For questions 1-26, decide which answer (A, B, C or D) best fits each blank.

1. Children are the delight _________ the house.
   A of  
   B for  
   C to  
   D in

2. Faisal _________ a fortune when his great uncle Tanveer passed on.
   A made into  
   B went into  
   C came into  
   D bought

3. With the passing of time and the encroachment of people, the habitat of gorillas _________ to decrease.
   A continuing  
   B which continue  
   C continues  
   D that it has continued

4. Sugar intake, particularly that of refined sugar, _________ curtailed by most overweight people wishing to lessen their corpulence.
   A must being  
   B which must  
   C must be  
   D must

5. In recent months, the final mapping of the human genome _________ the range of medical treatments and cures available to those suffering from various diseases.
   A has extended  
   B extends  
   C will extend  
   D will have extended

6. Intelligent life on other planets, while remaining an intriguing possibility, _________ yet to be discovered.
   A has  
   B has been  
   C has not  
   D have

7. Broccoli _________ best in gardens having loose, well-composted soil, and full sunlight.
   A had grown  
   B grows  
   C growing  
   D which grows
8. The princess in the fairytale *Sleeping Beauty* _________ down and slept for twenty years.

A lain  
B laid  
C lay  
D lied

9. Because of copper's conductivity, it _________ for housing electrical cords and circuitry.

A values  
B is valued  
C is being valuable  
D has valued

10. As recently as a decade _________, astronomers regarded Pluto as a planet of little scientific interest.

A before  
B for  
C since  
D ago

11. At the railway station, the gray morning light _________ to filter in between the heavy stone pillars upon throng of straw-hatted peasants, Indian women carrying their burdens on their backs, and sleepy, tired soldiers.

A is begun  
B begun  
C was beginning  
D begin

12. In _________, the crime rate has begun to drop due to neighbourhood watch programs.

A the past few years  
B a few years ago  
C few years  
D a few years since

13. Ghazala never tells the truth. I don't believe _________ any longer.

A hers  
B her  
C she  
D him

14. Disappointingly, many software companies have discovered a limited audience for _________ from the couch.

A Web surfing  
B Web to surf  
C to Web surf  
D Web surfs

15. Shooting stars, otherwise known as meteorites, often fall to Earth in a pattern dictated _________ and Earth rotation.

A to solar winds  
B by solar winds  
C on solar winds  
D which solar winds
Ink stains, commonly regarded __________ difficult stains to remove, will not succumb to the usual array of detergents and cleaners found in supermarkets.

A as the most  
B to the most  
C in the most  
D through the most

Above-ground swimming pools have __________ the flexibility of being able to be moved from place to place but also the efficiency of using less water than standard in-ground pools.

A that  
B all  
C in addition  
D not only

I can sell you some bananas but only __________.

A few  
B little  
C a few  
D a little

"Would you like to come swimming with us?" asked Tahira.  "__________," responded Fahad.

A I'll love to  
B I like it  
C I'd love to  
D I'd like it

To further the important study of solar radiation __________ long range weather forecasting, the organization appropriated over ten percent of its budget.

A as relation with  
B for relation on  
C by relation of  
D in relation to

Come to my party __________ Saturday night.

A in  
B on  
C at  
D the

In flush financial times, __________ on Wall Street may employ as many as 800 stock brokers and managers.

A a brokerage typical stock  
B typically stock, a brokerage  
C a stock typical brokerage  
D a typical stock brokerage

Even at the peak of its power, the circulating column of air at the core of a tornado__________ in excess of 250 miles per hour.

A almost never reaches  
B reaches almost never  
C almost reaches never  
D reaches never almost
Among the many unusual creatures of the high Nepalese forests _________ with genetic ties hearkening back to the time of mammoths.

A a breed is of unusual elephants  
B is an unusual breed of elephants  
C an unusual breed is of elephants  
D elephants are an unusual breed

"Earth" is a __________ appearing in somewhat impure or diluted form.

