

**ALL ANSWERS MUST BE GIVEN ON THE ANSWER SHEET****BY CROSSING THE CORRESPONDING LETTER****Math M.C.Q's**

No. of Questions: 45 (from 1 to 45)

Time allowed: 80 Minutes

Questions on page Numbers: 1 to 7

Negative markings: **Yes**

Q1 Determine the domain of the function,  $f(x) = \frac{\sqrt{x^2-x}}{x^3-x}$

- A)  $\{x : x > 1\} \cup \{x < -1\}$   
 B)  $\{x : x > 1\} \cup \{x < 0\} - \{-1\}$   
 C)  $\{x : x \geq 1\} \cup \{x < -1\}$   
 D)  $\{x : x > 1\} \cup \{x \leq -1\}$

Q2 Junaid accepted a reduction of 12% in his salary when his company was not doing well. Now his company's financial position has improved and his boss wants to restore his original salary. By what percentage must his reduced salary be increased?

- A) 12.64%  
 B) 13.64%  
 C) 14.64%  
 D) 15.64%

Q3 The probability that A can solve a problem is  $\frac{2}{5}$ , that B can solve it is  $\frac{1}{3}$  and that C can solve it is  $\frac{4}{7}$ . If all of them try independently, find the probability that the problem will be solved.

- A)  $\frac{8}{105}$   
 B)  $\frac{6}{35}$   
 C)  $\frac{29}{35}$   
 D) None of these

Q4 If the domain of the function  $y = f(x) = 10 - 2|3 - x|$  consists of all those real numbers which are greater than or equal to 10, then the range of the function  $f(x)$  will be

- A)  $\{y : y \leq 10\}$   
 B)  $\{y : y \leq -4\}$   
 C)  $\{y : y \leq -6\}$   
 D)  $\{y : y \leq -8\}$

Q5 The terms of a particular sequence can be generated from its recurrence relation which is given as  $A_{n+2} = 3A_n + 2A_{n+1}$ . If  $A_1 = -1$ , and  $A_2 = 1$ . Find the value of the following sum

$$\sum_{i=1}^{1001} A_i$$

- A) 1  
 B) -1  
 C) 0  
 D) None of these

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- Q6 Zubair Consulting charges R1000 per man-hour for the first 50 man-hours and R800 per man-hour for each additional hour or fraction of an hour. If Aslam's fees for using Zubair Consulting's services were R119600, approximately how many man-hours were charged?
- A) 130  
B) 137  
C) 875  
D) None of these
- Q7 What is the % increase in the volume of a sphere when its diameter increases by 20%?
- A) 40%  
B) 60%  
C) 72.8%  
D) 80%
- Q8 Two coins are tossed. One is unbiased and the other one is biased with the occurrence of a head being twice as likely as the occurrence of a tail? What is the probability of observing at least 1 tail?
- A)  $\frac{1}{3}$   
B)  $\frac{2}{3}$   
C)  $\frac{3}{8}$   
D) None of these
- Q9 If  $f(x) = (3x - 2)^2$ , find the value of  $f(2x - 3)$
- A)  $9x^2 - 12x + 4$   
B)  $9x^2 + 12x - 4$   
C)  $36x^2 - 132x + 121$   
D)  $36x^2 + 132x - 121$
- Q10 If  $y = -2$ , then  $y^2(y^3 - y^5) + 2y^3 =$
- A) 16  
B) 80  
C) -176  
D) None of these
- Q11 For which of the following functions is  $f(a+b)=f(a)f(b)$  for all real numbers  $a$  and  $b$ ?
- A)  $f(x) = \sin(x)$   
B)  $f(x) = \log_3 x$   
C)  $f(x) = e^x$   
D)  $f(x) = x$
- Q12 In the  $xy$  coordinate system, if  $(\alpha, \beta)$  and  $(\beta - 2, 3 - \alpha)$  are two points on the line defined by the equation  $x + 3y = 7$ , then  $\beta =$
- A) 0.7  
B) 2.1  
C) 1.4  
D) 4.2

