ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET
BY CRSSOING THE CORRESPONDING LETTER
English M.C.Q's

No. of Questions: 45 (from 1 to 45)	Time allowed: 40 Minutes
Questions on Page Nos: 1 To 4	Negative markings: **Yes**

For questions 1-10, decide which answer (A, B, C or D) best fits each blank.

Tennis is my ___1___ sport. Nothing else comes close as a great competitive activity. For one thing, it's easier to get a ___2___ going than with a team sport. All you need are ___3___ people, one on each side. Secondly, you can play for __4___ at many public courts. Sure, you have to buy a racquet, but a ___5___ one should last for many ___6___. And a can of tennis ___7___ only costs a couple of dollars.

In addition, if you play tennis, you get a lot of ___8___. Compare it to a sport like baseball, where players spend most of their ___9___ standing around waiting for something to happen.

Yes, as far as I'm concerned, tennis is the ___10___ sport in the world!

1. A. funny   B.   easiest   C.   old   D.   favorite
2. A. game   B.   car   C.   player   D.   ball
3. A. one   B.   two   C.   three   D.   four
4. A. free   B.   fun   C.   hours   D.   money
5. A. wooden   B.   blue   C.   used   D.   good
6. A. hours   B.   days   C.   sports   D.   years
7. A. courts   B.   balls   C.   corn   D.   racquets
8. A. money   B.   fun   C.   sprains   D.   exercise
9. A. money   B.   help   C.   time   D.   paper
10. A. best   B.   worst   C.   same   D.   cheapest

For questions 11-20, decide which answer (A, B, C or D) best fits each blank.

Take a big truck. Take a comfortable little house. Put them __11__ and what do you get? A motorhome. A motorhome has all the comforts of __12__. A complete kitchen is standard, with a stove and __13__. Most __14__ motorhomes come from the factory with a microwave oven too. They have small dining room tables and seats called dinettes. They have living room __15__ such as couches, chairs, and a television of course.

Motorhomes come with complete bathrooms. There's no need to look for a rest room along the highway. Time to wash up? No problem. The well equipped motorhome has a shower; some even have bathtubs. When you're __16__, just pull open the couch, rearrange the dinette, or walk back to the bedroom. There's sleeping accommodations for the whole family. You can use a motorhome almost anywhere. They produce and store their own electricity. They have __17__ to __18__ many gallons of fresh water and waste water as well. When it's time to go __19__ or to just __20__ in style, nothing beats a motorhome!

11. A. close   B. sideways   C. apart   D. together
12. A. cotton   B. home   C. pillows   D. nails
13. A. shower   B. toilet   C. camera   D. refrigerator
14. A. new   B. old   C. broken   D. fast
15. A. carpets   B. furniture   C. windows   D. curtains
16. A. cautious   B. serious   C. angry   D. tired
17. A. cups   B. tanks   C. pails   D. glasses
18. A. leak   B. watch   C. hold   D. container
19. A. crying   B. home   C. camping   D. backwards
20. A. dress   B. design   C. drive   D. travel

(go on to the next page)

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For questions **21-27**, decide which answer (**A, B, C** or **D**) best fits each blank.

21. **Ride** is to **rode** as **row** is to _____.

   A. road   B. rode   C. rowed   D. route

22. **Bill** is to **Bill's** as **it** is to _____.

   A. its   B. it's   C. Bills   D. it

23. **They are** is to **they're** as **it is** is to _____.

   A. its   B. it's   C. iti'   D. i'is

24. **Close** is to _____ as **good** is to **well**.

   A. water   B. closed   C. open   D. closely

25. **Create** is to **creation** as **arrange** is to _____.

   A. arrangement   B. arranged   C. arranged   D. arranges

26. **Baby** is to **babies** as **woman** is to _____.

   A. girls   B. adult   C. plural   D. women

27. **Man** is to **his** as **men** is to _____.

   A. Her   B. oys   C. boy   D. their

For questions 28-31, choose the best option (A, B, C or D)

28.

