

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

Mathematics M.C.Q's

No. of Questions: 40

Time: 80 Minutes

Questions on Page Numbers: 1 To 8

Negative markings: **Yes**

Q1 If $(2x + 5)(3x - 8) = kx^2 + mx - n$, then the value of $k + m - n$?

- A) -35
 - B) -33
 - C) -31
 - D) None of these
-

Q2 If x and y are integers, and $4x + 5y = 12$, which of the following could be the value of x ?

- A) 3
 - B) 2
 - C) 1
 - D) 0
-

Q3 If n is odd, which of the following cannot be even?

I $2n + 1$

II $8n$

III $n^2 - 1$

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

Q4 The larger side of a rectangle is 3 more than 4 times of its smaller side. If the rectangle smaller side is tripled and its larger side is doubled the perimeter of new rectangle is 102 cm greater than original perimeter. Find the area of the original rectangle.

- A) 1680 cm^2
 - B) 280 cm^2
 - C) 188 cm^2
 - D) 86 cm^2
-

Q5 If X and Y axes form two triangles $\Delta 1$ and $\Delta 2$ with lines $x + y = 1$ and $x - y = 20$ respectively, then the ratio of areas of triangles $\Delta 1$ to $\Delta 2$ is

- A) 1 : 400
- B) 400 : 1
- C) 1 : 20
- D) 20 : 1

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Q6 If $\frac{9}{4m} + \frac{7}{4m} = \frac{1}{16^x}$, then x expressed in terms of m is

- A) $0.5m + 1$
 B) $0.5m - 1$
 C) m^2
 D) $m - 2$

Q7 If an integer is divisible by both 8 and 28, then the integer also must be divisible by which of the following?

- | | |
|-----|----|
| I | 56 |
| II | 14 |
| III | 4 |

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

Q8 If the mean of a set of data is 65, and the standard deviation is 5, which of the following represents the interval that is three standard deviations from the mean?

- A) 5 to 15
 B) 65 to 80
 C) 15 to 65
 D) 50 to 80

Q9 $f(f(2)) = 34$ for all of the following functions EXCEPT

- A) $f(x) = 34$
 B) $f(x) = x^2 + x - \sqrt{41} - 7$
 C) $f(x) = x^2 + x + \sqrt{41} - 7$
 D) $f(x) = 3 - 4x$

Q10 $(250)^2 - 2(200)(250) + (200)^2 =$

- A) 2000
 B) 2500
 C) 4000
 D) None of these

Q11 If $y \diamond x = x^{2y}$ for all positive integers, then $6 \diamond (5 \diamond 4) =$

- A) 2^{240}
 B) 2^{120}
 C) 4^{240}
 D) 6^{120}

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Q12 The roots of the equation $\log_9(x^2+110x+1729) = 3$ are

- A) -10, 100
- B) 10, 100
- C) -10, -100
- D) 10, -100

Q13 If $x^2 + x - 12 > 0$ and $-x^2 + 2x + 3 < 0$, then x lies in the interval

- A) $(-4, 3)$
- B) $[-4, 3]$
- C) $(-4, 3) \cup (1, 3)$
- D) $(-\infty, -4) \cup (3, \infty)$

Q14 What number must be subtracted from two numbers which are in the ratio 2:3 so that the ratio becomes 5:9 and sum of the modified numbers is 168.

- A) 48
- B) 36
- C) 336
- D) None of these

Q15 If one root of the equation $x^2 + x + \alpha = 0$ is 1 and the equation $4x^2 + 4x + \beta = 0$ has only one root, then the quadratic equation $x^2 + \alpha x + \beta = 0$ has

- A) only one real root
- B) two distinct real roots
- C) complex roots
- D) None of these

Q16 How many unique number plates can be generated of the form XXXYY where X is any letter from A to T and Y is any digit from 1 to 9.

- A) 648000
- B) 1757600
- C) 1423656
- D) None of these

Q17 The expression $\frac{1}{\sqrt{|3x|-9}}$ is undefined for

- I $x = \pm 3$
- II $-3 < x < 3$
- III those real numbers x which are greater than 3

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

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Q18 Twenty one marbles are placed in a bowl. There are twice as many green marbles as orange marbles in the bowl. What is the probability that a marble taken from the bowl is green?

