

ALL ANSWERS MUST BE GIVEN ON THE COMPUTERIZED ANSWER SHEET
BY CROSSING THE CORRESPONDING LETTER

English M.C.Q's

No. of Questions: 37 (from 1 to 37)
Questions on Page Nos: 1 To 6

Time: 45 Minutes
Negative markings: **Yes**

For questions **1-20**, decide which answer (**A, B, C** or **D**) best fits each blank.

1. It's better _____ I thought.

- A. as
- B. then
- C. than
- D. like

2. It was _____ expensive restaurant I've ever been to.

- A. more
- B. the more
- C. most
- D. the most

3. "I _____ biology all my life," said the renowned biologist.

- A. study
- B. studied
- C. have studied
- D. am studying

4. _____ Salma _____ to bed early yesterday?

- A. Was; going
- B. Had; been going
- C. Had; gone
- D. Did; go

5. These are the pupils _____ parents have volunteered to take the class out on field trip.

- A. which
- B. whose
- C. whom
- D. who

6. Mohsin's writing is so illegible that I cannot _____ what he has written.

- A. make up
- B. make over
- C. make out
- D. make off

7. Neither the boys nor Sidra _____ the answer to the difficult question.

- A. know
- B. knows
- C. has known
- D. have known

8. Ali prefers watching musicals _____ watching movies.

- A. to
- B. than
- C. over
- D. against

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9. We arrived at the airport just _____ time to send our best friend off.

- A. by
- B. on
- C. at
- D. in

10. We _____ the language test in October. Let's work hard together and strive for good results.

- A. have been taking
- B. have taken
- C. will have taken
- D. will be taking

11. Fahad always criticizes his younger brother, Daniyal. In fact, he dislikes Daniyal _____.

- A. intensely
- B. intently
- C. intentionally
- D. intermittently

12. The rescuers felt that there was _____ danger of a second volcanic eruption.

- A. devastating
- B. eminent
- C. imminent
- D. catastrophic

13. Doctors all over the world are working hard to _____ a cure for bird flu.

- A. invent
- B. discover
- C. construct
- D. experiment

14. The travellers finally _____ the town after a long and tedious journey.

- A. joined
- B. landed
- C. arrived
- D. reached

15. Mariam is not _____ of learning Japanese in six months.

- A. keen
- B. capable
- C. inclined
- D. interested

16. The police were called in to _____ order after a riot broke out on the busy street.

- A. restore
- B. ensure
- C. create
- D. impose

17. After the fire, the residents accused the night watchman of _____ because he had been sound asleep when the fire broke out.

- A. disregard
- B. negligence
- C. sluggishness
- D. forgetfulness

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18. I can never get work done with others around; I need _____.

- A. solitude
- B. isolation
- C. seclusion
- D. loneliness

19. The little girl spilled the hot soup and _____ her hand.

- A. scalded
- B. burnt
- C. bruised
- D. grazed

20. When you "scoff" at your food, it means that you _____ everything on your plate very quickly.

- A. keep in
- B. go over
- C. polish off
- D. put out

For questions 21-24, select the best version (A, B, C or D) of the underlined part of the sentence.

21. The baby was obviously getting too hot, then Hashim did what he could to cool her.

- A. hot, then Hashim did
- B. hot, Hashim did
- C. hot; Hashim, therefore, did
- D. hot; Hashim, trying to do

22. Salma hoped to find a new job. One that would let her earn money during the school year.

- A. job. One that
- B. job. The kind that
- C. job, one that
- D. job, so that it

23. Knocked sideways, the statue looked as if it would fall.

- A. Knocked sideways, the statue looked
- B. The statue was knocked sideways, looked
- C. The statue looked knocked sideways
- D. The statue, looking knocked sideways,

24. To walk, biking, and driving are Ahmed's favourite ways of getting around.

- A. To walk, biking, and driving
- B. Walking, biking, and driving
- C. To walk, biking, and to drive
- D. To walk, to bike, and also driving

For questions 25-32, two sentences are given. Read the sentences, and then choose the best answer (A, B, C, or D) to the question.

25. Interviewing for a new job can be an extremely stressful event.

Many job candidates become anxious about having to respond to certain interview questions, especially those that ask them to prove their competence.

How are the two sentences related?

- A. They repeat the same idea.
- B. They give a problem and a solution.
- C. They make a comparison.
- D. They provide a general claim and specific example.

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26. The pain associated with many medical conditions can be alleviated by listening to classical music on a regular basis.

A great deal of American hospitals have established music therapy programs to help reduce the suffering of their terminally-ill patients.

What does the second sentence do?

- A. It supports the claim made in the first sentence.
- B. It gives the reason for the result mentioned in the first sentence.
- C. It contradicts the evidence given in the first sentence.
- D. It draws a conclusion about what is stated in the first sentence.

27. The tornado caused wide-spread devastation to property in the local area.

Property insurance is much more expensive now than it was before the storm.

What does the second sentence do?

- A. It states the effect.
- B. It gives an example.
- C. It offers a solution.
- D. It makes a contrast.

28. The city has been trying to reduce the amount of litter dropped by pedestrians.

The municipal government has recently introduced fines for littering.

How are the two sentences related?

- A. They repeat the same idea.
- B. They provide a general rule and a specific example.
- C. They state a problem and a solution.
- D. They offer a theory and an explanation.

29. According to the law of gravity, objects dropped from above the surface of the earth fall to the earth's surface.

Apples that fall from apple trees land on the ground.

What does the second sentence do?

- A. It refutes the claim made in the first sentence.
- B. It draws a conclusion about what is stated in the first sentence.
- C. It applies the theory mentioned in the first sentence.
- D. It contradicts the evidence given in the first sentence.

30. Increasing levels of pollution have an extremely adverse effect on the environment.

The government has established regulations to limit the amount of noxious fumes emitted into the atmosphere.