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- Q13 It is given that all the roots of  $x^2 - bx - 16 = 0$  are integers; how many values are possible for 'b'?
- A) 7  
B) 6  
C) 5  
D) 4
- Q14 What does the quadratic equation  $x^2 - y^2 = 0$  represent geometrically?
- A) A circle with center at origin  
B) An ellipse with center at origin  
C) A pair of straight lines passing through origin  
D) A straight line passing through origin
- Q15 In factored form  $4x^2 - 9y^2$
- A)  $(4x - 9y)(4x + 9y)$   
B)  $(3x - 3y)(2x + 3y)$   
C)  $(2x - 3y)(2x + 3y)$   
D) None of these
- Q16 If the product of the roots of the quadratic equation  $2x^2 + mx - m = 0$  is  $-1$ , then the average value of the two roots is
- A) 1  
B)  $-\frac{1}{2}$   
C)  $\frac{1}{2}$   
D)  $-1$
- Q17 What is the smallest integer that satisfies the inequality equation  $x^2 + 2x - 8 < 0$ ?
- A)  $-2$   
B)  $-3$   
C)  $-4$   
D)  $-5$
- Q18 The value of  $\sqrt{147} - 2\sqrt{588} + 3\sqrt{12}$  is
- A)  $\sqrt{3}$   
B)  $3\sqrt{3}$   
C)  $-15\sqrt{3}$   
D)  $7\sqrt{3}$
- Q19 How many 3 digit positive integers exist that when divided by 3 leave a remainder of 2?
- A) 150  
B) 200  
C) 250  
D) 300

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Q20 If two of the four expressions  $x + 2y$ ,  $x - 3y$ ,  $x - 2y$ ,  $x + 3y$  are chosen at random, what is the probability that their product will be of the form of  $x^2 - by^2$ , where  $b$  is an integer?

- A)  $\frac{1}{5}$
- B)  $\frac{1}{4}$
- C)  $\frac{1}{3}$
- D)  $\frac{1}{2}$

Q21 If  $11x + 13y = 286$ , then value of  $\frac{x}{13} + \frac{y}{11}$  is

- A) 1
- B) 2
- C) 3
- D) 4

Q22 Kazim ate 6 mangoes from a box of mangoes on the first day. This was 20% more than the number of mangoes he ate on the second day. Given that he ate  $\frac{1}{6}$  of the mangoes originally in the box on the second day, what was the total number of mangoes in the box originally.

- A) 72 mangoes
- B) 60 mangoes
- C) 30 mangoes
- D) 25 mangoes

Q23 Set A contains all the positive even integers less than 100. Set B contains all the integers between 2 and 98 which are multiple of 3. What is the difference between the sum of elements of set A and that of set B?

- A) 466
- B) 566
- C) 766
- D) 866

Q24 Amjad has six times as much money as Wardah. If Amjad gives R80 to Wardah, both of them will have equal amounts of money. How much money did Wardah have at the beginning?

- A) R192
- B) R32
- C) R62
- D) R80

Q25 How many integral divisors does the number 2160 have?

- A) 9
- B) 8
- C) 27
- D) 40

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Q26 For what values of 'k' will the pair of equations  $9x + 3y = 57$  and  $3x + ky = 19$  have no solution?

- A) 1
- B) 2
- C) 3
- D) For all values of 'k' system is consistent

Q27 If  $x = 1 + \sqrt{2}$ , then the value of  $x + \frac{1}{x}$  will be

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

Q28 For which  $n$  is the remainder largest when the number 1234597840 is divided by  $n$ ?

- A) 4
- B) 5
- C) 9
- D) 10

Q29 Let us suppose that  $x$  is a positive odd integer and the remainder when  $x$  is divided by 7 is 5. What is the remainder when  $x$  is divided by 14?

