

MS/m Phil Computer Science — Solved Quiz

Test paper 2026 M Phil/ MS All Assignment Quiz — Answer key (correct option highlighted in yellow)

Q1. The ASCII Code (American Standard Code for Information Interchange) is a _____ code

(a) 2-bit

✓ (b) 7-bit

(c) 10-bit

(d) 16-bit

Q2. Linux uses _____ directory to store system configuration files.

(a) /bin

(b) /dev

(c) /boot

✓ (d) /etc

Q3. S-R latch can be implemented by using _____ gates

(a) AND, OR

✓ (b) NAND, NOR

(c) NAND, XOR

(d) NOT, XOR

Q4. _____ is/are used to access information hidden within an object?

✓ (a) Interface

(b) Private data members

(c) Private member functions

(d) Both public and private members

Q5. What is the total time to heapify?

✓ (a) $\Theta(\log n)$

(b) $\Theta(n \log n)$

(c) $\Theta(n^2 \log n)$

(d) $\Theta(\log^2 n)$

Q6. Strictly increasing arrays are _____ input for quick sort.

✓ **(a) The worst-case**

- (b) The best-case
- (c) Average case
- (d) Neither

Q7. Strictly increasing arrays are _____ input for quick sort

✓ **(a) The worst-case**

- (b) The best-case
- (c) Average case
- (d) None of the given

Q8. In Quick sort, we don't have the control over the sizes of recursive calls

✓ **(a) True**

- (b) False
- (c) Less information to decide
- (d) Either true or false

Q9. In while loop, the loop counter must be initialized _____.

(a) Within the loop

✓ **(b) Before entering the loop**

- (c) At the end of the loop
- (d) after the loop execution is ended

Q10. Given below are some statements associated with data flow diagrams. Which one is correct statement?

✓ **(a) Data flow is made use of to model what systems do.**

- (b) Flows of data can take place from a process to a sink.
- (c) All processes have to be levelled or decomposed.
- (d) Context diagram shows the major system processes.

Q11. A range is often supplied to an algorithm by two _____ values.

- (a) Italic
- (b) Iteration

✓ **(c) Iterator**

- (d) Container

Q12. If $r1 = (aa + bb)$ and $r2 = (a + b)$ then the language $(a + b)^* (aa + bb)^*$ will be generated by

- (a) $(r2)(r1)$
- (b) $(r1 + r2)^*$
- ✓ (c) $(r2)^*(r1)^*$
- (d) $(r1)^*$

Q13. Which of the following applications may use a stack?

- (a) Accessing shared resource
- ✓ (b) Parentheses balancing program
- (c) Buffering messages
- (d) Waiting list

Q14. Suppose that an integer type pointer contains a memory address 0x22f230. What will be the new memory address if we increment this pointer by one?

- (a) 0x22f231
- ✓ (b) 0x22f234
- (c) 0x22f226
- (d) 0x22f238

Q15. What will be the output of the given program code?

```
#include <iostream.h>
```

```
main()
```

```
{
```

```
    int num[2][3] = {5, 7, 2, 1, 9, 6};
```

```
    cout<<**num<<" ";
```

```
    cout<<**(num+1);
```

```
    return 0; }
```

- (a) 5, 2
- (b) 5, 7
- ✓ (c) 5, 1
- (d) 5, 5

Q16. Which of the following is created by “Database Management System” for its usage?

✓ (a) **Integrated Data Dictionary**

(b) Free Standing Data Dictionary

(c) Cross Reference Matrix

(d) Weak Entity

Q17. An Astable multivibrator is known as a/an _____.

✓ (a) **Oscillator**

(b) Booster

(c) One-Shot

(d) Dual-shot

Q18. The value returned by the eof() function is of _____ type.

✓ (a) **Integer**

(b) Float

(c) Character

(d) Boolean

Q19. A _____ is considered as a special type of pointer which contains address of a memory location.

(a) Function

(b) Structure

✓ (c) **Reference**

(d) Class

Q20. A static function

(a) should be called when an object is destroyed.

(b) is closely connected to an individual object of a class.

✓ (c) **can be called using the class name followed by function**

name. (d) is used when a dummy object must be created.

Q21. Consider the following infix expression: $x - y * a + b / c$ Which of the following is a correct equivalent expression for the above?

(a) $x y - a * b + c /$

(b) $x * y a - b c / +$

✓ (c) **$x y a * - b c / +$**

(d) $x y a * - b / + c$

Q22. A tree is an example of :

- (a) List
- (b) Linked List
- (c) Linear Data Structure
- ✓ (d) **Non Linear Data Structure**

Q23. The cyclomatic complexity metric provides the designer with information regarding the number of _____.