A naturally occurring metal oxide  
B occurred naturally oxide metal  
C oxide metal occurring naturally  
D metal occurring naturally oxide

__________ the import trade appreciate the proportion of imported food and drug stuffs.

A Few persons not associated with  
B Not few persons associated with  
C Associated with not a few persons  
D With not a few persons associated,

For questions 27-30, choose the sentence (A, B, C or D) that has correct punctuation.

27  
A I read in a book, "If all else fails, succeed; if all else succeeds"...  
B I read in a book, "If all else fails, succeed; if all else succeeds..."  
C I read in a book, "If all else fails, succeed; if all else succeeds...."  
D I read in a book, "If all else fails; succeed; if all else succeeds..."

28  
A Whenever, Sadia, is in town she visits her sister.  
B Whenever Sadia, is in town she visits her sister.  
C Whenever Sadia is in town she visits her sister.  
D Whenever Sadia is in town, she visits her sister.

29  
A I asked Aisha, "Did he ask for his ring back"?  
B I asked Aisha? "did he ask for his ring back?"  
C I asked Aisha, "Did he ask for his ring back?"  
D I asked Aisha, "Did he ask for his ring back"?

30  
A Shahid worried about the hurricane; but tried to stay calm and help his family.  
B Shahid worried about the hurricane; but tried to stay calm, and help his family.  
C Shahid worried about the hurricane but tried to stay calm, and help his family.  
D Shahid worried about the hurricane but tried to stay calm and help his family.

For questions 31-38, read the text below and choose the word (A, B, C or D) that can replace the underlined part of the sentence.

*Fields of Darkness* was a gripping and memorable film, even though the plot was in some ways (31) difficult to believe. Some critics have said it’s (32) not as good as people say it is and the story is (33) boring because it has been done so often, but I disagree. I found it (34) emotional and even (35) extremely upsetting at times. On the other hand, another film I saw recently, *Three Delicate Balances*, had a plot which was (36) complex and impossible to understand and (37) lacked a clear order. I also feel that the director thought that if he threw in a few (38) slightly immoral and shocking scenes it would make a good movie, but it just didn’t work.
31  
A far-fetched  
B overrated  
C hackneyed  
D plagiarised  

32  
A far-fetched  
B overrated  
C hackneyed  
D disappointed  

33  
A far-fetched  
B hackneyed  
C overrated  
D tedious  

34  
A harrowing  
B baffling  
C uplifting  
D moving  

35  
A baffling  
B moving  
C harrowing  
D uplifting  

36  
A impossible  
B impediment  
C implausible  
D impenetrable  

37  
A discord  
B disjointed  
C distinct  
D discrepancy  

38  
A risqué  
B action  
C stiff  
D convoluted  

For questions 39-41, read the text below and answer the questions that follow.

Various researches suggest that there are creatures that do not know what light means at the bottom of the sea. They don't have either eyes or ears; they can only feel. There is no day or night for them. There are no winters, no summers, no sun, no moon, and no stars. It is as if a child spent its life in darkness in bed, with nothing to see or hear. How different our own life is! Sight shows us the ground beneath our feet and the heavens above us - the sun, moon, and stars, shooting stars, lightning, and the sunset. It shows us day and night. We are able to hear voices, the sound of the sea, and music. We feel, we taste, we smell. How fortunate we are!
39 This passage is mainly about

A life of sea creatures at the bottom of the sea
B how wonderful our lives were and will be
C the differences among creatures of the earth and those of the sea
D the superiority of human beings over some creatures in terms of senses

40 We discover that the sea creatures

A have the same senses that we do
B have no sense of hearing as well as sight
C hear the sounds of the ocean
D live in darkness because no light reaches to the bottom

41 In the passage a child in darkness is likened to

A someone who lives where there are no seasons
B an animal without the sense of touch
C a sea creature with no seeing or hearing ability
D a perfect sleeper, for there is no sound around to hear

For questions 42-44, read the text below and answer the questions that follow.

