ (d) VLSI ☐
10. Which of the following memory is non-volatile?
 (a) SRAM ☐ (b) DRAM ☐
 (c) ROM ☐ (d) All of the above ☐
11. GUI stands for
 (a) Graph Use Interface ☐ (b) Graphical Universal Interface ☐
 (c) Graphical User Interface ☐ (d) Graphical Unique Interface ☐
12. Any data or instruction entered into the memory of a computer is considered as
 (a) Storage ☐ (b) Output ☐
 (c) Input ☐ (d) Information ☐

13. Time during which a job is processed by the computer is:
- | | | | |
|--------------------|--------------------------|------------------|--------------------------|
| (a) Execution Time | ☐ | (b) Delay Time | ☐ |
| (c) Real Time | ☐ | (d) Waiting Time | ☐ |
14. Which of the following circuit is used a 'Memory device' in computers?
- | | | | |
|----------------|--------------------------|----------------|--------------------------|
| (a) Rectifier | ☐ | (b) Flip Flop | ☐ |
| (c) Comparator | ☐ | (d) Attenuator | ☐ |
15. The memory sizes in mainframe computers and advanced technology microcomputer are expressed as
- | | | | |
|-----------|--------------------------|---------------|--------------------------|
| (a) Bytes | ☐ | (b) Kilobytes | ☐ |
| (c) Bits | ☐ | (d) Megabytes | ☐ |
16. One MB is equal to?
- | | | | |
|---------------|--------------------------|-------------|--------------------------|
| (a) 1024 Byte | ☐ | (b) 1024 KB | ☐ |
| (c) 1000 KB | ☐ | (d) 1024 GB | ☐ |
17. Dot-matrix, Deskjet, Inkjet and Laser are all types of which computer peripherals?
- | | | | |
|--------------|--------------------------|---------------|--------------------------|
| (a) Printers | ☐ | (b) Software | ☐ |
| (c) Monitors | ☐ | (d) Keyboards | ☐ |
18. Internet Explorer is a type of
- | | | | |
|----------------------|--------------------------|--------------|--------------------------|
| (a) Operating System | ☐ | (b) Browser | ☐ |
| (c) IP address | ☐ | (d) Compiler | ☐ |
19. AVI (Audio Video Interleave) format was developed by?
- | | | | |
|---------------|--------------------------|-----------|--------------------------|
| (a) IBM | ☐ | (b) Apple | ☐ |
| (c) Microsoft | ☐ | (d) Adope | ☐ |
20. _____ is the high speed memory used in the computer.
- | | | | |
|-----------|--------------------------|---------------|--------------------------|
| (a) RAM | ☐ | (b) Hard Disk | ☐ |
| (c) Cache | ☐ | (d) BIOS | ☐ |
21. In a client/server model, a client program _____.
- | | | | |
|--|--------------------------|---|--------------------------|
| (a) Asks for information | ☐ | (b) Provides information and files | ☐ |
| (c) Serves software files to other computers | ☐ | (d) Distributes data files to other computers | ☐ |
22. Which one of the following is an example of Operating System?
- | | | | |
|----------------------|--------------------------|-----------------------|--------------------------|
| (a) Microsoft Word | ☐ | (b) Micorsoft Excel | ☐ |
| (c) Microsoft Access | ☐ | (d) Microsoft Windows | ☐ |
23. Which of the following is not used as secondary storage?
- | | | | |
|--------------------------|--------------------------|--------------------|--------------------------|
| (a) Semiconductor memory | ☐ | (b) Magnetic Disks | ☐ |
| (c) Magnetic Drums | ☐ | (d) Magnetic Tapes | ☐ |
24. General purpose computers are those that can be adopted to countless uses simply by changing its
- | | | | |
|-------------------|--------------------------|------------------|--------------------------|
| (a) Output Device | ☐ | (b) Input Device | ☐ |
| (c) Program | ☐ | (d) Processor | ☐ |
25. A collection of 8 bits is called
- | | | | |
|----------|--------------------------|------------|--------------------------|
| (a) Byte | ☐ | (b) Record | ☐ |
| (c) Word | ☐ | (d) Nibble | ☐ |