- A) 4
- B) 5
- C) 6
- D) 7

Q30 The quotient and remainder are  $x - 3$  and  $-3x + 5$  respectively when the polynomial  $x^3 - 4x^2 + 5$  is divided by  $h(x)$ . Find  $h(x)$

- A)  $x^2 + x - 1$
- B)  $x^2 - x$
- C)  $x^2 - x - 1$
- D) None of these

Q31 A Bell Curve (Normal Distribution) has a mean of  $-1$  and a standard deviation of  $\frac{1}{2}$ . How many integer values are within three standard deviations of the mean?

- A) 1
- B) 3
- C) 5
- D) 7

Q32  $\frac{\log_{17} 10000}{\log_{17} 100} =$

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

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- Q33 The rate of a certain chemical reaction is directly proportional to the square of the concentration of chemical A present and inversely proportional to the concentration of chemical B present. If the concentration of chemical A present is increased by 100 percent, which of the following is the percent change in the concentration of chemical B required to keep the reaction rate unchanged.
- A) 200% decrease  
B) 200% increase  
C) 400% decrease  
D) 300% increase
- Q34 A car traveled 600 kilometers per tankful of petrol on the highway and 480 kilometers per tankful of petrol in the city. If the car traveled 4 fewer kilometers per litre in the city than on the highway, how many kilometers per litre did the car travel on the highway?
- A) 12  
B) 16  
C) 20  
D) 24
- Q35 A livestock farm has only chickens and goats. When the manager of the farm counted the heads of the stock in the farm, the number totaled up to 500. However, when the number of legs was counted, the number totaled up to 1240. How many goats were there in the farm?
- A) 70  
B) 120  
C) 60  
D) 130
- Q36 Following are the marks obtained by ten students in a subject:  
69, 60, 79, 89, 81, 65, 58, 69, 57, 67  
The median mark is
- A) 67  
B) 68  
C) 69  
D) None of these
- Q37 If  $\frac{(18)(27)(45)}{q}$  is an integer, which of the following CANNOT be the value of  $q$ ?
- A) 90  
B) 486  
C) 810  
D) 126
- Q38 The average age of a group of 15 students was 22. The average age decreased by one year when five more students joined the group. What is the average age of these five students who joined the group recently?
- A) 20 years  
B) 18 years  
C) 16 years  
D) 14 years

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- Q39 The average of five consecutive odd integers, of which  $x$  is the first integer is
- A)  $x$
  - B)  $x + 2$
  - C)  $x + 4$
  - D)  $x + 6$
- Q40 The slope of the line  $4y = 13$  is
- A) 2
  - B) 1
  - C) 0
  - D)  $-1$
- Q41 The sum of the third and seventh term of an arithmetic progression is 300. What is the value of the fifth term of the arithmetic progression?
- A) 150
  - B) 200
  - C) 250
  - D) 300
- Q42 The point  $(-\sqrt{11}, -\sqrt{13})$  is located in
- A) First quadrant
  - B) Second quadrant
  - C) Third quadrant
  - D) Fourth quadrant
- Q43 If the sum of the first 100 terms of a G.P. is 0 and first term is  $-1$ , then the common ratio of the G.P. will be
- A) 2
  - B) 1
  - C) 0
  - D)  $-1$
- Q44 For what values of ' $\alpha$ ' will the quadratic equation  $2x^2 - \alpha x + 8 = 0$  have real and distinct roots?
- I  $\alpha > 8$
  - II  $\alpha < 8$
- A) Only I
  - B) Only II
  - C) both I and II
  - D) None of these
- Q45 The square root of  $x$  varies inversely as the cube root of  $y$ . If  $x = 27$  when  $y = 64$ , find  $y$  when  $x = 144$
- A)  $3\sqrt{3}$
  - B) 9
  - C) 105
  - D) None of these