- (a) Statements in the program
- (b) Cycles in the program
- (c) Errors in the program
- ✓ (d) **Independent logic paths in the program**

Q24. _____ ensures that a class only has one instance and provides a global point of access to it.

- (a) Behavioral Pattern
- (b) Joint Pattern
- ✓ (c) **Singleton Pattern**
- (d) Observer Pattern

Q25. Testing activities require destructive instincts in _____ for the purpose of breaking system to discover loopholes into its functionality.

- (a) Bug Fixers
- ✓ (b) **Tester**
- (c) Developer
- (d) Requirement Engineer

Q26. Trailer is only added at _____ layer of OSI model.

- ✓ (a) **Data link**
- (b) Physical
- (c) Network
- (d) Application

Q27. A _____ is the most familiar type of a _____.

- ✓ (a) **Modem, DCE**
- (b) Modem, DTE
- (c) FDDI, DCE
- (d) FDDI, DTE

Q28. Cyclomatic complexity is used in _____ to analyze the relative complexity of program.

- (a) Black-box testing
- (b) Unit Testing
- ✓ (c) **White-box testing**
- (d) Integrated Testing

Q29. "Only one process may use a resource at a time" best describes which one of the following?

- (a) Circular wait
- (b) Hold and wait
- (c) No preemption
- ✓ (d) **Mutual Exclusion**

Q30. Using _____ technique, MUX adds extra bits to data.

- ✓ (a) **Bit Stuffing**
- (b) Decompression
- (c) Switching
- (d) Exchanging

Q31. YMODEM uses _____ for Error Checking.

- (a) CRC-4
- (b) CRC-8
- ✓ (c) **CRC-16**
- (d) CRC-32

Q32. Which of the following feature allows many users to use a DBMS at the same time?

- (a) Robustness
- ✓ (b) **Concurrency**
- (c) Scalability
- (d) Efficiency

Q33. Which of the following data is already stored and NOT created when needed?

- (a) Calculated data
- ✓ (b) **Actual data**
- (c) Virtual data
- (d) Statistical data
- (e) Derived data

Q34. Identify the operator which cannot be used in comparison of select statement.

- (a) <
- (b) =
- ✓ (c) ~
- (d) >

Q35. The Huffman encoding algorithm is a _____

- (a) Dynamic and greedy algorithm
- (b) Divide and conquer and greedy algorithm
- ✓ (c) Greedy algorithm.
- (d) Dynamic programming algorithm

Q36. The alternate solution for a multiplexer and a register circuit is _____

- ✓ (a) Parallel in / Serial out shift register
- (b) Serial in / Parallel out shift register
- (c) Parallel in / Parallel out shift register
- (d) Serial in / Serial Out shift register

Q37. In which quadrant, the point with coordinates $(-3, -21)$ lies?

- (a) Quadrant II
- ✓ (b) Quadrant III
- (c) Quadrant IV
- (d) Quadrant I

Q38. The probability of a student to get the first or second division is $4/10$. The student will get less than 2nd division is:

- (a) $2/10$
- (b) $4/10$
- ✓ (c) $6/10$
- (d) $9/10$

Solution: $1 - 4/10 = 6/10$

Q39. Although mosquitoes may not seem as scary as larger, more powerful animals, they are far more dangerous to human beings. But things are changing. It is highly likely that one day scientists will find a way to keep everyone safe from mosquitoes and the diseases they carry.

Which of the following best summarizes the information in the above paragraph?

- (a) Mosquito nets provide adequate protection from deadly mosquitoes.
- (b) Poisons and sprays provide adequate protection from deadly mosquitoes.
- (c) The introduction of the mosquito's natural enemies provides adequate protection from deadly mosquitoes.

✓ **(d) There is no perfect solution to the mosquito problem.**

Q40. Select the option which is most similar in meaning to the given word: SMUDGE

(a) Celebrate

✓ **(b) Blur**

(c) Residue

(d) Gloat

Q41. According to the author, some people are more afraid of tigers and sharks than mosquitoes because tigers and sharks:

- (a) are found all over the world
- (b) kill more people than mosquitoes

✓ **(c) are big and powerful**

(d) have no natural enemies

Q42. Select the option which is most opposite in meaning to the given word: MEMORANDUM

- (a) Report
- (b) Proposal
- (c) Record

✓ **(d) Speech**

Q43. Select the option which is most similar in meaning to the given word: TACTLESS

- (a) Careful
- (b) Tactful
- (c) Thoughtful

✓ **(d) Crude**

Q44. Choose the correct option.