Have you ever wondered whether fishes drink or not? All living things must drink, and they often require a fresh supply of water. A person can go without food for many days, but he or she cannot go for long without water. Fishes drink, and fishes that live in salt water must drink salt water. However, when we watch them in an aquarium and see them opening and closing their mouths, we must not assume that they are drinking. Fishes need water for its oxygen. The water that they seem to be gulping gives them oxygen, which is in the water. On the other hand, when a fish drinks, it swallows water, just in the way we do.

42 It is stated in the passage that a fish opens and closes its mouth

A in order to get oxygen
B so as to gulp
C to drink to stay alive
D to swim in an aquarium

43 We are informed by the passage that a person

A can live for a long time without water
B can live for a long time without food
C has no need for food and water
D does need water to get oxygen

44 When a fish drinks water

A it requires fresh water
B it swallows water just like humans
C it requires salt water
D it drinks water for its oxygen

(Stop. Do not turn over this page until you are told to do so.)
**Mathematics M.C.Q's**

No. of Questions: 40 (from 45 to 84)  
Time allowed: 70 Minutes  
Questions on Page Nos: 7 To 12  
Negative markings: Yes

**Q45** If \( x = 3 - 4\sqrt{2} \), then the value of \( x + 1 / x \) will be

A) \( 3 + \sqrt{2} \)  
B) \( -4\sqrt{2} \)  
C) 6  
D) None of these

**Q46** The value of \( \log_b 256 \) is

A) \( 5 / 3 \)  
B) \( 7 / 3 \)  
C) \( 8 / 3 \)  
D) None of these

**Q47** If \( x - \frac{1}{x} = 3 \), then the value of \( x^4 + \frac{1}{x^4} \)

A) 47  
B) 51  
C) 123  
D) 119

**Q48** \( 9x^2 - 4y^2 + 4z^2 + 12xz = \)

A) \( (3x + 4y + z)(3x - y + z) \)  
B) \( (3x + y + z)(3x - 4y + 2z) \)  
C) \( (3x + 2y + 2z)(3x - 2y + 2z) \)  
D) \( (3x + 2y + 2z)(3x - 2y + z) \)

**Q49** It is given that \( (x + 2) \) is a factor of \( 9x^3 - 4x^2 + 4x + 96 \), then

A) \( 9x^3 - 4x^2 + 4x + 96 = 0 \) has only one real distinct root  
B) \( 9x^3 - 4x^2 + 4x + 96 = 0 \) has only one complex distinct root  
C) all the roots of \( 9x^3 - 4x^2 + 4x + 96 = 0 \) are real  
D) all the roots of \( 9x^3 - 4x^2 + 4x + 96 = 0 \) are complex

**Q50** The L.C.M of \( 7x^2 - 12x + 5 \), \( x^2 - 12x + 11 \) and \( x^2 - x \) is

A) \( x(x - 1)(7x - 5) \)  
B) \( (x - 1)(7x - 5)(x - 11) \)  
C) \( x(x - 1)(7x - 5)(x - 11) \)  
D) None of these

**Q51** If \( A = \begin{bmatrix} 1 & 2 \\ 3 & d \end{bmatrix} \) \( \begin{bmatrix} 1 & 1 \\ 3 & 3 \end{bmatrix} = \begin{bmatrix} 1 & b \\ 3 & 1 \end{bmatrix} = \begin{bmatrix} 1 \\ 4 \end{bmatrix} \) \( \begin{bmatrix} 1 \\ 3 \end{bmatrix} \) then

A) \( a = 2b = 2 \)  
B) \( a = 2b \)  
C) \( a = b \)  
D) \( a = 2b = 4 \)