Your cousin claimed to be late because the doors of his house were frozen shut. Even though I have my doubts, his explanation is **plausible**. It got really cold last night. I'll just have to take his word for it.

If a statement is *plausible*, _____.

A. you must always believe it
B. you should never believe it
C. it's hard to understand because it makes no sense
D. it's believable enough to possibly be true

29.

If you don't **curtail** your spending, you'll be broke in no time at all!

Which word is a synonym of "curtail"?

A. reduce
B. follow
C. behind
D. buy

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30.

No word must ever leak out about this military action! It has to be a **clandestine** operation in order to succeed.

Which word is a synonym of "clandestine"?

A. family
B. useful
C. dangerous
D. secret

31.

Put this medicine on your arm and rub it into your skin until it's invisible. It will **inhibit** the infection's attempt to spread.

What does "inhibit" mean?

A. live in a certain place
B. block or slow down
C. itch or burn
D. help to do something important

For questions 32-41, choose the best option (A, B, C or D)

Once upon a time in a land now lost in time, there lived a beautiful young princess named Princess Megan. She lived in a __32__ palace where her every __33__ was met. She had ice cream with every meal. She had clothes made of pure gold. She even had her __34__ phone in her bedroom! The palace was indeed a wonderful place to live. It was __35__. It was exciting. It was safe. Did I say safe? Well not entirely.

    You see, just outside the palace there was a magnificent __36__. In that garden grew the most spectacular __37__ and the most __38__ fruits and vegetables. However, in that garden there __39__ grew the Terrible Onion. No one __40__ the Terrible Onion. But it was said that the Terrible Onion would pop out of the ground and eat people when the __41__ struck then.

32.	A.	cold	B. grand	C. stone	D. small
33.	A.	friend	B. pet	C. wish	D. enemy
34.	A.	toy	B. own	C. plastic	D. old
35.	A.	luxurious	B. drafty	C. ancient	D. wooden
36.	A.	garden	B. tree	C. pool	D. lawn
37.	A.	fireworks	B. sounds	C. flowers	D. stones
38.	A.	rotten	B. pretty	C. delicious	D. costly
39.	A.	also	B. never	C. often	D. did
40.	A.	eats	B. called	C. felt	D. ate
41.	A.	stick	B. car	C. lightning	D. mood

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For questions 42-45, choose the best option (A, B, C or D).

Read each paragraph carefully. Choose the best answer to the questions that follow.

42.

Juan loves to play games. His favorite game is chess because it requires a great deal of thought. Juan also likes to play less demanding board games that are based mostly on luck. He prefers Monopoly because it requires luck and skill. If he's alone, Juan likes to play action video games as long as they aren't too violent.

What is the main idea of this paragraph?

A. Juan dislikes violence.
B. Juan likes to think.
C. Juan enjoys Monopoly.
D. Juan enjoys playing games.

43.

Maria is watching too much television. A toddler shouldn't be spending hours staring blankly at a screen. Worse yet, some of her wild behavior has been inspired by those awful cartoons she watches. We need to spend more time reading books with her and pull the plug on the TV!

What is the main idea of this paragraph?

A. Watching a lot of television isn't good for Maria.
B. Books are good.
C. All cartoons are bad.
D. Some cartoons are bad for Maria.

44

Samantha, I can't eat or sleep when you are gone. I need to hear your scratchy voice and see your lovely toothless smile. I miss that special way that you eat soup with your fingers. Please come home soon!

What is the main idea of this paragraph?

A. Samantha, you have bad manners.
B. Samantha, you should see a dentist.
C. Samantha, I miss you.
D. Samantha, I have lost my appetite.

45

Someday we will all have robots that will be our personal servants. They will look and behave much like real humans. We will be able to talk to these mechanical helpers and they will be able to respond in kind. Amazingly, the robots of the future will be able to learn from experience. They will be smart, strong, and untiring workers whose only goal will be to make our lives easier.

Which sentence from the paragraph expresses the main idea?

A. Someday we will all have robots that will be our personal servants.
B. We will be able to talk to these mechanical helpers and they will be able to respond in kind.
C. They will look and behave much like real humans.
D. Amazingly, the robots of the future will be able to learn from experience.