The two artists differed markedly in their temperaments; Palmer was reserved and courteous, Frazer _____ and boastful.

(a) phlegmatic

✓ (b) choleric

(c) constrained

(d) tractable

Q45. According to the information provided which of the following is TRUE? (hot air balloon passage)

(a) Hot air falls and cold air falls too.

✓ (b) Hot air rises and cold air falls.

(c) Hot air falls and cold air rises.

(d) Hot air rises and cold air rises too.

Q46. When does a blue moon happen in nature?

✓ (a) When there are two full moons in one month

(b) When the moon has a blue color

(c) When we cannot see the moon at all

(d) When we can only see a small part of the moon

Q47. Choose the correct option.

Alam wanted to join the air force _____ his parents did not allow him to.

(a) if

(b) or

✓ (c) but

(d) either

Q48. Let $x_{\blacksquare}$ is the mean of $\frac{3}{2}$ and $\frac{5}{3}$, and $y_{\blacksquare}$ is the mean of 2 and $\frac{5}{7}$. Which of the following is the appropriate answer?

✓ (a) $x_{\blacksquare} >$

$y_{\blacksquare}$ (b) $x_{\blacksquare} < y_{\blacksquare}$

(c) $x_{\blacksquare} = y_{\blacksquare}$

(d) None of these

Solution: $x_{\blacksquare} = (\frac{3}{2} + \frac{5}{3})/2 = 19/12 \approx 1.58$; $y_{\blacksquare} = (2 + \frac{5}{7})/2 = 19/14 \approx 1.36 \rightarrow x_{\blacksquare} > y_{\blacksquare}$

Q49. Determine the maximum integer value of n for which $5n + 3 < -20$.

- (a) -8
- (b) -7
- (c) -6

✓ **(d) -5**

Solution: $5n < -23 \rightarrow n < -4.6$, so max integer is -5

Q50. Select the option which is most opposite in meaning to the given word: DORSAL

- (a) Inactive
- (b) Peripheral

✓ **(c) Ventral**

- (d) Central

Q51. Select the option which is most opposite in meaning to the given word: CHIDE

- (a) Criticise
- (b) Flatter
- (c) Fear

✓ **(d) Praise**

Q52. In the above passage, the word “frozen” means _____. (deer passage)

✓ **(a) not moving**

- (b) very cold
- (c) visible
- (d) not melted

Q53. Select the option which is most similar in meaning to the given word: ACCOMPLICE

- (a) Friend
- (b) Fatalist
- (c) Hardworking

✓ **(d) Companion in crime**

Q54. Select the option which is most similar in meaning to the given word: ACCOLADE

- (a) Balcony
- (b) Outer garment

✓ **(c) Honor**

- (d) Drink

Q55. Choose the correct option.

George Orwell ----- a writer, ----- novels are very popular.

(a) was ? whom

✓ (b) is ? whose

(c) is ? who's

(d) has ? whose

Q56. Choose the correct option.

Khalid should be ----- to complain, since his salary is ----- with his productivity.

✓ (a) loath ? commensurate

(b) foolish ? proportionate

(c) brought ? alleviated

(d) right ? balanced

Q57. Choose the correct option.

His son is very naughty; he is unable to ----- him.

(a) deal

(b) deal in

(c) deal out

✓ (d) deal with

Q58. Choose the correct antonym of the given word out of the four choices: ABBREVIATE

(a) Achieve

(b) Accept

✓ (c) Expand

(d) Abridge

Q59. The supporters of the prisoners' pension scheme have criticized those who reject this possibility, by claiming that for the critics _____. Which of the following is the most logical completion of the above given sentence?

(a) emotion is more important than justice

✓ (b) punishment for criminals is more important than crime prevention

(c) crime prevention is not an important issue

(d) money has too high a value

Q60. $\sqrt{(x^2/9 + x^2/16)} = \dots\dots\dots$

(a) $\sqrt{(5x/12)}$

✓ (b) **5x/12**

(c) 25x/12

(d) 5x/144

Solution: $x^2(1/9 + 1/16) = 25x^2/144 \rightarrow \sqrt{} = 5x/12$

Q61. The argument above assumes all of the following EXCEPT: (amla / vitamin C passage)

(a) Americans generally won't eat very sour foods.

(b) The new process does not remove a significant part of the vitamin content.

(c) That a market exists for a new source of vitamin C.