What does the second sentence do?

- A. It exemplifies the first sentence.
- B. It explains the reason for the result mentioned in the first sentence.
- C. It gives a solution to the problem that is stated in the first sentence.
- D. It draws a conclusion about what is stated in the first sentence.

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31. It is widely believed that dinosaurs became extinct as a consequence of a catastrophic meteorological event.

Archaeological evidence recovered near the Gulf of Mexico demonstrates that dinosaurs died out after a large asteroid struck the area.

What does the second sentence do?

- A. It repeats the same idea as stated in the first sentence.
- B. It refutes the point raised in the first sentence.
- C. It presents a solution to the problem mentioned in the first sentence.
- D. It analyzes the claim made in the first sentence.

32. Everyone should take regular vacations in order maintain his or her physical health and well being.

Recent research demonstrates that taking a vacation helps to reduce the chances of getting certain diseases, particularly those that are caused by high stress levels.

How are the two sentences related?

- A. They repeat the same idea.
- B. They give a problem and solution.
- C. They provide a general rule and a specific example.
- D. They create a contrast.

For questions **33-37**, read the text below and answer the questions that follow.

In Asia and much of the Third World, trees are still destroyed in the old-fashioned way: they are cut down for fuel and cropland. In Europe, there is new and potentially more deadly culprit. The Germans call it *Waldsterben*, the dying forest syndrome.

But the disease is far more than a German phenomenon. Since it was first observed by German scientists in the autumn of 1980, the mysterious malady has raced across Europe, blighting woods in countries as far apart as Sweden and Italy.

Explanations for the epidemic range from a cyclic change in the environment to a baffling form of tree cancer. But the most convincing evidence points to air pollution.

Indeed, saving the rapidly deteriorating Forests of Europe will probably require a two-pronged strategy: an offensive campaign that includes the breeding of pollution-immune trees and a defensive scheme that calls for reductions in toxic emissions. But both will require more money than is currently being spent on such measures, as well as total commitment to protecting the environment.

33. According to this passage, which one of the following statements is correct?

- A. There is less damage in Asia than in Europe.
- B. More forests are dying in Germany than anywhere else in Europe.
- C. A cyclic change in the environment is responsible for deforestation.
- D. Air pollution is the main culprit of destroying European forests.

34. Saving the trees of European forests

- A. should not be difficult because of the advances in experimental research.
- B. appears to be a hopeless task and therefore pointless to undertake.
- C. requires a much bigger budget.
- D. demands vigilance and punitive measures against those who cut down the trees.

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35. The dying forest syndrome is a disease that
- A. is peculiar to the forests of Asia
 - B. has spread rapidly over the forests of Europe
 - C. is confined to the forests of Germany
 - D. has affected forests all over the world
36. The writer suggests that
- A. it is no longer possible to grow trees in industrialized areas
 - B. pollution-immune trees will absorb toxic emissions
 - C. all pollution-prone trees should be destroyed
 - D. it is not possible to grow trees that remain unaffected by pollution
37. The writer's approach toward the problem of forest devastation is one of
- A. tolerance
 - B. indifference
 - C. well thought-out strategy
 - D. despondency

Stop. Do not turn the next page. Wait for the invigilator's signal.

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Mathematics M.C.Q's

No. of Questions: 43 (from 38 to 80)
 Questions start from page 7

Time allowed: 50 Minutes
 Negative markings: **Yes**

Q38 $6.7 \times 10^{-2} =$

- A) 0.0067
 B) 0.067
 C) 0.67
 D) 670

Q39 If x and y are distinct prime numbers less than 10, which of the following *cannot* be the sum of x and y ?

- A) 5
 B) 6
 C) 7
 D) 8

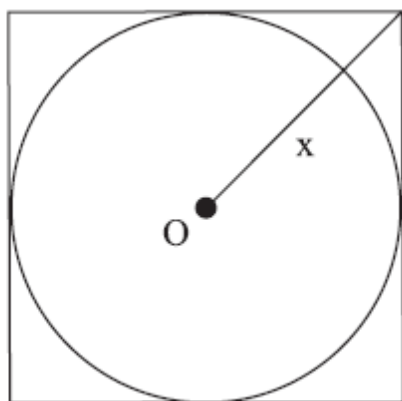
Q40 If the radius of a circle is increased by 10% then the area is increased by

- A) 2.1%
 B) 21%
 C) 121%
 D) None of these

Q41 In a right isosceles triangle, the lengths of the two nonhypotenuse sides are designated a . What is the perimeter of the triangle in terms of a ?

- A) $4a$
 B) a^2
 C) $(2 + \sqrt{2})a$
 D) None of these

Q42 In the figure below, $x = 4$. What is the area of the circle?



- A) 8 B) 8π C) 16 D) 16π

Q43 In an examination, each student in a group scores either 8, 12, 16 or 20 marks. The number of students scoring each mark is shown in the table below. If the median mark is 12, then the largest possible value of x will be:

Mark	8	12	16	20
Number of students	10	20	x	10

- A) 49
 B) 59
 C) 69
 D) None of these

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Q44 If $x + y = \alpha - \beta$ and $x - y = \alpha + \beta$, then xy is

- A) $\alpha^2 + \beta^2$
 - B) $-\alpha\beta$
 - C) $\alpha\beta$
 - D) None of these
-

Q45 In the xy -coordinate system, if $(-3, \beta)$ and $(\alpha - 3, \beta - 3)$ are two points on the line defined by $x + 3y = 12$, then $\alpha =$

- A) 5
 - B) 7
 - C) 9
 - D) 11
-

Q46 What is the product of the distinct prime factors of 150?

- A) 150
 - B) 75
 - C) 50
 - D) 30
-

Q47 If $x|y + 9| > 0$, which of the following must be true?