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

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

No. of Questions: 45 (from 46 to 90)  
 Questions on Page Nos: 8 to 15

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

**For questions 46 - 60, select the option that is most nearly opposite in meaning.**

46. Commanding  
 A. raucous  
 B. onerous  
 C. subservient  
 D. destitute
47. Morose  
 A. peripheral  
 B. parochial  
 C. equivocal  
 D. sanguine
48. Intrepid  
 A. cowardly  
 B. sedentary  
 C. jaundiced  
 D. wanton
49. Zealous  
 A. motley  
 B. irrevocable  
 C. nonchalant  
 D. trenchant
50. Estrange  
 A. make calm  
 B. grow close  
 C. turn away  
 D. be normal
51. Vainglorious  
 A. introverted  
 B. sardonic  
 C. ostentatious  
 D. humble
52. Fortitude  
 A. dynamism  
 B. valor  
 C. penetration  
 D. pusillanimity
53. Reckless  
 A. circumspect  
 B. meteoric  
 C. accountable  
 D. insufficient
54. Propensity  
 A. poverty  
 B. aversion  
 C. ambiguity  
 D. embodiment
55. Lassitude  
 A. pulchritude  
 B. inanity  
 C. turbidity  
 D. vigor
56. Stalwart  
 A. prolific  
 B. generous  
 C. fickle  
 D. fortunate



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57. Scintillating  
 A. florid  
 B. equitable  
 C. exhaustive  
 D. dull
58. Melancholy  
 A. tuneful  
 B. sanguine  
 C. apocryphal  
 D. stunted
59. Affected  
 A. hygienic  
 B. mannered  
 C. pretty  
 D. simple
60. Uncritical  
 A. wary  
 B. worried  
 C. lively  
 D. impeccable

**For questions 61 - 71, select the option that best replaces blank(s).**

61. The little - known but rapidly expanding use of computers in mapmaking is technologically similar to the more \_\_\_\_\_ uses in designing everything from bolts to satellites.
- A. ingenuous  
 B. recent  
 C. secure  
 D. publicized
62. Although his out numbered troops fought bravely, the general felt he had no choice but to \_\_\_\_\_ defeat and \_\_\_\_\_ a retreat.
- A. oversee - reject  
 B. acknowledge - order  
 C. hasten - suggest  
 D. seek - try
63. No hero of ancient or modern times can surpass the Indian with his lofty contempt of death and the \_\_\_\_\_ with which he sustained the cruelest conflict.
- A. guide  
 B. assent  
 C. reverence  
 D. fortitude
64. The hostess attempted to \_\_\_\_\_ a romantic atmosphere that would bring the two young people together in \_\_\_\_\_.
- A. expand - fealty  
 B. simulate - conflict  
 C. introduce - cacophony  
 D. contrive - matrimony
65. The gypsy girl, decked out in \_\_\_\_\_ finery, and with her disheveled hair streaming over shoulders, was indeed a \_\_\_\_\_ sight.
- A. verdant - wistful  
 B. sartorial - flagrant  
 C. specious - poignant  
 D. tawdry - bizarre

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66. Yellow fever, the disease that killed 4,000 Philadelphians in 1793, and so \_\_\_\_\_ Memphis, Tennessee, that the city lost its charter, has reappeared after nearly two decades in \_\_\_\_\_ in the western hemisphere.
- A. disabled - quarantine  
B. decimated - abeyance  
C. terrorized - contention  
D. ravaged - secret
67. The painting was larger than it appeared to be, for hanging in a darkened recess of the chapel, it was \_\_\_\_\_ by the perspective.
- A. improved  
B. jeopardized  
C. aggrandized  
D. diminished
68. We have in America \_\_\_\_\_ speech that is neither American, Oxford English, nor English but a \_\_\_\_\_ of all three.
- A. motley - miracle  
B. feigned - patchwork  
C. mangled - medley  
D. hybrid - combination
69. He was so \_\_\_\_\_ by the interplay of the colors that varied in brilliance and pattern as the music rose and fell, that he asked the price of the device.
- A. overwrought  
B. penalized  
C. repelled  
D. penalized
70. The absence of a sense of outrage and grief at national tragedy is an \_\_\_\_\_ of moral responsibility.
- A. intervention  
B. energizing  
C. abdication  
D. administration
71. In an effort to \_\_\_\_\_ its operations, the corporation announced it was acquiring a \_\_\_\_\_ company in a different type of manufacturing.
- A. diversify - subsidiary  
B. adumbrate - solvent  
C. multiply - protracted  
D. intensify - fluctuating

**For questions 72 - 77, replace the underlined section with option that best fits the sentence.**

72.