- A) $\frac{1}{3}$
 B) $\frac{2}{3}$
 C) $\frac{3}{4}$
 D) None of these

Q19 If $y = 10^{-1}$, what is the value of $(y^2 - y + \frac{1}{y} - \frac{1}{y^2})y^2$?

- A) -0.9009
 B) 0.0991
 C) 1.0991
 D) None of these

Q20 The marks obtained by 100 students in a Algebra test are given below:

Marks	15	20	25	30	35	40	45	50	55
Number of Students	10	15	10	20	10	15	10	5	5

The Arithmetic Mean of marks is

- A) 38.75
 B) 37.75
 C) 36.75
 D) None of these

Q21 The expression $x^3 + bx^2 - 7x + 10$ has a remainder of 7 when it is divided by $x - 3$. The value of b is

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

Q22 A and B entered into a partnership with capitals in the ratio of 5:6. After 6 months, A withdrew 20% of his capital and B withdrew 25% of her capital. The gain at the end of 12 months was R390,000. What is the share of A?

- A) R180,000
 B) R210,000
 C) R195,000
 D) None of these

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Q23 A train traveled from Point A to Point B at a speed of u kmph and traveled back from B to A at v kmph. What is the average speed of the train?

- A) $\frac{1}{2} \left(\frac{1}{u} + \frac{1}{v} \right)$
B) $\frac{2uv}{u+v}$
C) $\frac{u+v}{2}$
D) $\frac{u+v}{uv}$
-

Q24 Suppose we have a biased coin that comes up heads with probability $\frac{2}{3}$. This coin is flipped 3 times. What is the probability that it lands on heads exactly twice?

- A) $\frac{5}{9}$
B) $\frac{4}{9}$
C) $\frac{3}{8}$
D) None of these
-

Q25 Suppose events A, B, and C are independent. If $P(A \cap C) = 0.03$ and $P(B \cap C) = 0.09$, and $P(C) = 0.3$ then $P(A \cap B)$ =

- A) $P(A \cap C)$
B) $P(B \cap C)$
C) $P(C)$
D) $P(B)$
-

Q26 The sum of the 9th and 19th term of an arithmetic progression is 200. What is the 14th term of the arithmetic progression?

- A) 300
B) 200
C) 100
D) None of these

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Q27 A certain store sold pens for R18 each and pencils for R21 each. If a customer purchased both pens and pencils from the store for a total of R270, what total number of pens and pencils did the customer purchase?

- I 13
- II 14
- III 15

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

Q28 Find the value of $x^4 + \frac{1}{x^4}$ when $x - \frac{1}{x} = 5$

- A) 675
- B) 727
- C) 701
- D) None of these

Q29 The range of the function $f(x) = -x^2 - 10x + 9$ is

- A) All real values which are less than or equal to 34
- B) All real values which are greater than 34
- C) All real values which are less than 34
- D) All real values which are greater than or equal to 34

Q30 On a 5-day mountain trip, 6 persons consumed food costing R24000. For the same food costs per person per day, what would be the cost of food consumed by 10 persons during a 8-day mountain trip?

- A) R 32000
- B) R 48000
- C) R 64000
- D) R 72000

Q31 A person on a diet loses 4 kgs during the first week, 2 kgs during the second week, 1 kg during the third week and this pattern continues. How many weeks are needed to lose $\frac{127}{16}$ kgs?

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

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Q32 What is the middle of 5 consecutive even integers whose sum is 520?

- A) 108
 - B) 106
 - C) 104
 - D) 102
-

Q33 If $f(x) = x^2 + ax + b$ such that $f(-100) = f(100)$, then the coefficient of x in $f(x)$ is

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

Q34 Which of the following is the equation of a line that goes through the points (0, 7) and origin?