- A) $x < 0$
 - B) $x > 0$
 - C) $y < -9$
 - D) $y > -9$
-

Q48 The average of three consecutive integers such that twice the greatest integer is 2 less than 3 times the least integer is

- A) 6
 - B) 7
 - C) 8
 - D) None of these
-

Q49 The area of a circle of radius r is the same as the area of a square of side a . Ratio of r to a is

- A) 1 : 1
 - B) $a : r\pi$
 - C) $a : r$
 - D) None of the these
-

Q50 Humera wants to put up fencing around three sides of her rectangular yard and leave a side of 20 feet unfenced. If the yard has an area of 680 square feet, how many feet of fencing does she need?

- A) 40
 - B) 68
 - C) 74
 - D) 88
-

Q51 If the price of CNG increases by 20% and Rizwana intend to spend only 5% more on CNG, by how much % should she reduce the quantity of CNG she buys?

- A) 0.125%
- B) 12.5%
- C) 33.33%
- D) None of these

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Q52 All possible values of an integer variable x satisfying the conditions below are:

$$3x + 9 < 14 \text{ and } 1 - x \leq 3$$

- A) $-2, -3, -4, -5$
 B) $-2, -1, 0, 1$
 C) $1, 2, 3, 4$
 D) None of these
-

Q53 What is the smallest integer u for which $5^u > 625$?

- A) 3
 B) 4
 C) 5
 D) 6
-

Q54 Which of the following is not a solution to the equation $x^3 - x^2 - 9900x = 0$?

- A) -99
 B) 0
 C) 100
 D) 1000
-

Q55 The average of 5 consecutive integers starting with m as the first integer is n . What is the average of following integers?

$$m + 1, m + 3, m + 5, m + 7, m + 9$$

- A) $m + 4$
 B) $n + 6$
 C) $m + 5$
 D) None of these
-

Q56 An entry test conducted by IBA demanded that the test takers answer 45 quantitative questions within 65 minutes. Which of the following is closest to the average amount of time the test takers can spend on each question?

- A) 2 minutes, 18 seconds
 B) 2 minutes, 10 seconds
 C) 1 minute, 29 seconds
 D) 1 minute, 49 seconds
-

Q57 A jar has three black marbles and three white marbles. If you draw three marbles, replacing each marble before drawing the next one, what is the probability that you will draw at least one black marble?

- A) $\frac{1}{2}$
 B) $\frac{3}{8}$
 C) $\frac{5}{8}$
 D) $\frac{7}{8}$
-

Q58 If $3x + 2y = 1$ and $2x + 3y = 4$, then $x + y$ must be

- A) 1
 B) 2
 C) 3
 D) $1 - y$

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Q59 How many 2-digit numbers satisfy the following conditions:

The units digit is smaller than the tens digit?

- A) 50
 - B) 45
 - C) 35
 - D) 30
-

Q60 Solve the inequality $3(x + 4) < 4x$

- A) $x < -12$
 - B) $x > -12$
 - C) $x < 12$
 - D) $x > 12$
-

Q61 Which of the following statements may be correct for $|x + 2|$?

- I) $|x + 2| = -(x + 2)$, when $x < 2$.
- II) $|x + 2| = (x + 2)$, when $x \geq 2$.
- III) $|x + 2| = (x + 2)$, for all real values of x .

- A) I only.
 - B) II only.
 - C) I and II only.
 - D) II and III only.
-

Q62 If x is defined as $\{x < \frac{1}{2}\} \cap \{x > -\frac{1}{2}\}$, then which of the following is not a value of x ?

- I) 0.
 - II) 1.
 - III) $\frac{1}{2}$
 - A) I only.
 - B) I and III only.
 - C) II only.
 - D) II and III only.
-

Q63 For all values of u for which it is defined, the expression $\frac{u^2 - 5u + 4}{u^2 - u}$ can be simplified to

- A) $\frac{4-u}{u}$
 - B) $\frac{u-4}{u}$
 - C) $\frac{4+u}{u}$
 - D) $-4u + u$
-

Q64 Which of the following is divisible by 9?

- A) 2,999,777
 - B) 3,888,666
 - C) 4,777,555
 - D) 5,666,444
-

Q65 The set $\{1, 2, 3, 4, 5, 6, 7, 8\}$ has standard deviation of 2.29. Which of the following values is two standard deviations away from the mean?

- A) 2.21
- B) 6.79
- C) 9.08
- D) None of these

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Q66 Which of the following is equivalent to $(x + 2)(x^4 + 16)(x - 2)(x^2 + 4)$?

- A) $x^2 - 4$
 B) $x^4 - 16$
 C) $x^8 - 256$
 D) None of these

Q67 Monthly rainfall was recorded for two towns over a five-month period using the chart below. If the median rainfall in Town A was equal to the average rainfall in Town B, what is the value of x ?

Month	Town A	Town B
April	3	3
May	0	2
June	2	0
July	4	x
August	5	1

- A) 9
 B) 8
 C) 7
 D) 6

Q68 A circle is tangent to both axes. If the distance from the origin to the centre of the circle is r , what is the area of the circle?

- A) $\frac{\pi r^2}{2}$
 B) πr^2
 C) $2\pi r$
 D) None of these

Q69 Which of the following data suffices to find the area of a right angled triangle?

- I) Magnitude of any two angles of the triangle.
 II) Length of any two sides of the triangle.
 III) Length of all three sides of the triangle.
 A) I only.
 B) II only.
 C) III only.
 D) I and III only.

Q70 If the sum of the interior angles of a regular polygon measures up to 1440 degrees, how many sides does the polygon have?

- A) 10 sides
 B) 9 sides
 C) 8 sides
 D) 7 sides

Q71 What is the area of the circle defined by the equation $(x - 5)^2 + (y + 7)^2 = 3^2$?