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

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73.

The Bengal school attempted to create an authentic style of Indian painting based on the study of the art of ancient India, Indian medieval miniature traditions, as well as European and Japanese art.

- A. Indian medieval miniature traditions, as well as European and Japanese art
- B. and Indian medieval miniature traditions, as well as European and Japanese art
- C. Indian medieval miniature traditions, and European and Japanese art as well
- D. and Indian medieval miniature traditions, and European as well as Japanese art

74.

Often said to be the most perfectly cut of all large diamonds, the Jubilee's facets are so exact that it can be balanced on its culet, which is less than two millimeters across.

- A. the Jubilee's facets are so exact that the diamond can be balanced on its culet, less
- B. the Jubilee has facets so exact that it can be balanced on its culet, which is less
- C. the Jubilee has facets which are so exact that it can balance on its culet, which is less
- D. the Jubilee's facets are so exact that it can be balanced on its culet, which is lesser

75.

Unlike traditional bullet-proof vests, which can prevent serious injury, but which cannot prevent the wearer being knocked over by the impact, new vest designs are being developed in the United States where bullets bounce off.

- A. new vest designs, where bullets bounce off, are being developed in the United States
- B. the United States is developing new vests, designed to make bullets bounce off
- C. new vests, designed to make bullets bounce off, are being developed in the United States
- D. new vests, where bullets bounce off, are being developed in the United States

76.

The National Library has recently acquired a manuscript by Jenkins that should provide answers to the much-disputed question of the extent to which this author's work had been altered by her editors in the years before she died.

- A. the extent to which this author's work had been altered by her editors in the years before she died.
- B. the extent this author's editors altered her work in the years before she died
- C. how much the work of this author had been altered in the years before her death by her editors.
- D. the extent to which this author's work was altered by her editors in the years before she died.

77.

Since the path-breaking discovery, just over fifty years ago, of the structure of the DNA molecule, scientists have made astounding progress to understand and manipulate this most important of biological molecules.

- A. scientists have made astounding progress to understand and to manipulate
- B. scientists have made astounding progress in understanding and manipulating
- C. astounding progress has been made by scientists to understand and to manipulate
- D. scientists made astounding progress in understanding and manipulating

**Questions 78 - 82 comprise sentences of a complete paragraph. Select the option that represents the most logical sequence of the paragraph.**

78.

- a. To be culturally literate is to possess the basic information needed to thrive in the modern world.
- b. Nor is it confined to one social class; quite the contrary.
- c. It is by no means confined to "culture" narrowly understood as an acquaintance with the arts.

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- d. Cultural literacy constitutes the only sure avenue of opportunity for disadvantaged children, the only reliable way of combating the social determinism that now condemns them.
- e. The breadth of that information is great, extending over the major domains of human activity from sports to science.

- A. aecbd  
 B. decba  
 C. acbed  
 D. dbcae

79.

- a. Both parties use capital and labor in the struggle to secure property rights.
- b. The thief spends time and money in his attempt to steal (he buys wire cutters) and the legitimate property owner expends resources to prevent the theft (he buys locks).
- c. A social cost of theft is that both the thief and the potential victim use resources to gain or maintain control over property.
- d. These costs may escalate as a type of technological arms race unfolds.
- e. A bank may purchase more and more complicated and sophisticated safes, forcing safecrackers to invest further in safecracking equipment.

- A. abcde  
 B. cabde  
 C. acbed  
 D. cbeda

80.

- a. The likelihood of an accident is determined by how carefully the motorist drives and how carefully the pedestrian crosses the street.
- b. An accident involving a motorist and a pedestrian is such a case.
- c. Each must decide how much care to exercise without knowing how careful the other is.
- d. The simplest strategic problem arises when two individuals interact with each other, and each must decide what to do without knowing what the other is doing.