- A) $y = 7$
 - B) $x = 7$
 - C) $y = 0$
 - D) $x = 0$
-

Q35 Which expression is equivalent to $\frac{1-\sqrt{7}}{2+\sqrt{7}}$?

- A) $-\sqrt{7} + 3$
 - B) $-\sqrt{7} - 3$
 - C) $\sqrt{7} + 3$
 - D) $\sqrt{7} - 3$
-

Q36 The product of the prime integers between 50 and 60, inclusive, is:

- A) 2703
 - B) 3127
 - C) 178239
 - D) None of these
-

Q37 The value of $\sqrt[3]{729x^{21}y^{51}}$ is

- A) $81x^{63}y^{115}$
- B) $9x^7y^{17}$
- C) $243x^7y^{17}$
- D) None of these

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Q38 The number of rooms at Hostel A is 40 more than thrice the number of rooms at Hostel B. If the total number of rooms at Hostel A and Hostel B is 800, what is the number of rooms at Hostel B?

- A) 610
 - B) 190
 - C) 420
 - D) None of these
-

Q39 How many three digits integers between 600 and 900 meet **one** or **both** of the conditions given in the two statements below?

Statement 1: The first digit is 7

Statement 2: The last digit is 5

- A) 140
 - B) 130
 - C) 120
 - D) 110
-

Q40 Let a be the negative root and b be the positive root of the quadratic equation $x^2 + 5x - 6 = 0$, then the value of

$$\frac{a^{-1} + b^{-1}}{a^{-1}} + \frac{a^{-1} - b^{-1}}{b^{-1}} \text{ is}$$

- A) $\frac{37}{6}$
 - B) $-\frac{37}{6}$
 - C) $-\frac{1}{3}$
 - D) None of these
-

Don't turn to the next page (which is # 9) until instructed by the invigilator

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English M.C.Q's

No. of Questions: 46 (Numbered 41 to 86)

Time: 60 Minutes

Questions on Page Numbers: 9 To 18

Negative markings: **Yes**

41. This _____ of disturbed humanity has floated across seas, swum through rivers, trudged over mountains, permeated city streets, and barged blithely through border check-posts in search of a German Paradise.
- A. Phalanx
B. Individuality
C. Exclusivity
D. Solitary
42. Tariq was laughing now. He _____ the trident up swiftly.
- A. Lower
B. Hauled
C. Depress
D. Disgruntled
43. The oil has _____ effects on ocean habitats.
- A. Vague
B. Deleterious
C. Buoyant
D. languid
44. Before the Industrial Revolution the earth seemed large and its resources _____ .
- A. Effervescent
B. Parochial
C. Inexhaustible
D. Contemplative
45. Nations that had _____ themselves comfortably within the European Union are now questioning this choice.
- A. Repulsed
B. Convene
C. Cocooned
D. Uninsulated
46. Population growth and its increasing pressure on resources leads to a greater _____ of inhabited land.
- A. Scattering
B. Fragmentation
C. Fostering
D. Invigoration

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47. The vast Atlantic Ocean once separated the continents of Europe and America, but even that expanse of seawater could not prevent _____ migrants navigating across it.

- A. Tenacious
- B. Irresolute
- C. Swerving
- D. Transient

48. Children are sent to work in fields, and thus not given the opportunity for education; perhaps the slow pace of industrialization and the _____ distribution of wealth are responsible for this state of affair.

- A. Inequitable
- B. Unprejudiced
- C. Impartial
- D. Indiscriminate

49. Delhi has seen two of India's worst incidents of religious violence, and the massacres of 1947 and 1984 make it a worrying candidate for a Gujarat model of _____.

- A. Fervor
- B. Unsectarian
- C. Zealotry
- D. Terrorism

50. He was a man of _____ fancy, and, withal, of an authority so irresistible that, at his will, he turned his varied fancies into facts.

- A. Apathetic
- B. Exuberant
- C. Perturb
- D. Debilitate

Grammar: Select the option which best replaces the underlined part.

51. Web sites like Facebook and Myspace offer ways for people to connect in the virtual world however they do not replace traditional forms of social interaction.