- A) 3π
 B) 6π
 C) 9π
 D) 18π

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Q72 What are the roots of the equation $3x^2 + 24x = 27$?

- A) (-1, 9)
 - B) (1, 9)
 - C) (1, -9)
 - D) (-1, -9)
-

Q73 If $2^{(-5y)} = 32^{(2+y)}$, then value of y is

- A) 2
 - B) 1
 - C) 0
 - D) -1
-

Q74 Which of the following sets contains only factors of 180?

- A) {12, 15, 16, 30}
 - B) {12, 18, 20, 22}
 - C) {1, 2, 4, 9, 15}
 - D) {2, 9, 30, 16}
-

Q75 A Pythagorean triple is a triple of positive integers (a, b, c) such that a right triangle exists with legs a, b and hypotenuse c . Following are Pythagorean triples, except

- A) (3, 4, 5)
 - B) (5, 12, 13)
 - C) (10, 11, 12)
 - D) (10, 24, 26)
-

Q76 What is the length of the diagonal of a square whose area is 289 square inches?

- A) $289\sqrt{2}$
 - B) $289\sqrt{3}$
 - C) $17\sqrt{2}$
 - D) $17\sqrt{3}$
-

Q77 Freed and Sami are standing 45 miles apart and they start walking toward each other at the exact same moment. If Freed's speed is 4 miles per hour and Sami's speed is 5 miles per hour, how many miles has Sami walked when they meet?

- A) 5
 - B) 20
 - C) 25
 - D) 30
-

Q78 If Sami can finish a job in 3 hours and Maria can finish the same job in 12 hours; in how many hours could they finish the job if they worked on it together at their respective rates?

- A) 2 B) 2.4 C) 3.25 D) 4
-

Q79 There are eight job applicants sitting in a waiting room – four women and four men. If two of the applicants are selected at random, what is the probability that both will be the men?

- A) $\frac{1}{2}$ B) $\frac{3}{7}$ C) $\frac{3}{14}$ D) $\frac{1}{10}$
-

Q80 At a restaurant, you must choose an appetizer, a main course and a desert. If there are two possible appetizers, three possible main courses, and five possible deserts, how many different meals one can order?

- A) 10 B) 20 C) 30 D) 40

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Computer Science M.C.Q's

No. of Questions: 45 (from 81 to 125)
Questions start from page 13

Time allowed: 50 Minutes
Negative markings: **Yes**

81. The application layer of a network
- A) Establishes, maintains and terminates virtual circuits
 - B) Defines the user's port into the network
 - C) Consists of software being run on the computer connected to the network
 - D) All of the above
82. Which of the following services dynamically resolves NetBIOS-to-IP resolution?
- A) DNS
 - B) DHCP
 - C) WINS
 - D) LMHOSTS
83. The return type for all destructors is
- A) int
 - B) the class
 - C) the same as the first data in the class
 - D) None
84. A distributed network configuration in which all data/information pass through a central computer is
- A) Bus network
 - B) Star network
 - C) Ring network
 - D) Point-to-point network
85. In SQL, which command(s) are used to remove rows from a table
- A) Delete
 - B) Remove
 - C) Truncate
 - D) Both (a) and (c)
86. Which of the following regular expression zero or more instances of x or y?
- A) $(x | y)$
 - B) $(x | y)^*$
 - C) $(x^* | y)$
 - D) (xy^*)
87. A variable's _____ indicates which portion of the program can use it
- A) area
 - B) scope
 - C) lifetime
 - D) reach

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88. Scheduling
- A) Allows jobs to use the processor
 - B) Is not required in uni-processor systems
 - C) Is used at the data link layer
 - D) None of the above
89. In SQL, which command is used to change data in a table?
- A) Update
 - B) Insert
 - C) Browse
 - D) Append
90. The errors that can be pointed out by the compiler are
- A) Syntax errors
 - B) Semantic errors
 - C) Logical errors
 - D) Internal errors
91. Semaphores
- A) Synchronize critical resources to prevent deadlock
 - B) Synchronize critical resources to prevent contention
 - C) Are used to do I/O
 - D) Are used for memory management
92. Which of the following perform modulation and demodulation
- A) Fiber optics
 - B) Satellite
 - C) Coaxial cable
 - D) Modem
93. Inheritance occurs when a class adopts all the traits of
- A) An object
 - B) A parent class
 - C) A variable
 - D) A function
94. In half-duplex transmission
- A) Data can be transmitted in one direction only
 - B) Data can be transmitted in both directions
 - C) Data can be transmitted in both directions simultaneously
 - D) Data cannot be transmitted
95. What is the term used to describe addresses available on a DHCP server
- A) pool
 - B) grid
 - C) cluster
 - D) notes

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96. What does a MAC (Media Access Control) address represent?
- A) A logical address that identifies the workstation
 - B) A physical address that is randomly assigned each time the computer is started
 - C) A physical address that is assigned by the manufacturer
 - D) The logical domain address for the workstation
97. Variable names known only to the procedure in which they are declared are called
- A) global
 - B) local
 - C) recent
 - D) internal
98. The break statement is used to exit from
- A) A do loop
 - B) A for loop
 - C) A switch statement
 - D) All of the above
99. Which of the following is characteristic(s) of an operating system?
- A) Resource management
 - B) Error recovery
 - C) Memory management
 - D) All of the above
100. Consider the following regular expression: $R = (ab \mid abb)^*bbab$. Which of the following string is NOT in the set denoted by R ?
- A) ababab
 - B) ababbbbab
 - C) abbabbbbab
 - D) ababbbbab
101. Consider the following arithmetic expression
- $$2 * ((i \% 5) * 4 + (j - 3) / (k + 2))$$
- Where i, j, k are integer variables. If these variables are assigned the values 8, 15 and 4 respectively, then the given expression will be result as
- a. 32
 - b. 36
 - c. 30
 - d. None of the above
102. Consider the following assignment statement
- $$\text{flag} = (i < 0) ? 0 : 100$$
- What will be the value of flag if 'i' is assigned a non-negative value.
- a. 0
 - b. 100
 - c. -100
 - d. 1

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103. Consider the following assignment statement

$$a = 2 * ((i/5) + (4 * (j-3)) \% (i + j - 2))$$

What will be the value of 'a' if i is an integer equal to 8 and j is an integer equal to 5.