- A. abcd  
 B. adcb  
 C. dbca  
 D. dbac

81.

- a. In rejecting the functionalism in positivist organization theory, either wholly or partially, there is often a move towards a political model of organization theory.
- b. Thus the analysis would shift to the power resources possessed by different groups in the organization and the way they use these resources in actual power plays to shape the organizational structure.
- c. At the extreme, in one set of writings, the growth of administrators in the organization is held to be completely unrelated to the work to be done and to be caused totally by the political pursuit of self-interest.
- d. The political model holds that individual interests are pursued in organizational life through the exercise of power and influence.

- A. adbc  
 B. cbad  
 C. dbca  
 D. abdc

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82.

- a. Group decision making, however, does not necessarily fully guard against arbitrariness and anarchy, for individual capriciousness can get substituted by collusion of group members.
- b. Nature itself is an intricate system of checks and balances, meant to preserve the delicate balance between various environmental factors that affect our ecology.
- c. In institutions also, there is a need to have in place a system of checks and balances which inhibits the concentration of power in only some individuals.
- d. When human interventions alter this delicate balance, the outcomes have been seen to be disastrous.

- A.      cbad
- B.      bcad
- C.      cabd
- D.      bdca

**For questions 83- 85, read the following passage and select the best option.**

A study based on a year-long analysis of data from an extensive mobile phone network has produced interesting information that might be of use to epidemiologists and social scientists. The data, according to the researchers, might shed light, for example, on how diseases and information (or rumors) are transmitted through social networks.

Researchers ranked the link between a pair of phone users on the basis of the total time spent talking to each other. ‘Strong’ links exist between members of a close social group. ‘Weak’ links tend to be more long range and join individuals from different social groups.

The researchers observed a dramatically different effect when they removed links in the network in rank order, depending on whether they removed links starting with the strongest or with the weakest. To their surprise, removing the strong links first had little effect on the overall structure of the network. But removing weak links first split the network into a series of unconnected islands, with individual users linked to a small collection of other phone users.

Thus the researchers have hypothesized that the weak links (the more tenuous connections between individuals from different social groups) might be very important in maintaining wider social cohesion. If you lose contact with casual acquaintances you may fragment your social circle, but if you stop talking to your brother there might be less visible impact on the structure of your social network.

83. The passage offers support for which of the following positions?

- A. ‘Weak’ links are more important than ‘strong’ links
- B. Links between family members would be likely to be disrupted by terminating ‘weak’ links
- C. Some people believe that phone-network patterns could be useful to social scientists
- D. Information transmission through phone networks is essentially the same as information transmission through face-to-face contact

84. In the last sentence the author apparently intends to:

- A. make the ideas more specific to enhance the reader’s understanding
- B. reinforce the researchers’ conclusions
- C. provide a practical illustration of the meaning of a strong link
- D. generalize the argument to make it more appealing

85. Which of the following can be inferred from the passage?

- A. The researchers had not anticipated the specific effects of removing weak links.
- B. The phone-network studied had the same number of users throughout the study.
- C. The phone users were unaware of the study.
- D. Social cohesion is not comprised in case of affected family bonds.

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For questions 86 - 88, read the following passage and select the best option.

The standard methods of science proceed from observations to hypotheses to testing these hypotheses in controlled experiments. However, it would be a mistake to suppose that every hypothesis that comes out of observation lends itself to rigorous scientific scrutiny. **There are, in fact, many questions that can be asked of science that science is not in a position, for one reason or another, to answer.** (Such unanswerable questions cannot strictly be termed hypotheses, since a hypothesis must be testable.)