- A. Web sites like Facebook and Myspace offer ways for people to connect in the virtual world; however, they do not replace traditional forms of social interaction.
- B. Web sites like Facebook and Myspace offer ways for people to connect in the virtual world however, they do not replace traditional forms of social interaction.
- C. Web sites like Facebook and Myspace offer ways for people to connect in the virtual world; however they do not replace traditional forms of social interaction.
- D. Web sites like Facebook and Myspace offer ways for people to connect in the virtual world, however they do not replace traditional forms of social interaction.

52. It ought to be her with whom you share your secrets, not me.

- A. her with whom you share your secrets, not me
- B. her with whom you share your secrets, not I.
- C. she with whom you share your secrets, not me.
- D. she with whom you share your secrets, not I.

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53. The best way to encourage innovative thinking is not to promise financial rewards for ideas, but to ensure that the person who makes the suggestion will be receiving recognition for his contribution.

- A. but to ensure that the person making the suggestion receives recognition for his contribution.
- B. but to ensure that the person who makes the suggestion will be receiving recognition for his contribution.
- C. but rather by ensuring that the person making the suggestion receives recognition for his contribution.
- D. but rather ensure that suggestion-maker receives recognition for his contribution.

54. We are dedicated in helping the poor and our student government is good in saving.

- A. We are dedicated to help the poor and our student government is good at saving.
- B. We are dedicated to helping the poor and our student government is good at saving.
- C. We are dedicated to helping the poor and our student government is good in saving.
- D. We are dedicated in helping the poor and our student government is good in saving.

55. The painting would have been even more priceless had it been signed.

- A. The painting would have been even more priceless had it been signed.
- B. The painting would have been more valuable had it been signed.
- C. The painting could have been anything but more priceless had it been signed.
- D. The painting would be more priceless had it been signed.

56. The internet has spread so, that in our culture it touches all segments of society.

- A. The internet has so permeated our culture that it touches all segments of society.
- B. The internet has so diffused our culture that it touches all segments of society.
- C. The internet has spread so, that in our culture it touches all segments of society.
- D. The internet had subtly spread in our culture that it touches all segments of the society.

57. By advertising on television, pharmaceutical companies gain exposure for their prescription drugs. Patients respond to this by requesting drugs they might not need.

- A. By advertising on television, pharmaceutical companies gain exposure for their prescription drugs. Patients respond to this by requesting drugs they might not need.
- B. By advertising on television, pharmaceutical companies gain exposure for their prescription drugs. Patients respond to the ads by requesting drugs they might not need.
- C. By advertising on television, pharmaceutical companies gain exposure for their prescription drugs. Patients respond to these by requesting drugs they might not need.
- D. By advertising on television, pharmaceutical companies gain exposure for their prescription drugs. Patients respond to this television advertising by requesting drugs they might not need.

58. A local school whose name will be in tomorrows paper, has received the Governors Gold Medal for outstanding community service.

- A. A local school, the name of which will be in tomorrow's paper, has received the Governor's Gold Medal for outstanding community service.
- B. A local school, whose name will be in tomorrow's paper, has received the Governor's Gold Medal for outstanding community service.
- C. A local school whose name will be in tomorrows paper, has received the Governor's Gold Medal for outstanding community service.
- D. A local school the name of which will be in tomorrows paper has received the Governor's Gold Medal for outstanding community service.

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59. China's economy continues to flourish this year: industrial production grew, inflation has eased, and the trade surplus swelled.

- A. grew, inflation has eased, and the trade surplus swelled
- B. has grown, inflation has eased, and the trade surplus swelled
- C. has grown, inflation eased, and the trade surplus has swelled
- D. is growing, inflation easing and the trade surplus swelling

60. Have recently developed a passion for gardening, and the garden I have been working has tiny tulips, several of them in yellow.

- A. The garden I have been working lately has several tiny yellow tulips.
- B. The garden that I have been working, has tiny but several tulips, all yellow.
- C. The garden now has several tulips all yellow and tiny.
- D. Several tulips, tiny and yellow have grown in the garden now.