- a. 14
- b. 16
- c. 18
- d. 20

104. What the following 'C' program is calculating:

```
main()
{
    int n, count = 1;
    float x, result, sum = 0;

    printf("How many numbers?");
    scanf("%d", &n);

    while (count <= n) {
        printf("x = ");
        scanf("%f", &x);
        sum += x;
        ++count;
    }
    result = sum/n;
    printf("\n The result is %f \n", result);
}
```

- a. Average of list of real numbers
- b. Average of list of integers
- c. Square of list of integers
- d. Square of list of real numbers

105. What will be the output of the following 'C' program?

```
main()
{
    int i = 0, x = 0;
    for (i = 1; i < 10; ++i)
    {
        if (i % 2 == 1)
            x += i;
        else x--;
    }
    printf("%d", x);
    continue;
}
printf("\nx = %d", x);
}
```

- a. 1 2 3 4 5 6 7 8 9
x=15
- b. 2 4 6 8 10 12 14 16 18
x= 20

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c. 1 0 3 2 7 6 13 12 21
x = 21

d. 1 3 5 7 9 11 13 15 17
x = 15

106. What will be the output of the following 'C' program

```
#include <stdio.h>
main()
{
    int i, j, k, x = 0;

    for (i=0; i<5; ++i) {
        for(j = 0; j<i; ++j)
            x += (i + j - 1);
        printf ("%d ",x);
        break;
    }
    printf("\nx = %d", x);
}
```

a. 0
x = 0

b. 1 2 3 4 5
x = 55

c. 1 3 5 7 9
x = 9

d. 1 3 5 7 9
X = 1

107. What is the output of the following program

```
main()
{
    int i, j, k, x = 0;
    for (i=0; i<5; ++i)
        for(j = 0; j<i; ++j) {
            switch (i + j - 1) {

                case -1:
                case 0:
                    x += 1;
                    break;

                case 1:
                case 2:
                case 3:
                    x +=2;

                default:
                    x +=3;
            }
            printf ("%d ",x);
        }
    printf("\nx = %d", x);
}
```

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}

a. 1 2 3 4 5 6 7 8 9
x=1

b. 2 4 6 8 10 12 14 16 18
x=18

c. 2 4 6 8 10 12 14 16 18
x=2

d. 1 6 11 16 21 24 29 32 35 38
x=38

108. What is the output of the following code

```
int main( ){
    int arr[][3]={{1,1},{2,2,2},{3}};
    printf("%d %d %d",sizeof(arr),arr[0][2],arr[1][2]);
    return 0;
}
```

- a. 36 0 2
- b. 6 1 1
- c. 36 1 2
- d. 6 0 0

109. In Object Oriented Programming style, which of the following relationship is known as inheritance relationship?

- a. 'has-a' relationship
- b. 'is-a' relationship
- c. association relationship
- d. none of the above

110. What is the output of the following 'C' program

```
main( )
{
    int n = 10;
    printf("%d", funct1(n));
}

int funct1(int n)
{
    if (n > 0) return (n + funct1(n-1));
}
```

- a. 10
- b. 55
- c. 0
- d. 1 2 3 4 5 6 7 8 9 10

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111. What is the output of the following 'C' program

```
#include <stdio.h>

int funct1(int a);
int funct2(int a);

main()
{
    int a = 0, b=1, count;
    for(count=1; count<=5; ++count)
    {
        b+= funct1(a) + funct2(a);
        printf("%d ", b);
    }
}

funct1(int a)
{
    int b;
    b = funct2(a);
    return(b);
}

funct2(int a)
{
    static int b =1;
    b+=1;
    return(b+a);
}
```

- a. 5 10 15 20 25
- b. 6 12 18 24 30
- c. 6 10 28 45 66
- d. 6 66 666 6666 66666

112. Consider the following table of integers:

```
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1
```

Among the following, which array would store the table with the minimum amount of memory used?

- a. `int[][] a = new int[5][6];`
- b. `int[][] a = new int[5][];`
`for(int i=0; i<a.length; i++) a[i] = new int[i];`
- c. `int[][] a = new int[5][];`
`for(int i=0; i<a.length; i++) a[i] = new int[i+1];`
- d. `int[][] a = new int[5][];`
`for(int i=0; i<a.length; i++) a[i] = new int[i+2];`

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113. Let
 m = "Faisal is a math major,"
 c = "Faisal is a computer science major,"
 g = "Faisal's cousin is a literature major,"
 h = "Faisal's cousin has read Ghalib,"
 t = "Faisal's sister has read Faiz."

Which of the following expresses the statement:

Faisal is a computer science major and a math major, but his cousin is a literature major who hasn't read both Ghalib and Faiz.

- a. $c \wedge m \wedge (g \vee (\sim h \vee \sim t))$
- b. $c \wedge m \wedge g \wedge (\sim h \wedge \sim t)$
- c. $c \wedge m \wedge g \wedge (\sim h \vee \sim t)$
- d. $c \wedge m \wedge (g \vee (\sim h \wedge \sim t))$

114. The Boolean expression $X = \overline{\overline{A + B + C}}$ is logically equivalent to what single binary operation?

- a. NOR
- b. NAND
- c. AND
- d. OR

115. Polymorphism reduces the effort required to extend an object system by
- a. Coupling objects together more tightly.
 - b. Enabling a number of different operations to share the same name.
 - c. Making objects more dependent on one another.
 - d. Removing the barriers imposed by encapsulation.