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Mathematics M.C.Q's

No. of Questions: 50 (from 46 to 95)	Time allowed: 80 Minutes
Questions starting from page 5	Negative markings: **Yes**

Q46   The sum of three consecutive natural numbers is 3000. The smallest of these three numbers is

   A) 1002
   B) 1001
   C) 1000
   D)   999

Q47   The length of the rectangle is 6 cm more than its breath. If the perimeter of the rectangle is 308 cm, find the area of the rectangle

   A)   6000 cm^2
   B)   5960 cm^2
   C)   5920 cm^2
   D)   5880 cm^2

Q48   Find the solution set of the equation: $-8 + |6y - 7| = 3$

   A) $\{3, \dfrac{2}{3}\}$
   B) $\{3, -\dfrac{2}{3}\}$
   C) $\{3\}$
   D) $\{\dfrac{2}{3}\}$

Q49   Find the solution set of the equation: $|7 - x| < 2, \forall\, x \in \mathbb{R}$

   A) $\{x \mid x \in \mathbb{R} \text{ and } x < 5\}$
   B) $\{x \mid x \in \mathbb{R} \text{ and } 5 < x < 9\}$
   C) $\{x \mid x \in \mathbb{R} \text{ and } x < 9\}$
   D) $\{x \mid x \in \mathbb{R} \text{ and } -5 < x < 9\}$

Q50   Find the solution set of $(2x + 1)(2x - 1) + 1 = 0$

   A) $\{0\}$
   B) $\{0, -1\}$
   C) $\{0, 1\}$
   D) $\{1, -1\}$

Q51   Eliminate t from the following equations:
$$x = 8t, \quad y = 128t^2$$
   A) $y = x^2$
   B) $y = 2x^2$
   C) $y = 4x^2$
   D) $x = 2y^2$

Q52   The mean proportional between 100 and 160 is

   A) 400
   B) 230
   C) $20\sqrt{10}$
   D) $40\sqrt{10}$

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Q53   If $x \propto \dfrac{1}{y}$, and x is 9 when $y = 15$, find x when y is 30

A) 4.5
B) 18
C) 135
D) None of these

Q54   If the measures of angles of a triangle are proportional to 1, 2 and 3, then the measure of the largest angle of the triangle will be

A) 30^0
B) 60^0
C) 90^0
D) 120^0

Q55   The marks obtained by 80 students in a Mathematics test are given below:

Marks	20	30	40	50	60	70	80
Number of Students	5	10	15	20	15	10	5

The Arithmetic Mean of marks is

A) 30
B) 40
C) 50
D) 60

Q56   Find the value of x if the median for 2, 3, 7, x, 10, 15 is 8

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

Q57   The variance of the following set of observations is

$$-2, -1, 0, 1, 2$$

A) 2
B) 1.6
C) 1.2
D) 0.8

Q58   If two circles of diameters 20 cm and 10 cm touch externally, the distance between their centers is

A) 5 cm
B) 10 cm
C) 30 cm
D) None of these

Q59   The set of all points of a plane which are equidistant from a fixed point is called
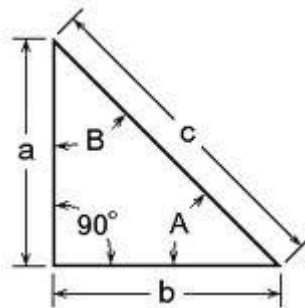
A) an ellipse
B) a parabola
C) a hyperbola
D) a circle

Q60   If the value of $\sin \beta$ is 0.8, what is the value of $\sin -\beta$?