61. In 1947, Pakistan and India achieved independence from Great Britain, but freedom was coming at a great cost.

- A. but freedom was coming at a great cost.
- B. yet freedom was coming at great cost.
- C. yet freedom did come at a great cost.
- D. but freedom came at great cost.

62. After a storied investment bank recently fired its CEO and hired an outspoken and flamboyant replacement, members of the news media centered their stories on the replacement's claims that, based upon his past work at a private equity firm, he can return the investment bank to profitability.

- A) that, based upon his past work at a private equity firm, he could return the investment bank to profitability
- B) of the ability, based upon his past work at a private equity firm, of returning the investment bank to profitability
- C) of being able to return, based upon his past work at a private equity firm, the investment
- D) to be, based upon his past work at a private equity firm, able to return the investment bank to profitability

63. A ground-breaking report written by a major group of scientists has indicated that much of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from polluted rain water and irresponsible chemical dumping by large corporations.

- A) much of the previously untraceable pollutants in stream water known to kill fish and harm humans come from
- B) many of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from
- C) much of the previously untraceable pollutants in stream water known to kill fish and harming humans come from
- D) many of the previously untraceable pollutants in stream water known to kill fish and harm humans come from

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64. Although many citizens enjoy spacious and well-kept state parks, some fiscally conservative State Representatives are quick to point out that maintaining state parks cost far more than other state land.

- A) maintaining state parks cost far more than other state land
- B) state parks costs far more to maintain than other state land does
- C) maintaining state parks costs far more than other state land
- D) state parks cost far more to maintain than does other state land

65. By the year 2000, *A Tale of Two Cities*, Charles Dickens' gripping book portraying the suffering of the proletariat under the brutal subjugation of the French aristocracy had around 200 million copies in print, making it more than almost any other English book ever written.

- A) book portraying the suffering of the proletariat under the brutal subjugation of the French aristocracy had around 200 million copies in print, making it more than
- B) book portraying the suffering of the proletariat under the brutal subjugation of the French aristocracy had around 200 million copies in print, which is more than
- C) book portraying the suffering of the proletariat under the brutal subjugation of the French aristocracy, had around 200 million copies in print, more than
- D) book portraying the suffering of the proletariat under the brutal subjugation of the French aristocracy, had around 200 million copies in print, making it more than

66. In geometry, polygons with up to twelve sides have different given names; however, if the number of sides is greater than twelve, name the polygon by placing the suffix "gon" after the number of sides in the polygon.

- A) if the number of sides is greater than twelve, name the polygon by placing the suffix "gon" after the number of sides in the polygon.
- B) if the number of sides is higher than twelve, the polygon is named by placing the suffix "gon" after the number of sides in the polygon.
- C) if the number of sides is higher than twelve, name the polygon by placing the suffix "gon" after the number of sides in the polygon.
- D) if the number of sides is greater than twelve, the polygon is named by placing the suffix "gon" after the number of sides in the polygon.

Passage 1 (for questions 67 – 71)

Self-reliance is the pilgrim's best staff, the worker's best tool. It is the master key that unlocks all the difficulties of life. "Help yourself and Heaven will help you" is a maxim that receives daily confirmation. He who begins with crutches will generally end with crutches. Help from within always strengthens, but help from without invariably enfeebles the recipient. It is not in the sheltered garden, but in the rugged Alpine cliff, where the storms beat most violently, that the toughest plants are reared. It is not by the use of corks, bladders and life-buoys that you can best learn to swim, but by plunging courageously into the waves and buffeting them. To wait until some charitable man passes by, to stand with arms folded sighing for a helping hand, is not part of any manly mind. The habit of depending upon others should be vigorously resisted, since it tends to weaken the intellectual faculties and paralyze the judgement. The struggle against adverse circumstances has, on the contrary, a bracing and strengthening effect, like that of the pure mountain air, on an enfeebled frame. This is a lesson which is nowadays not taught in colleges. To us it seems the vice of modern systems of education that they lay down too many 'royal roads' to knowledge. Those impediments which formerly compelled the student to think and labour for himself are now most carefully removed, and he glides so smoothly along the well-beaten highway that he pauses not to heed the flowers on the either side.