For questions 116-118 use the following Bank class information. It contains the headings of the methods in the Bank class, along with a description.

```
public Bank( )
// default constructor starts checking and savings account with zero rupees.
public Bank(double c, double s)
// parameter creates an object with c rupees in current account and s rupees in savings.
public double getCurrent( )
// returns the current account balance
public double getSavings( )
// returns the savings account balance
public double getCombined( )
// returns the combined balance of the current and savings account
public void changeCurrent(double amount)
// alters the balance of the current account by the amount parameter
public void changeSavings(double amount)
// alters the balance of the savings account by the amount parameter
public void closeCurrent( )
// alters the current account balance to zero
public void closeSavings( )
// alters the savings account balance to zero
```

116. The methods in the Bank class are
- a. class methods.
 - b. object methods.
 - c. expression methods.
 - d. variable methods

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117. Access to methods of the Bank class requires
- using a statement, like `Bank.getSavings()`;
 - using a statement, like `Bank.getSavings`;
 - the creation of one or more Bank objects
 - using the get method
118. What is the output of the following program segment?
- ```
Bank Kashif;
Kashif = new Bank();
Bank Zoya;
Zoya = new Bank();
Kashif.changeChecking(1000);
Zoya.changeChecking(1500);
System.out.println("Zoya: " + Zoya.getSavings());
System.out.println("Kashif: " + Kashif.getSavings());
```
- Kashif: 1000  
Zoya: 1500
  - Kashif: 1500  
Zoya: 1000
  - Zoya: 0  
Kashif: 0
  - None of the above
119. Is the Binary Search always preferred over the Linear Search, and why?
- Yes, because the Binary Search is always faster than the Linear Search.
  - Yes, because the Binary Search can search any type of data.
  - No, because the Linear Search is faster than the Binary Search with sorted data.
  - No, because the Binary Search only works with sorted data, unlike the Linear Search.
120. Object-based programming languages do not support:
- Inheritance
  - Dynamic binding
  - Encapsulation
  - All of the above
- Both i and ii
  - iii only
  - iv only
  - i, and iii
121. Consider the following code:
- ```
#include <stdio.h>  
main()  
{  
    int n1 = 100;  
    int n2 = 200;  
    int n3 = n1 / n2;  
    if (n3 > 0)  
    {
```

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```

        n2 = n1;
        n1 = n2;
    }
    else
    {
        n1 = n2;
        n2 = n1;
    }
    printf("%d %d",n1,n2);
}

```

What will be the output of this program?

- a. 200 200
 - b. 100 200
 - c. 200 100
 - d. 100 100
122. What is the value of num at the conclusion of the following program segment?

```

#include <stdio.h>
main()
{
char qwerty = 'B';
int num = 100;
switch(qwerty)
{
case 'A':
    num ++;
case 'B':
    num += 2;
case 'C':
    num += 3;
case 'D':
    num += 4;
}
printf("%d", num);
}

```

- a. 100
 - b. 102
 - c. 109
 - d. Error
123. What is the value of num at the conclusion of the following program statement

```

main()
{
char qwerty = 'B';
int num = 100;
switch(qwerty)
{
case 'A':
    num ++;
    break;
case 'B':
    num += 2;
    break;
case 'C':
    num += 3;
    break;
}

```

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```

case 'D':
    num += 4;
}
printf("%d", num);
}

```

- a. 100
- b. 102
- c. 104
- d. 106

124. What is the output of the following code

```

main()
{
int num1 = 120;
int num2 = 108;
int num3 = 0;
do
{
num3 = num1 % num2;
if (num3 == 0)
printf("%d", num2);
else
{
num1 = num2;
num2 = num3;
}
}
while (num3 != 0);
}

```

- a. 0
- b. 6
- c. 12
- d. 36

125. Consider that the methods f1 and f2 are in the same class:

```

public static int f1(int a, int b)
{
    if ( a == b)
        return b;
    else
        return a + f2(a-1, b);
}

public static int f2 (int p, int q)
{
    If ( p < q)
        return p+q;
    Else
        return p + f1(p-2, q);
}

```

What value will be returned by a call to f1(5,3)?

- a. 5
- b. 6
- c. 7
- d. 15

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Economics M.C.Q's

No. of Questions: 45 (from 81 to 125)
Questions start from page 13

Time allowed: 50 Minutes
Negative markings: **Yes**

Q81 Indifference curves cannot intersect because of the assumption that:

- A) Indifference curves are negatively sloped.
- B) Marginal utility diminishes as more of that good is consumed.
- C) Preferences are complete.
- D) Preferences are transitive.

Q82 If in a model with only two goods a consumer always derives positive marginal utility from each good, then we can infer all but one of the following. Which can we not infer?

- A) The consumer's indifference curves are downward sloping.
- B) No two indifference curves intersect.
- C) The indifference curves are convex to the origin.
- D) Along any ray, indifference curves further from the origin represent higher levels of utility.

Q83 Consider a model with only two goods X and Y, where the quantity of good X is plotted on the horizontal axis and the quantity of good Y is plotted on the vertical axis. If the marginal rate of substitution of good X for good Y is constant and greater than the price ratio P_x/P_y , then the consumer will:

- A) Buy no X.
- B) Buy no Y.
- C) Be indifferent among all combinations of X and Y permitted by his budget constraint.
- D) Adjust his preferences keeping in view the price ratio.

Q84 In a model with only two goods X and Y, in which of the following cases would the budget line move out from the origin without changing its slope:

- A) The price of X increases by 10% while the price of Y falls by 10%.
- B) The prices of X and Y both increase by 10%.
- C) The prices of X and Y both increase by 10% while money income falls by 5%.
- D) The prices of X and Y both fall by 15% while money income falls by 10%.