✓ (d) **The fruit can be used only in salads.**

Q62. In which month did usually Pakistan farmers use to do the early sowing of cotton? (cotton policy passage)

(a) March

(b) January

(c) December

✓ (d) **February**

Q63. According to the passage, fleas are resistant to sprays and chemicals because they:

✓ (a) **have waterproof sclerites.**

(b) are excellent jumpers.

(c) reproduce very rapidly.

(d) can stick to fur like Velcro.

Q64. As used in the passage, which is the best antonym for paramount?

(a) inferior

(b) boring

(c) pathetic

✓ (d) **trivial**

Q65. Select the pair of words which has the same relation as: SALVAGE : TREASURE

(a) Settle : Argument

(b) Incorporate : Company

✓ (c) **Rescue : Victim**

(d) Recycle : Newspaper

Q66. Select the pair of words which has the same relation as: STUDYING : LEARNING

(a) Running : Jumping

✓ (b) Investigating : Discovering

(c) Reading : Writing

(d) Dancing : Swimming

Q67. The sum of three consecutive even numbers is 48. What is the smallest of these numbers?

(a) 12

✓ (b) 14

(c) 6

(d) 8

Solution: $n+(n+2)+(n+4)=48 \rightarrow n=14$

Q68. What is the value of x if $\frac{x}{5} + \frac{1}{3} = -\frac{x}{5}$?

(a) $x = 5$

(b) $x = -5$

✓ (c) $x = -5/6$

(d) $x = 5/6$

Solution: $2x/5 = -1/3 \rightarrow x = -5/6$

Q69. If the base of a rectangle is increased by 50% and its altitude is decreased by 30%. Then, its area is:

(a) decreased by 20%

(b) increased by 10%

✓ (c) increased by 5%

(d) decreased by 15%

Solution: $1.5 \times 0.7 = 1.05 \rightarrow +5\%$

Q70. Sum of the polynomials $5x^3+2x^2-7x+3$ and $-6-2x^3+7x^2+6x$ is

(a) $3x^3+9x^2-x = 3$

(b) $3x^3+9x^2-x$

✓ (c) $3x^3+9x^2-x-3$

(d) $3x^3+9x^2-x+3$

Q71. A rope is cut into three pieces in the ratio 1:3:5. Given that the length of the longest piece is 35m. The length of the original piece is

- (a) 64
- (b) 61
- (c) 62

✓ (d) 63

Solution: unit = $35/5 = 7$; total = 9 units = 63

Q72. Divide \$782 into three parts, in the ratio 6:8:9, then the first part is

- (a) 200
- (b) 201
- (c) 202

✓ (d) 204

Solution: $782/23 = 34$; $6 \times 34 = 204$

Q73. If $a^2 + b^2 = 117$ and $ab = 54$, then what the value of $(a+b)/(a-b)$ is -----?

✓ (a) 5

- (b) 25
- (c) 10
- (d) None of these

Solution: $(a+b)^2 = 225 \rightarrow a+b=15$; $(a-b)^2 = 9 \rightarrow a-b=3$; $15/3=5$

Q74. If Salman has 350 balls and Ali has 500 balls then Salman's balls are what percent of Ali's balls?

- (a) 40%
- (b) 50%
- (c) 60%

✓ (d) 70%

Solution: $350/500 = 70\%$

Q75. $(-x^{\blacksquare})^2 + (-x^2)^{\blacksquare} = \text{-----}$

- (a) $-2x^1$ ■
- (b) (-
- $2x^2$) ■ (c) (-
- $2x$ ■)²

✓ (d) 0

Solution: $x^1 \blacksquare + (-x^1 \blacksquare) = 0$

Q76. The perimeter of an equilateral triangle is 12. The length of the side is _____

(a) 36

✓ (b) 4

(c) 3

(d) 5

Solution: $12 \div 3 = 4$

Q77. If $pqr=1$, $rst=0$ and $spr=0$, which of the following can not be zero?

(a) p

(b) q

(c) r

✓ (d) all of these

Solution: $pqr=1$ forces p, q, r all $\neq 0$

Q78. If $\sqrt[3]{(a^1 \cdot b^1 \cdot c^1)} = a^x \cdot b^y \cdot c^z$, then the values of x, y and z are respectively -----

(a) 1, 2, 3

✓ (b) 2, 3, 1

(c) 3, 2, 1

(d) 1, 3, 2

Solution: $a^1 \cdot b^1 \cdot c^1 \rightarrow a^2, b^3, c^1$

Q79. $\frac{4}{3}$ of a number is 22, what is $\frac{8}{3}$ of that number?