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67. Those impediments which formerly compelled the student to think and labour for himself are now most carefully removed, and he glides so smoothly along the well-beaten highway...

- A. The writer asserts that modern systems of education tend to make it easy for students to acquire knowledge.
- B. The students are not trained and taught to think and labour for themselves
- C. Education today has made them self-sufficient in all means.
- D. The author is all praises for the modern education systems

68. The author emphasizes ...

- A. Acquire modern education
- B. Follow old techniques and methods so they are better prepared
- C. Self-reliance is important for overcoming difficulties
- D. Man could only be self-reliant in olden days; today this notion is not acceptable.

69. Help from within always strengthens, but help from without invariably enfeebles the recipient.

- A. Without help man would be miserable.
- B. Struggle against adverse circumstances has a bracing effect on mind.
- C. Self-help strengthens while dependence weakens
- D. reliance weakens mind

70. The struggle against adverse circumstances has, on the contrary, a bracing and strengthening effect, like that of the pure mountain air, on an enfeebled frame.

- A. A metaphoric comparison of a man as feeble frame; and adversities of life to coarseness of mountain air.
- B. A simile comparing life and its adversities
- C. A hyperbole where man is unnecessary been portrayed weak.
- D. A farfetched notion that is not true

71. The author concludes ...

- A. One should think of labour for himself.
- B. Modern student can hardly think of labour for himself.
- C. Students can hardly think of labour for himself.
- D. Today man can hardly think of labour for himself.

Passage 2 (for questions 72 – 76)

In spite of rigorous precautions against accidents, many people are injured every year in factories and elsewhere. In addition, some people are born with physical disabilities. They are either blind or deaf or in some way deformed from birth. Up to quite recent times, little planned action was taken to fit handicapped people for employment. A number of charitable organizations tried to help them in cases of hardship; but few seriously held the idea that these people might still have abilities in other directions.

Only during the last few decades has society slowly come to acknowledge its responsibilities and to recognize that handicapped people can be trained to play a useful part in economic as well as social life. The Second World War

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gave impetus to this. During the 1939-45 war, pressure on resources of labour compelled all fighting nations to call on the services of handicapped people for tasks adapted to, and within the limits of their capabilities. A man must have lost the use of his legs but still be able to use his hands with skill. Another person must have lost his sight, but still be capable of training in ways in which his other senses could be employed effectively in furtherance of the war effort.

In recent years, scientific inventions and discoveries have learned the disabilities of deafness, some forms of paralysis and other physical handicaps. Scientists working in association with engineers have devised methods by which handicapped people can take up work again, thanks to the inventions of mechanical limbs, the improvement of hearing aids and so on.

72. War gave impetus to this means

- A. stimulant
- B. compelled
- C. hindrance
- D. discouragement

73. Synonym for disabilities _____

- A. febrile
- B. infirmity
- C. deformity
- D. incapable

74. Which one is not a synonym for handicap?

- A. affliction
- B. impediment
- C. encumbrance
- D. disconsolate

75. Invention of mechanical limbs and hearing aids....

- A. Has compelled nations to call on services the handicapped people for tasks
- B. other senses could be employed effectively
- C. handicapped people can take up work again
- D. the tasks can be done faster and efficiently

76. Why do you think during the 1939-45 war, pressure on resources of labour compelled all fighting nations to call on the services of handicapped people for tasks adapted to, and within the limits of their capabilities?

- A. Rationing is introduced in Britain.
- B. The deportations of German Gypsies to concentration camps in the east begins.
- C. Second World War erupts.
- D. United States institutes extended military conscription for men ages 20-44

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Passage 3 (for questions 77 – 81)

Marketing executives in television work with a relatively stable advertising medium. In many ways, the television ads aired today are similar to those aired two decades ago. Most television ads still feature actors, still run 30 or 60 seconds, and still show a product. However, the differing dynamics of the Internet pose unique challenges to advertisers, forcing them to adapt their practices and techniques on a regular basis.