**Q52** Three sides of a triangle are of lengths 3, 4, and 5 cm respectively. The triangle is

A) an isosceles triangle  
B) a scalene triangle  
C) a right triangle  
D) an equilateral triangle
Q53  The inverse of $A = \begin{bmatrix} 1 & 4 \\ 3 & 13 \end{bmatrix}$ is
A) $\begin{bmatrix} 13 & -4 \\ -3 & 1 \end{bmatrix}$
B) $\begin{bmatrix} 13 & 4 \\ 3 & 1 \end{bmatrix}$
C) $\begin{bmatrix} 1 & 3 \\ 4 & 13 \end{bmatrix}$
D) None of these

Q54  If $\begin{bmatrix} 1 \\ 3 \\ 2 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$, then $\begin{bmatrix} x \\ y \end{bmatrix} =$
A) $\begin{bmatrix} 1 \\ 0 \end{bmatrix}$
B) $\begin{bmatrix} 0 \\ 0.5 \end{bmatrix}$
C) $\begin{bmatrix} 1 \\ 3 \end{bmatrix}$
D) None of these

Q55  The length of a rectangle is 5 cm more than its breadth. If the area of the rectangle is 234 cm², then the perimeter of the rectangle will be
A) 31 cm
B) 62 cm
C) $\sqrt{234}$ cm
D) None of these

Q56  The solution set of the roots of the equation $|x + 3| + x = 6$ is
A) $\{4, 5\}$
B) $\{-1.5\}$
C) $\{1.5\}$
D) $\{-1.5, 1.5\}$

Q57  Let x be a real number satisfying the inequality $|1 - 2x| < 5$, then the solution set of the inequality is given by
A) $x \leq 3$
B) $x < 3$
C) $-2 < x < 3$
D) $-2 \leq x \leq 3$

Q58  Suppose z is some constant and w = 3, 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) 11
D) $-11$

Q59  The mean proportional of two positive numbers $a = 20$ and $b = 80$ is
A) 30
B) 40
C) 50
D) 60

Q60  If the measures of angles of a triangle are proportional to 4, 5 and 6, then the measure of the smallest angle of the triangle will be
A) 36°
B) 48°
C) 60°
D) 72°
Q61 The numbers of children of 100 families in a village are given below:

<table>
<thead>
<tr>
<th>Number of children / family</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of families</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

The approximate value of the average number of children per family is

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

Q62 Following are the runs made by a batsman in 10 matches:

50, 60, 30, 85, 10, 20, 30, 24, 99, 46

Find the median.

A) 30  
B) 38  
C) 46  
D) 60

Q63 The mode of the data given in the previous problem is

A) 20  
B) 24  
C) 30  
D) 99

Q64 The mean of four numbers u, v, w and x is 10 and the mean of six numbers u, v, w, x, y and z is 16. Find the mean of y and z.

A) 13  
B) 26  
C) 28  
D) 30

Q65 If two circles of radii 20 cm and 10 cm touch internally, the distance between their centers is

A) 10 cm  
B) 20 cm  
C) 30 cm  
D) None of these

Q66 The measure of an angle inscribed by a semi-circle is equal to

A) 45°  
B) 90°  
C) 135°  
D) 180°

Q67 In the given triangle \( a = 21 \) and \( b = 20 \). The value of \( \sin A \) is

A) \( \frac{a}{41} \)  
B) \( \frac{b}{41} \)  
C) \( \frac{a}{29} \)  
D) \( \frac{b}{29} \)
Q68 The value of \( \sin 60^\circ \) is
A) \( \frac{\sqrt{3}}{2} \)
B) \( \frac{1}{2} \)
C) \( \frac{1}{\sqrt{3}} \)
D) \( \frac{\sqrt{3}}{2} \)

Q69 The weight \( E \) of a person on earth's surface is directly proportional to his / her weight \( M \) on mars. If a man weights 126 kg on earth and 42 kg on mars, then what will be weight of his wife on mars if she weighs 66 kg in Karachi?
A) 40 kgs
B) 22 kgs
C) 99 kgs
D) None of these