A) 0.2
B) 0.8
C) −0.2
D) −0.8

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Q61   In the given triangle a = 21 and c = 29.
      The value of sin B is

A) $\dfrac{20}{41}$

B) $\dfrac{21}{41}$

C) $\dfrac{20}{29}$

D) $\dfrac{21}{29}$

Q62 $2\sin 45^0 + 0.5 \cosec 45^0 =$

A) $\dfrac{5}{2\sqrt{2}}$

B) $\dfrac{3}{\sqrt{2}}$

C) $\dfrac{5}{\sqrt{2}}$

D) $\dfrac{3}{2\sqrt{2}}$

Q63 $\{1, 2, 3, 5, 7\} \triangle \{3, 5, 7, 9, 11\}$

A) $\{1, 2, 3, 5, 7, 9, 11\}$
B) $\{3, 5, 7\}$
C) $\{1, 2, 9, 11\}$
D) None of these

Q64   The domain of the binary relation R = {(2, 1), (4, 3), (6, 5), (8, 7)} is

A) $\{1, 2, 3, 4, 5, 6, 7, 8\}$
B) $\{1, 3, 5, 7\}$
C) $\{2, 4, 6, 8\}$
D) None of these

Q65   The relation R = {(a, b) | a = 2b} in Z, the set of integers, has the range {4, 8, 10, 12}. Its
      domain is given by

A) $\{2, 4, 5, 6\}$
B) $\{8, 16, 20, 24\}$
C) $\{2, 4, 5, 6, 8, 16, 20, 24\}$
D) None of these

Q66   If M $= \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 1 & 1 \\ 3 & 3 \end{bmatrix}$ then /M/

A) –2
B) 2
C) zero
D) None of these

Q67   The inverse of A $= \begin{bmatrix} 13 & -4 \\ 3 & 1 \end{bmatrix}$ is

A) $25 \begin{bmatrix} 13 & -4 \\ -3 & 1 \end{bmatrix}$

B) $0.04 \begin{bmatrix} 1 & 4 \\ -3 & 13 \end{bmatrix}$

C) $25 \begin{bmatrix} 1 & 3 \\ 4 & 13 \end{bmatrix}$

D) None of these

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Q68   The length of a rectangle is 10 cm more than its breadth. If the perimeter of the rectangle is 100 cm, then the area of the rectangle will be

A) 300 cm^2

B) 600 cm^2

C) $\sqrt{600} \text{ cm}^2$

D) None of these

Q69   Suppose z is some constant and w = 11, is a solution of the equation $w^2 + zw + 33 = 0$, then the other solution of the quadratic equation is

A) 8
B) −8
C) 3
D) −3

Q70   The value of cosec 60^0 is

A) $\dfrac{\sqrt{3}}{2}$

B) $\dfrac{1}{2}$

C) $\dfrac{1}{\sqrt{3}}$

D) $\dfrac{2}{\sqrt{3}}$

Q71   The value of $\sqrt{5}(\sqrt{35} + \sqrt{125})$ is

A) $\sqrt{5}(5 + 2\sqrt{31})$
B) $5(5 + \sqrt{7})$
C) $(\sqrt{5} + 12)$
D) None of these

Q72   The sum of three consecutive integers, of which x is the largest integer.

A) 3x
B) 3x + 1
C) 3x + 2
D) 3x − 3

Q73   Which expression is equivalent to $2\log(4/x)$,

A) $(\log 4 - \log x)^2$
B) $\log 16 - 2\log x$
C) $-2\log 4\log x$
D) None of these

Q74   The value of $\sqrt[3]{64x^{12}y^{15}}$

A) $16x^{36}y^{45}$

B) $8x^4y^5$

C) $4x^4y^5$

D) None of these

Q75   What should be added to $6x^3 + 13x^2 + 4x + 20$, so that it becomes exactly divisible by $2 + x^2$?