In the early days of Internet marketing, online advertisers employed banner and pop-up ads to attract customers. These techniques reached large audiences, generated many sales leads, and came at a low cost. However, a small number of Internet users began to consider these advertising techniques intrusive and annoying. Yet because marketing strategies relying heavily on banners and pop-ups produced results, companies invested growing amounts of money into purchasing these ad types in hopes of capturing market share in the burgeoning online economy. As consumers became more sophisticated, frustration with these online advertising techniques grew. Independent programmers began to develop tools that blocked banner and pop-up ads. The popularity of these tools exploded when the search engine Google, at the time an increasingly popular website fighting to solidify its place on the Internet with giants Microsoft and Yahoo, offered free software enabling users to block pop-up ads. The backlash against banner ads grew as new web browsers provided users the ability to block image-based ads such as banner ads. Although banner and pop-up ads still exist, they are far less prominent than during the early days of the Internet.

A major development in online marketing came with the introduction of pay-per-click ads. Unlike banner or pop-up ads, which originally required companies to pay every time a website visitor saw an ad, pay-per-click ads allowed companies to pay only when an interested potential customer clicked on an ad. More importantly, however, these ads circumvented the pop-up and banner blockers. As a result of these advantages and the incredible growth in the use of search engines, which provide excellent venues for pay-per-click advertising, companies began turning to pay-per-click marketing in droves. However, as with the banner and pop-up ads that preceded them, pay-per-click ads came with their drawbacks. When companies began pouring billions of dollars into this emerging medium, online advertising specialists started to notice the presence of what would later be called click fraud: representatives of a company with no interest in the product advertised by a competitor click on the competitor's ads simply to increase the marketing cost of the competitor. Click fraud grew so rapidly that marketers sought to diversify their online positions away from pay-per-click marketing through new mediums.

Although pay-per-click advertising remains a common and effective advertising tool, marketers adapted yet again to the changing dynamics of the Internet by adopting new techniques such as pay-per-performance advertising, search engine optimization, and affiliate marketing. As the pace of the Internet's evolution increases, it seems all the more likely that advertising successfully on the Internet will require a strategy that shuns constancy and embraces change.

77. Which of the following most accurately states the main idea of the passage?

- A) Although pay-per-click advertising remains a wide-spread and effective online advertising medium, its popularity is likely to diminish as the Internet evolves.
- B) Internet advertising is not well received by Internet users, causing independent programmers to subvert advertisers.
- C) Unlike the television, the Internet has experienced dramatic changes in short periods of time.
- D) Unlike the television, the Internet has evolved rapidly, forcing online marketers to develop new advertising strategies and mediums.

78. The passage implies that which of the following attributes will be the most important for future success in online advertising:

- A) Flexible creativity
- B) Disciplined patience
- C) Uniform approach
- D) Ruthless tenacity

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79. The author implies what about the future of pay-per-performance advertising?
- A) Although it improves on pay-per-click advertising, it is still vulnerable to click fraud
 - B) It will one day become extinct as Internet users discover drawbacks with it
 - C) Internet users will develop free software to block its effectiveness
 - D) It will eventually become less popular with advertisers as the Internet evolves and drawbacks emerge
80. According to the passage, which of the following best describes the current status of pop-up ads?
- A) Widely used
 - B) Less popular now than at earlier times
 - C) Non-existent due to pop-up blockers
 - D) Increasingly popular due to search engines
81. According to the passage, which of the following best describes the practice of click fraud?
- A) Clicking on the banner advertisements of rival companies
 - B) Using software to block advertisements
 - C) Utilizing search engine optimization to visit the pages of competitors
 - D) Clicking on the pay-per-click ads of competitors

Passage 4 (for questions 82 – 86)

Prior to the fall of the Union of Soviet Socialist Republics (USSR), Mikhail Gorbachev, seeing a country falling behind its Western rival and a people increasingly clamoring for change, addressed the growing internal unrest in the summer of 1987 by introducing a series of reforms known as perestroika (literally, restructuring). In *Perestroika: New Thinking for Our Country and the World*, Mikhail Gorbachev discussed his analysis of the problems facing the USSR and his plans to solve them.