Q70 If \( 5(n - 1) - 11(2 - 3n) = -46 \), what is the value of \(-7n + 3n^2\)?
A) 3.25
B) -3.25
C) 4.25
D) None of these

Q71 The value of \( \sqrt{5}(\sqrt{35} + 4\sqrt{63}) \) is
A) \( \sqrt{5}(6 + 4\sqrt{63}) \)
B) \( \sqrt{5}(\sqrt{35} + 32) \)
C) \( \sqrt{5}\sqrt{7}(\sqrt{5} + 12) \)
D) None of these

Q72 The sum of three consecutive integers, of which \( x \) is the middle integer.
A) \( 3x \)
B) \( 3x + 1 \)
C) \( 3x + 2 \)
D) \( 3x + 3 \)

Q73 36 people can construct a house in 15 days. But the owner would like to finish the work in 10 days. How many more workers should he employ?
A) 54
B) 18
C) 20
D) 16

Q74 Coach Waqar constructed a Venn diagram that shows the number of athletes who play football, basketball, and hockey. How many more athletes play football than hockey?
A) 3
B) 4
C) 9
D) 12
Q75 The domain of the binary relation \( R = \{(1, 2), (3, 4), (5, 6), (7, 8)\} \) is
A) \( \{1, 2, 3, 4, 5, 6, 7, 8\} \)
B) \( \{1, 3, 5, 7\} \)
C) \( \{2, 4, 6, 8\} \)
D) None of these

Q76 The set \( A = \{1, 2, 3, 4\} \) has the following relations in it:
\[ R_1 = \{(1, 2), (2, 3), (3, 4), (4, 1)\} \]
\[ R_2 = \{(1, 2), (3, 4), (4, 1)\} \]
\[ R_3 = \{(1, 1), (2, 2), (3, 3)\} \]
\[ R_4 = \{(2, 1), (4, 4), (3, 1), (2, 3)\} \]
The only correct statement is
A) \( R_1 \) is a function
B) \( R_2 \) is a function
C) \( R_3 \) is a function
D) \( R_4 \) is a function

Q77 The value of \( 3\sqrt{216x^6y^9} \)
A) \( 36x^{18}y^{27} \)
B) \( 6x^2y^3 \)
C) \( 216x^2y^3 \)
D) None of these

Q78 \( x^6 - y^6 = \)
A) \( (x^3 - y^3)^2 \)
B) \( (x - y)(x + y)(x^2 - y^2)(x^2 + y^2) \)
C) \( (x - y)(x + y)(x^2 - xy + y^2)(x^2 + xy + y^2) \)
D) None of these

Q79 60 cm of a certain type of piping cost Rs 900. What is the cost of 1 km of such piping?
A) Rs 15,000,000
B) Rs 1,500,000
C) Rs 150,000
D) Rs 15,000

Q80 In an army camp, there is food for 10 weeks for 1600 people. After 5 weeks, 400 more soldiers joined the camp. For how many more weeks will the food last?
A) another 2 weeks
B) another 3 weeks
C) another 4 weeks
D) another 5 weeks

Q81 Which is the greatest?
A) 80% of 100.3
B) 7% of 100.24
C) 40% of 200.5
D) 5% of 250

Q82 H.C.F of 28x and 56y^2 is
A) 28
B) 28xy
C) 56xy
D) 56xy^2
Q83 The price of a T-shirt was Rs 600. It was first increased by 20%. After a week the shop owner decreased the price by 20%. What is the new price of the T-shirt?
   A) Rs 600
   B) Rs 660
   C) Rs 630
   D) Rs 576

Q84 The equation $ax^2 + bx + c = 0$, will not represent a quadratic equation, if
   A) $a \neq 0$ and $b = 0$
   B) $a = 0$ and $b \neq 0$
   C) $a \neq 0$ and $c = 0$
   D) both A) and C)

(END of the TEST)