A) $-8x + 6$
B) $-8x - 6$
C) $8x - 6$
D) $8x + 6$

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Q76 Find the value of $x^4 + \dfrac{1}{x^4}$ when $x + \dfrac{1}{x} = 2$

A) 2
B) 4
C) 8
D) 16

Q77 The degree of the polynomial $6xy^3 + 13xz^2 + 4xyz + 20^5$

A) two
B) three
C) four
D) five

Q78 H.C.F of $28x^2y$ and $42xy^2$ is

A) 14xy
B) 28xy
C) $42xy^2$
D) $56xy^2$

Q79 The least common multiple of $x^2 + x - 6, 2x^2 + 9x + 9$ *and* $x^2 + 7x + 12$ *is*

A) $(x - 2)$
B) $(2x + 3)(x + 4)$
C) $(x - 2)(2x + 3)(x + 4)$
D) $(x - 2)(2x + 3)(x + 4)(x + 3)$

Q80 The equation $ax^2 + x + c = 0$, will not represent a quadratic equation, if

A) $a = 1$
B) $a = 0$ and $c \neq 0$
C) $ac \neq 0$
D) $a > 0$ and $c < 0$

Q81 Which the following is irrational?
A) $\dfrac{22}{7}$

B) 0.3333…
C) 0.16666….

D) π

Q82 Solution set of $\sqrt{x} = -6$ is

A) { 6 }
B) { 36 }
C) { }
D) { −36 }

Q83 Find x when the Matrix is singular

$$\begin{bmatrix} 1 & 3x \\ 3 & 27 \end{bmatrix}$$

A) 2
B) −2
C) 3
D) None of these

Q84 $x^2 - x + 1 = 8$ is a

A) linear equation
B) quadratic equation
C) cubic equation
D) None of these

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Q85 $x^3 - x^2 + 2 =$

A) $(x + 1)(x^2 - 2x - 2)$
B) $(x + 1)(x^2 - 2x + 2)$
C) $(x - 1)(x^2 + 2x + 2)$
D) $(x - 1)(x^2 - 2x - 2)$

Q86 If $(x^3 - x^2 - 226x + 1410)$ is divided by $(x + 17)$, then the remainder is

A) 20
B) 30
C) 40
D) 50

Q87 Simplified form of $\dfrac{3z^2 - zw}{2z^2 - 3zw^2}$ is

A) $\dfrac{3z + w}{w(2z - 3w)}$

B) $\dfrac{(3z - w)w}{(2z - 3w)}$

C) $\dfrac{z - 3w}{w(3z - 2w)}$

D) $\dfrac{3z - w}{2z - 3w^2}$

Q88 In the matrix $\begin{bmatrix} 10 & 20 \\ 30 & 40 \end{bmatrix}$, the diagonal elements are

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

Q89 If $A = \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$, then $|A^{-1}| =$

A) 2
B) –2
C) 0.5
D) –0.5

Q90 Suppose a system of two equations in two unknowns is given in matrix form as $A\underline{x} = \begin{bmatrix} 10 \\ 20 \end{bmatrix}$.
If A is a non-singular matrix with $A^{-1} = \begin{bmatrix} 10 & 15 \\ 20 & 25 \end{bmatrix}$, then the unique solution of the system is given by

A) $\begin{bmatrix} 25 \\ 45 \end{bmatrix}$

B) $\begin{bmatrix} 700 \\ 400 \end{bmatrix}$

C) $\begin{bmatrix} 400 \\ 700 \end{bmatrix}$

D) None of these

Q91 Construction of a triangle is possible when sum of measures of two sides is ------- the third side.

A) equal to
B) greater than
C) less than
D) All of these

11

Q92   Consider the following six real numbers

i) $(10)^{20}$ ii) $(-20)^{10}$ ii) $(20)^{-20}$ iv) $(-30)^{19}$ v) $(-20)^{-10}$ vi) $(-19)^{-19}$

A) all numbers are positive
B) all numbers are negative
C) two numbers are negative and four numbers are positive
D) two numbers are positive and four numbers are negative

Q93   Find a if $\log_a 243 = 5$

A) 2
B) 3
C) 4
D) 5

Q94 $\dfrac{\log_{11} 5}{\log_{11} 15} =$

A) $\log_{11} 15$
B) $\log_{11} 5$
C) $\log_5 15$
D) $\log_{15} 5$

Q95 The Distributive Property of Intersection over Union is given by

A) $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

B) $(A \cap B)' = (A' \cup B')$

C) $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

D) $(A \cup B)' = (A' \cap B')$

(END of the TEST)

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