Perhaps the most pressing and visible problem facing the USSR in the last 1980s came in the form of the country's consistently mediocre economic performance, despite its vast natural resource wealth and large labor force. Gorbachev flatly admitted that economic failures were increasing and current policies were failing to offer a sustainable remedy. Failing to take advantage of the numerous scientific and technological advancements available, the USSR relied on inefficient and outdated business models. As a result, Gorbachev said, "in the last fifteen years the national income growth rates had declined by more than a half and by the beginning of the eighties had fallen to a level close to economic stagnation." With business executives focused on using more resources (in order to employ more people) instead of becoming more efficient, the country produced poor quality products unable to compete in a global economy. Further, this inefficiency led to shortages: "the Soviet Union, the world's biggest producer of steel, raw materials, fuel and energy, has shortfalls in them due to wasteful or inefficient use."

The decrepit economy engendered social unrest and woe that only compounded economic difficulties and societal misery. Gorbachev wrote of "a gradual erosion of the ideological and moral values of our people" and noted the considerable growth in "alcoholism, drug addiction and crime." Accentuating these difficulties, the Communist government often ignored the needs of the average citizen, causing distrust and resentment. Perhaps the most destructive element of the social unraveling and inadequate government response was the mediocre education system. Gorbachev said, "Creative thinking was driven out from the social sciences, and superfluous and voluntarist assessments and judgments were declared indisputable truths."

Although Gorbachev also opined about the growing public disbelief in the content of the immense government propaganda campaigns, the extent to which economic underdevelopment and social deviance gripped Soviet culture made the collapse of the USSR virtually inevitable in the minds of many observers. When combined with glasnost (literally, openness), Gorbachev's plan that allowed greater transparency, perestroika actually served to hasten the collapse of the USSR. Contrary to its purpose, perestroika ensured that the fall of the USSR would occur sooner rather than later. Only a few years after Gorbachev implemented changes that would have been unthinkable and antithetical to the philosophy of previous leaders like Lenin, Stalin, and Khrushchev, the USSR fell.

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82. Which of the following best describes the primary objective of the passage?

- A) Argue that the implementation of perestroika caused the fall of the Soviet Union
- B) Explain perestroika along with its roots and consequences
- C) Analyze the pros and cons of Mikhail Gorbachev's decision to implement perestroika
- D) Explain the short-falls of a communist system and offer remedies

83. The passage implies that which of the following was most true of the Soviet economy prior to perestroika:

- A) Suffered from underperformance due to excessive government regulation and micro-management
- B) Failed to meet its potential as a result of corruption and bureaucratic overhead
- C) Lacked adequate natural resources to grow efficiently, regardless of business management
- D) Focused on achieving high-employment rather than export-capable products

84. Based upon the passage, the author would likely agree most with which of the following characterizations of the impact of the USSR's troubled economy during the days leading up to perestroika?

- A) Cause for renewed determination in communist philosophy
- B) Reason that natives looked increasingly to the West and capitalism
- C) Source of frustration and discomfort among citizens that fueled social friction
- D) Justification for the USSR's neglect of the needs of many citizens

85. According to the passage, which of the following best describes the relationship between perestroika and the fall of the USSR?

- A) Perestroika mildly delayed the fall of the USSR, although the decline of the Soviet Republic was inevitable
- B) Perestroika hastened the decline of the USSR
- C) Perestroika enabled the USSR to pursue much needed restructuring
- D) Perestroika softened the impact from the collapse of the USSR

86. In the context of the passage, the author most likely uses the word "unthinkable" (in the last sentence) to help convey which of the following points about the changes Gorbachev implemented in perestroika?

- A) They would have never crossed the mind of Lenin as being conceptually possible, let alone desirable or feasible
- B) They would have been difficult for the mind of Lenin to comprehend intelligibly
- C) They would have been seen by Lenin as undesirable and poor choices
- D) They would have been seen by

This is the end of Part 1 and Part 2. Please, wait for the Part 3 (two essay questions).