26. A typical modern computer uses
 (a) Magnetic cores for secondary storage ☐ (b) LSI chips ☐
 (c) Magnetic tape for primary memory ☐ (d) More than 10,000 vacuum tubes ☐
27. The term 'memory' applies to which one of the following?
 (a) Logic ☐ (b) Storage ☐
 (c) Input Device ☐ (d) Output Device ☐
28. The device primarily used to provide hardcopy is the
 (a) CRT ☐ (b) Computer Console ☐
 (c) Printer ☐ (d) Card Reader ☐
29. Which of the following is the most powerful type of the computers?
 (a) Mainframe ☐ (b) Super Conductor ☐
 (c) Microcomputer ☐ (d) Super Computer ☐
30. Which of the following is true about primary storage?
 (a) It is a part of the CPU ☐ (b) It allows very fast access to data ☐
 (c) It is relatively more expensive ☐ (d) All of the above ☐
31. A list of instructions used by a computer is called
 (a) Text ☐ (b) CPU ☐
 (c) Program ☐ (d) Output ☐
32. The process of copying data from a memory location is called
 (a) Writing ☐ (b) Controlling ☐
 (c) Booting ☐ (d) Reading ☐
33. The process of putting data into a storage location is called
 (a) Reading ☐ (b) Writing ☐
 (c) Controlling ☐ (d) Hand Shaking ☐
34. Which of the following is the product of data processing?
 (a) Information ☐ (b) Data ☐
 (c) Software Program ☐ (d) System ☐
35. Which one is not an input device?
 (a) Keyboard ☐ (b) Mouse ☐
 (c) Speaker ☐ (d) Scanner ☐
36. DNS in internet technology stands for
 (a) Distributed Name System ☐ (b) Data Name System ☐
 (c) Dynamic Name System ☐ (d) Domain Name System ☐
37. Portable program means?
 (a) Independent from its authors ☐ (b) Independent of platform ☐
 (c) Program with wheels ☐ (d) None of the above ☐
38. Memories which can be read only are called _____.
 (a) Virtual Memory ☐ (b) ROM ☐
 (c) DRAM ☐ (d) RAM ☐
39. CPU controls_____
 (a) All Input, Output and processing ☐ (b) Controls Memory ☐
 (c) Controlled by the input data ☐ (d) None of the above ☐

40. USB stands for _____?
- | | | | |
|--------------------------|--------------------------|------------------------------|--------------------------|
| (a) Universal Serial Bus | ☐ | (b) Universal Sequential Bus | ☐ |
| (c) Unique Serial Bus | ☐ | (d) Unique Sequential Bus | ☐ |
41. ALU Stands for _____?
- | | | | |
|---------------------------|--------------------------|------------------------------|--------------------------|
| (a) Arithmetic Legal Unit | ☐ | (b) Arithmetic Logic Unit | ☐ |
| (c) Arithmetic Local Unit | ☐ | (d) Arithmetic Logic Utility | ☐ |
42. CPU stands for _____?
- | | | | |
|-----------------------------|--------------------------|-----------------------------|--------------------------|
| (a) Central Performing Unit | ☐ | (b) Control Processing Unit | ☐ |
| (c) Common Processing Unit | ☐ | (d) Central Processing Unit | ☐ |
43. Which of the following holds the ROM, RAM, CPU?
- | | | | |
|------------------|--------------------------|-------------------|--------------------------|
| (a) Hard Disk | ☐ | (b) ALU | ☐ |
| (c) Mother board | ☐ | (d) None of these | ☐ |
44. A technique used by codes to convert an analog signal into a digital bit stream is known as
- | | | | |
|------------------------------|--------------------------|---------------------------|--------------------------|
| (a) Digital Signal Generator | ☐ | (b) Pulse Code Modulation | ☐ |
| (c) Pulse Signal Modulation | ☐ | (d) None of these | ☐ |
45. An optical input device that interprets pencil marks on paper media is
- | | | | |
|-----------------------|--------------------------|---------------------|--------------------------|
| (a) Magnetic tape | ☐ | (b) Optical Scanner | ☐ |
| (c) Punch card reader | ☐ | (d) O.M.R | ☐ |
46. A program that converts computer data into some code system other than the normal one is known as
- | | | | |
|--------------|--------------------------|-------------|--------------------------|
| (a) Emulator | ☐ | (b) Encoder | ☐ |
| (c) Decoder | ☐ | (d) Trigger | ☐ |
47. What does DRAM stand for?
- | | | | |
|----------------------------------|--------------------------|---------------------------------|--------------------------|
| (a) Data Random Access Memory | ☐ | (b) Data random Active Memory | ☐ |
| (c) Dynamic Random Access Memory | ☐ | (d) Double Random Access Memory | ☐ |
48. Where is computer's BIOS stored?
- | | | | |
|----------|--------------------------|------------|--------------------------|
| (a) DRAM | ☐ | (b) Flash | ☐ |
| (c) SRAM | ☐ | (d) EEPROM | ☐ |
49. What technology of memory is Cache RAM usually?
- | | | | |
|----------|--------------------------|------------|--------------------------|
| (a) DRAM | ☐ | (b) Flash | ☐ |
| (c) SRAM | ☐ | (d) EEPROM | ☐ |
50. What is Cache RAM?
- | | |
|--|--------------------------|
| (a) Extra memory used for overflow from your hard disk | ☐ |
| (b) A place to store secret information like passwords | ☐ |
| (c) Its the same as your Hard Disk Drive | ☐ |
| (d) Fast Memory used for data that is accessed often | ☐ |

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