Q85 If the price of X falls and the substitution effect on the quantity of X consumed is absolutely greater than the income effect on the quantity of X consumed, then we can be sure that:

- A) X is a normal good.
- B) X is an inferior good.
- C) X is not a Giffen good.
- D) Y is a normal good.

Q86 In a model with only two goods X and Y, where the quantity of good X is plotted on the horizontal axis and the quantity of good Y is plotted on the vertical axis, if we know that the demand curve for X is a downward sloping straight line, we know that the price-expenditure curve of good X generated by changing the price of X must:

- A) Fall continuously.
- B) Rise continuously.
- C) Be a horizontal straight line.
- D) Fall at high prices and rise at low prices.

Q87 In a model with only two goods X and Y, if the cross elasticity of demand for X with respect to the price of Y is greater than zero, then we can infer that:

- A) The price elasticity of demand for Y is elastic.
- B) The price elasticity of demand for Y is inelastic.
- C) The price elasticity of demand for X is elastic.

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D) The price elasticity of demand for X is inelastic.

Q88 Which of the following cases indicates a Giffen good?

- A) Income elasticity of demand and price elasticity of demand are both positive.
- B) Income elasticity of demand and price elasticity of demand are both negative.
- C) Income elasticity of demand is positive, but price elasticity of demand is negative.
- D) Income elasticity of demand is negative, but price elasticity of demand is positive.

Q89 Which of the following cases is theoretically impossible?

- A) Income elasticity of demand and price elasticity of demand are both positive.
- B) Income elasticity of demand and price elasticity of demand are both negative.
- C) Income elasticity of demand is positive, but price elasticity of demand is negative.
- D) Income elasticity of demand is negative, but price elasticity of demand is positive.

Q90 If an individual's supply curve of labor slopes backward over a particular range, then we know that:

- A) The substitution effect outweighs the income effect.
- B) The substitution and income effects work in the same direction.
- C) Leisure is an inferior good.
- D) Leisure is a normal good.

Q91 In a perfect competitive market, a firm produces good X using two inputs A and B. The following information applies to the firm's current position: $MPP_A = 6$, $MPP_B = 15$, $P_A = \$3$, $P_B = \$5$, $P_X = \$1$. To maximize profit the firm should use:

- A) More of A and less of B.
- B) More of B and less of A.
- C) More of both A and B.
- D) Less of both A and B.

Q92 Which of the following is a correct statement about the difference between perfect competition and imperfect competition?

- A) If there are many firms in an industry, then the market is perfectly competitive.
- B) If the demand curve facing the firm is downward sloping, then the market is imperfectly competitive.
- C) If all firms in the industry produce identical products, and there is more than one firm, then the market is perfectly competitive.
- D) If there is more than one firm in the industry, if all produce identical products, and all charge identical prices, then the market is perfectly competitive.

Q93 If the market demand curve is stated by the equation $Q = 50 - 2P$, then we know that:

- A) Marginal revenue will be positive for any price above 15.
- B) Marginal revenue will be negative for quantities at which demand is elastic.
- C) Total revenue will be maximized when $P = 25$.
- D) The market price will not be less than 10.

Q94 If the point elasticity of demand is -1.5 at a price of $\$30$, then marginal revenue at the corresponding output is:

- A) $\$20$
- B) $\$10$
- C) $\$5$
- D) $-\$5$

Q95 A profit maximizing monopolist who is able to practise price discrimination between two markets will:

- A) Sell outputs and charge prices such that the price elasticities of demand in the two markets are the same.
- B) Charge the higher price in the market with the more elastic demand curve.
- C) Sell the larger quantity in the market where the demand curve is more elastic.
- D) Charge higher prices in both markets than he would if price discrimination were not possible.

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Q96 In a productive activity, which involves no variable cost of production, four oligopolistic firms face a market demand curve given by the equation $P = 100 - Q$. If each firm maximizes profit on the basis of the Cournot assumptions, then:

- A) Each firm would produce 25 units of output.
- B) The market-price would settle at $P = 20$.
- C) The industry supply would be 60 units of output.
- D) No stable equilibrium will exist.

Q97 In the Edgeworth model of duopoly:

- A) Each firm assumes that its rival will not change its price.
- B) Each firm assumes that its rival has a capacity limit to output.
- C) The conclusion is reached that no stable equilibrium is possible.
- D) All of the above are true.

Q98 A form of market failure that arises when products of different qualities are sold at a single price is called

- A) Moral hazard.
- B) Market signaling.
- C) Adverse selection.
- D) Asymmetric information.

Q99 The efficient quantity of a public good is determined by equating the marginal cost of producing the good with

- A) The marginal benefit of each individual.
- B) The marginal cost of producing a comparable private good.
- C) The marginal benefit of the median consumer.
- D) The sum of the individual marginal benefits.

Q100 According to the Coase theorem, an efficient solution to an externality problem will depend on:

- A) Which party has the right to the activity in question.
- B) Which party can avoid the externality at a lower cost.
- C) Which party has purchased a permit.
- D) All of the above.

Q101 The burden of a tax will fall mostly on buyers when demand is relatively _____ and supply is relatively _____.

- A) Inelastic; inelastic
- B) Elastic; elastic.
- C) Inelastic; elastic.
- D) none of the above.

Q102 Disposable personal income:

- A) Is computed by subtracting personal tax and nontax payments from personal income.
- B) Is generally greater than personal income.
- C) Includes corporate profits but not dividends.
- D) Does not include government transfers to individuals.

Q103 The value added on an item produced means:

- A) A firm's profits on the item sold.
- B) The value of the labor inputs in the production of an item.
- C) The value of a firm's output less the value of its costs.
- D) The value of a firm's output less the value of the intermediate goods that the firm purchases.