(a) $\frac{11}{9}$

(b) $\frac{11}{6}$

(c) 2

✓ (d) 44

Solution: number = $22 \times \frac{3}{4} = 16.5$; $\frac{8}{3} \times 16.5 = 44$

Q80. If the number $367 \times x \times 94$ is divisible by 19, then what will be the value for x?

(a) 1

(b) 5

✓ (c) 19

(d) 36

Solution: x must supply the factor of 19

Q81. The two supplementary angles, in which one is 60° less than twice the other, are -----.

(a) $(60^\circ, 120^\circ)$

(b) $(40^\circ, 140^\circ)$

✓ (c) **$(100^\circ, 80^\circ)$**

(d) $(110^\circ, 70^\circ)$

Solution: $x+y=180$, $x=2y-60 \rightarrow y=80$, $x=100$

Q82. In how many ways can 3 officers of equal rank be selected from a group of 6 officers of equal rank?

(a) 360

(b) 240

(c) 120

✓ (d) **20**

Solution: $C(6,3) = 20$

Q83. What would be the length of any side of a Square whose Area is always more than its Perimeter?

(a) more than Zero

(b) more than 1

(c) more than 2

✓ (d) **more than 4**

Solution: $s^2 > 4s \rightarrow s > 4$

Q84. If $5a=7$ and $7b=8$, the value of $a/b = ?$

(a) 1

✓ (b) **$49/40$**

(c) $40/49$

(d) $7/50$

Solution: $a=7/5$, $b=8/7 \rightarrow a/b = 49/40$

Q85. The tens digit of a number is four times the ones digit. The sum of digits in the number is 5. Find the number?

✓ (a) **41**

(b) 32

(c) 14

(d) None of these.

Solution: $tens=4 \times ones$; $5 \times ones=5 \rightarrow ones=1$, $tens=4 \rightarrow 41$

Q86. In a lottery, there are 5 prizes and 15 blanks. A lottery is drawn at random. What is the probability of getting a prize?

✓ (a) 1/4

(b) 5/10

(c) 2/15

(d) 1/3

Solution: $5/(5+15) = 5/20 = 1/4$

Q87. According to Kleene's Theorem (Part II), in which of the following steps do we merge initial states into one?

✓ (a) Step 1

(b) Step 2

(c) Step 3

(d) Step 4

Q88. When there is no external fragmentation, free memory blocks are scattered on hard disk then _____ is used in order to utilize these blocks for space management.

✓ (a) Indexed Allocation

(b) Contiguous Allocation

(c) Linked Allocation

(d) Variable Allocation

Q89. ISR stands for _____.

(a) Inter Service Rollback

(b) Interrupt Signal Recovery

✓ (c) Interrupt Service Routine

(d) Interrupt System Runtime

Q90. In object oriented technique the problem is viewed as:

✓ (a) Objects and their interactions

(b) Data and Functions

(c) Objects and Functions

(d) Classes and Functions

Q91. _____ are responsible for granting access rights to the users of the database.

(a) Database Designers

✓ (b) Database Administrators

(c) End Users

(d) Application Programmers

Q92. Which one is post-order traversal technique?

(a) (N, L, R)

(b) (N, R, L)

(c) (L, N, R)

✓ (d) None of given

Solution: Post-order is (L, R, N), not listed → None of given

Q93. Which traversing method ensures that data will be traversed in ascending order?

✓ (a) In-order

(b) Pre-order

(c) Level-order

(d) Post-order

Q94. _____ is the process of assigning integral values in a specific range to sampled instances.

(a) Binary Encoding

(b) PAM

✓ (c) Quantization

(d) Modulation

Q95. Separation of implementation from interface provides the facility to restrict the _____ from direct access.

✓ (a) Data member

(b) Data function

(c) Class

(d) Object

Q96. In 32-bit Single-Precision Floating Point format, “exponent” is represented by _____ bits.

✓ (a) 8-bits

(b) 16-bits

(c) 28-bits

(d) 32-bits

Q97. Variable names are ----- addresses

- (a) Physical
- (b) Relocatable
- (c) Relative

✓ (d) Symbolic

Q98. A Moore machine is a collection of _____ things.

- (a) two
- (b) three
- (c) four

✓ (d) five

Q99. If an alphabet has “n” number of letters, then number of strings of length “m” will be _____.

- (a) $n+m$
- (b) $(n)(m)$
- (c) m^n

✓ (d) n^m

Solution: n^m (n raised to power m)

Q100. A start state (self-loop on a,b) → on 'b' → state 1 → (λ) → final state.

Above NFA- λ accepts the following string _____.

- (a) a
- (b) baba

✓ (c) baaab

- (d) aaba

Solution: Language = $(a|b)^ b$ — must end in 'b'*