The recent debate over melanoma (skin cancer) screening provides an interesting example of this area of ‘science that is not scientific’ or ‘trans-science’ as a few eminent thinkers have termed it. Let’s start with the observations. There has been an increase in the number of early-stage melanoma cases over the last twenty years. The incidence, measured in cases per thousand people, in the United States has doubled since 1896. As a result of the reported numbers, some physicians recommend screening for melanoma. The ‘**hypothesis**’ that is implied here is that screening for melanoma will decrease the death rate from the disease. But how do we test it? The conventional way to evaluate the effectiveness of a medical technique is the double blind trial. In this case we would have to assign some people to receive screening and some control people would not be screened. Then we would look at the death rate for melanoma in the two groups. The problems are logistic and ethical. If the answers are to reach statistical significance we need very large numbers and we need to follow people over whole lifetimes, neither of which is practical. And how do we decide who is to receive what might be a life-saving screening and who will be denied its potential benefits? The data collected thus far on the effectiveness of screening is, not surprisingly, equivocal.

86. The author would apparently agree with which of the following?

- A. The effectiveness of screening for melanoma is not proven
- B. Double blind trials are the best method to evaluate
- C. The death rate from melanoma is rising rapidly
- D. The life threats could be reduced through melanoma in case of critical illnesses

87. The word in **bold-face** in paragraph 2 is placed in inverted commas to

- A. Suggest that the contention in the same sentence cannot be tested scientifically
- B. Emphasize the importance of framing hypotheses correctly
- C. Draw attention to the main word in the sentence.
- D. Indicate that the author is using someone else’s view

88. Which of the following does the author mention as an example of the ‘reasons’ mentioned in the **bold-face** sentence in paragraph 1?

- A. Sufficient sample size
- B. Ethical considerations
- C. Ambiguous data
- D. Cross-cultural nature of the study

89.

Answer this question based on the information in the paragraph below.

French cuisine is highly regarded all over the world. Yet in Paris there are more American restaurants selling burgers and fries (which many people now class as ‘junk food’) than there are in any other European capital city. Obviously the French are very fond of ‘junk food’, and are not too proud to eat it.

Which of the following, if true, would most weaken the author’s contention?

- A. There are also a larger number of Lebanese restaurants in Paris than there are in other European capital cities
- B. French Cordon Bleu cuisine is very expensive
- C. The number of French tourists eating in New York burger restaurants is very low
- D. There are an unusually large number of American tourists in Paris who eat at burger joints

(go on to the next page)

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

90.

Answer this question based on the information in the paragraph below.

It is not unusual to see the ball fall into a black slot on a roulette wheel four times in a row. But for it to fall five or six times in a row into the same color is very unusual. Therefore you can win money by waiting for a run of five of the same color and then betting against that color.

If the roulette wheel in question is a fair wheel, which of the following observations or facts, if it were true, would best reveal a fallacy in the logic?

- A. If there were a reliable way to win at roulette it would be well-known by now.
- B. It is hard for a player to keep track of what went before for the time required.
- C. The probability of getting a particular color decreases with the number of times the color has appeared.
- D. The probability of getting a particular color is always the same no matter what has gone before.

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

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

Writing Task 1

Time: 20 minutes

Not illiteracy, poverty or corruption but foreign intervention is the gravest problem faced by Pakistan.

Write a response, of approximately 250 words, in which you examine the stated and/or unstated assumptions of the argument. Be sure to explain how the argument depends on these assumptions and what the implications are for the argument if the assumptions prove unwarranted.

Make sure that you make an outline prior to your final answer.

Writing Task 2

Time: 20 minutes

Everyone is interested in **what happens to things when we aren't looking at them**. Scientists have carefully studied this problem and some of them came to a simple conclusion - **they disappear**. Well, not quite like this. Phenomenology philosophers believe that **objects only exist as a phenomenon of consciousness**. So, your laptop is only here while you are aware of, and believe in its existence, but when you turn away from it, it ceases to exist until you or someone else interacts with it. **There is no existence without perception**

Write a response, of approximately 200 words, in which you discuss the extent to which you agree or disagree with the claim. In developing and supporting your position, be sure to address the most compelling reasons and/or examples that could be used to challenge your position.

Make sure that you make an outline prior to your final answer.