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Q104 In examining the impact of fiscal policy, it is assumed that:

- A) Consumption, investment, and the interest rate are endogenous variables.
- B) Consumption, investment, and the interest rate are exogenous variables.
- C) Government purchases, taxes, and interest rates are endogenous variables.
- D) Government purchases, taxes, and interest rates are exogenous variables.

Q105 The supply and demand for loanable funds determines the:

- A) Real wage.
- B) Real rental price of capital.
- C) Real interest rate.
- D) Nominal interest rate.

Q106 Assume that equilibrium GDP (Y) is 5,000. Consumption is given by the equation $C = 500 + 0.6(Y - T)$. Taxes (T) are equal to 600. Government spending is equal to 1,000. Investment is given by the equation $I = 2,160 - 100r$, where r is the real interest rate in percent. In this case, the equilibrium real interest rate is:

- A) 5 percent.
- B) 8 percent.
- C) 10 percent.
- D) 13 percent.

Q107 If an earthquake destroys some of the capital stock, the neoclassical theory of distribution predicts:

- A) The real wage will rise and the real rental price of capital will fall.
- B) Both the real wage and the real rental price of capital will fall.
- C) Both the real wage and the real rental price of capital will rise.
- D) The real wage will fall and the real rental price of capital will rise.

Q108 In the Solow growth model, the Golden Rule level of capital accumulation is the steady state with the highest level of:

- A) Output per worker.
- B) Capital per worker.
- C) Saving per worker.
- D) Consumption per worker.

Q109 Assume two economies are identical in every way except that one has a higher population growth rate. According to Solow growth model, in the steady state the country with the higher population growth rate will have a _____ level of total output and _____ rate of growth of output per worker as/than the country with the lower population growth rate.

- A) Higher; the same
- B) Higher; a higher.
- C) Lower; the same.
- D) Lower; a lower.

Q110 In the two-sector endogenous growth model, income growth persists because:

- A) The production function shifts exogenously.
- B) The saving rate exceeds the rate of depreciation.
- C) The creation of knowledge in universities never slows down.
- D) The fraction of the labor force in universities is large.

Q111 All of the following are reasons for frictional unemployment except:

- A) Workers have different preferences and abilities.
- B) Unemployed workers accept the first job offer that they receive.
- C) The flow of information is imperfect. .
- D) Geographic mobility takes time.

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Q112 Open-market operations are:

- A) Commerce Department efforts to open foreign markets to international trade.
- B) Central bank purchases and sale of government bonds.
- C) Securities and Exchange Commission rules requiring open disclosure of market trades.
- D) Treasury Department purchases and sales of the gold stock.

Q113 Money market mutual fund shares are included in:

- A) L but not M3.
- B) M3 but not M2.
- C) M2 but not M1.
- D) M1 but not currency.

Q114 To increase the money supply, the central bank:

- A) Buys government bonds.
- B) Sells government bonds.
- C) Buys corporate stocks.
- D) Sells corporate stocks.

Q115 "Inflation tax" means that:

- A) As the price level rises, taxpayers are pushed into higher tax brackets.
- B) As the price level rises, the real value of money held by the public decreases.
- C) As taxes increase, the rate of inflation also increases.
- D) In a hyperinflation, the chief source of tax revenue is often the printing of money.

Q116 A rise in government spending shifts the IS curve because it _____ national saving for any given level of income, and this _____ the interest rate for any given level of income.

- A) Reduces; reduction lowers.
- B) Reduces; reduction raises.
- C) Increases; increase raises.
- D) Increases; increase lowers.

Q117 According to the theory of liquidity preference, if the supply of real money balances exceeds the demand for real money balances, individuals will:

- A) Sell interest-earning assets in order to obtain non-interest-bearing money.
- B) Purchase interest-earning assets in order to reduce holdings of non-interest bearing money.
- C) Purchase more goods and services.
- D) Be content with their portfolios.

Q118 In the IS-LM model, a decrease in the interest rate would be the result of a(n):

- A) Increase in the money supply.
- B) Increase in government purchases.
- C) Decrease in taxes.
- D) Increase in money demand.

Q119 If the short-run IS-LM equilibrium occurs at a level of income below the natural rate of output, then in the long run the price level will _____, shifting the _____ curve to the right and returning output to the natural rate.

- A) Increase; IS
- B) Decrease; IS
- C) Increase; LM
- D) Decrease; LM

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Q120 If the IS curve is given by $Y = 1,700 - 1.00r$, the money demand function is given by $(MIP)^d = Y - 100r$, the money supply is 1,000, and the price level is 2, then if the money supply is raised to 1,200, equilibrium income rises by:

- A) 200 and the interest rate falls by 2 percent.
- B) 100 and the interest rate falls by 1 percent.
- C) 50 and the interest rate falls by 0.5 percent.
- D) 200 and the interest rate remains unchanged.

Q121 The usual pattern of a business cycle is

- A) Peak, trough, recovery, recession
- B) Peak, recovery, trough, recession
- C) Recession, peak, recovery, trough
- D) Recession, trough, recovery, peak

Q122 Assets of bank include:

- A) Money market mutual funds.
- B) Currency in the hands of the public.
- C) Loans to customers.
- D) Demand deposits.

Q123 The Solow residual measures the portion of output growth that cannot be explained by growth in:

- A) Capital and labor.
- B) Technology.
- C) The money supply.
- D) The saving rate.

Q124 Tobin's q equals the:

- A) Cost of buying and renting out one unit of capital measured in units of the economy's output.
- B) Marginal product of capital minus the cost of capital.
- C) Ratio of the replacement value of installed capital to the market value of installed capital.
- D) Ratio of market value of installed capital to the replacement cost of installed capital.

Q125 In the Baumol-Tobin model, the benefit of holding money is:

- A) The interest forgone.
- B) Convenience.
- C) The lower risk and higher return compared to other assets.
- D) The interest elasticity of money demand.

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(Stop. Do not turn over this page until you are told to do so.)