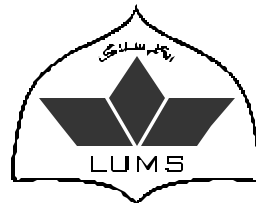


*LMAT – S – 2004*

# **MBA PROGRAMME**

**LUMS MANAGEMENT ADMISSION TEST (LMAT)  
FOR  
THE MBA & EMBA SESSIONS  
COMMENCING AUGUST 2004**

**(SAMPLE)**



**LAHORE UNIVERSITY OF MANAGEMENT SCIENCES**

## MBA &amp; EMBA PROGRAMMES

## LUMS MANAGEMENT ADMISSION TEST (LMAT)

## DESCRIPTION AND FORMAT OF THE TEST

**LMAT** measures mathematical and analytical abilities, as well as proficiency in English language. Questions are designed to explore knowledge and skills acquired over a period of time. The test makes it possible to compare candidates with different backgrounds.

The test will take around three hours. There will be seven multiple-choice sections of the test, which are as follows:

- Mathematics                      3 sections
- English language                3 sections
- Analytical                         1 section

**MATHEMATICS SECTIONS**

**There will be three sections of 25 minutes each.**

These sections measure basic mathematical skills of the candidates. There will be two main categories: Data Sufficiency and Problem Solving. It will cover topics in **algebra, geometry, and arithmetic**. The mathematics sections contain questions from a number of areas including: word problems, fractions, percentages, exponents and roots, operations with algebraic expressions, ratio and proportion, angle and area problems, geometry, inequalities, and quantitative comparison problems.

**ENGLISH LANGUAGE SECTIONS**

**There will be three sections of 25 minutes each.**

These sections test the English language skills of the candidates, and contain **antonyms, synonyms, sentence completion, written expression, and reading comprehension**. The questions on

**synonyms** and **antonyms** test the vocabulary of the candidates. Questions on **sentence completion** test the ability to grasp the context of a sentence even when some of the words are missing, as well as the ability to select the most appropriate word or phrase in order to construct meaningful sentences. The **written expression** component tests the understanding and usage of English language. In the **reading comprehension** section, the candidates will be given passages followed by a series of questions related to the passages. Among other things, these questions test the ability to understand directly stated information, the ability to recognise implications and draw inferences, and to identify the main ideas and opinions expressed in passages.

**ANALYTICAL SECTION**

**There will be one section of 25 minutes.**

The purpose of the analytical section is to test the intelligence and the analytical abilities of the candidates. The questions in this section would include patterns, sequences, analogies, logic problems, and puzzles.

**SECTION: MATHEMATICS (3 Parts )**

**There will be three sections of 25 minutes each.**

Directions: While solving problems you can use any available space on the page for scratchwork. For each question in this section, read the five choices marked (A), (B), (C), (D) and (E) in your test book. Select the letter of the choice which you consider is the correct answer. Then fill in the corresponding oval on your answer sheet.

Numbers:

All numbers used are real numbers.

Figures:

Figures that accompany problems are intended to provide information useful for solving the problems. Figures are drawn as accurately as possible EXCEPT when it is stated in a specific problem that it is not drawn to scale. All figures lie in a plane unless otherwise indicated.

- |  |   |
|--|---|
| <p>1. If each of four numbers is tripled, their average is multiplied by</p> <p>(A) 12<br/>(B) 3<br/>(C) 4<br/>(D) 9<br/>(E) 81</p>  | <p>is water. How many litres of solution X need to be added to 5 litres of solution Y to make a solution that is 10% salt?</p> <p>(A) 10<br/>(B) 8<br/>(C) 5<br/>(D) 4<br/>(E) 2</p>  |
| <p>2. Solve for y:</p> <p><math>2x + y = 4</math><br/><math>3x - 2y = -1</math></p> <p>(A) <math>y = 1</math><br/>(B) <math>y = 2</math><br/>(C) <math>y = 3</math><br/>(D) <math>y = 4</math><br/>(E) <math>y = 6</math></p>  | <p>5. Ali, Waqar, and Zahid pooled their funds to buy a gift for a friend. Ali contributed Rs 60 less than <math>\frac{1}{3}</math> of the cost of the gift and Waqar contributed Rs 60 more than <math>\frac{1}{4}</math> of the cost. If Zahid contributed the remaining Rs 450, what was the cost of the gift?</p> <p>(A) Rs 720<br/>(B) Rs 990<br/>(C) Rs 1,080<br/>(D) Rs 1,290<br/>(E) Rs 1,350</p> |
| <p>3. It takes Omar 10 minutes to bicycle 1 mile to school and 20 minutes to return the same way. What is his average speed in miles per hour for the round trip?</p> <p>(A) 2<br/>(B) <math>\frac{2}{3}</math><br/>(C) 4<br/>(D) <math>\frac{9}{2}</math><br/>(E) 6</p> | <p>6. 120 is 75% of what number?</p> <p>(A) 160</p>   |
| <p>4. Solution X is 15% salt and the rest is water. Solution Y is 8% salt and the rest</p>   | <p>is water. How many litres of solution X need to be added to 5 litres of solution Y to make a solution that is 10% salt?</p>  |

- (B) 90
- (C) 100
- (D) 84
- (E) 180

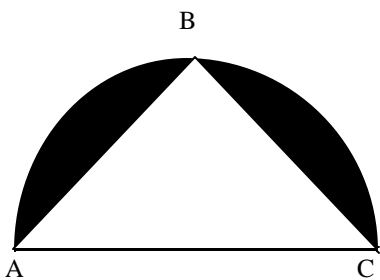
7. A person purchased 5 tables for Rs 3,600 each and 7 tables for Rs 4,000 each. He then sold all the tables for Rs 64,400. What was the percentage profit he made on the total sum he paid for all the tables?

- (A) 20%
- (B) 25%
- (C) 35%
- (D) 45%
- (E) 40%

8. A cyclist completed 5 laps of a circular track in one hour. If his average speed was 20 miles per hour, what is the diameter of the track?

- (A)  $2\pi$
- (B)  $4\pi$
- (C)  $\frac{4}{\pi}$
- (D)  $\frac{2}{\pi}$
- (E)  $\frac{\pi}{4}$

9.



Triangle ABC is inscribed in a semicircle of radius 2. What is the area of the shaded region above?

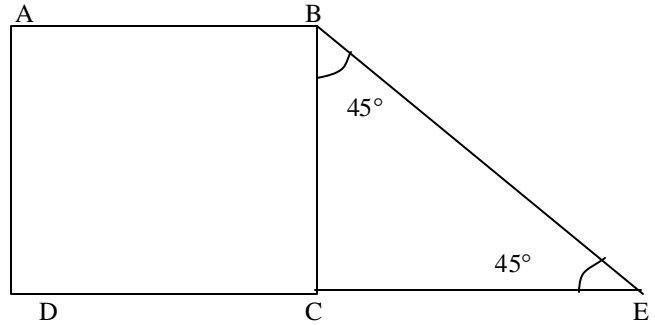
- (A)  $2\pi - 2$
- (B)  $2\pi - 4$
- (C)  $4\pi - 4$
- (D)  $8\pi - 4$
- (E)  $8\pi - 8$

10. If it takes 12 workers working independently 3 hours to make 500

boxes, how many minutes should it take for 16 workers to make 300 boxes?

- (A) 60
- (B) 72
- (C) 81
- (D) 98
- (E) 240

11. ABCD is a square



If the area of the triangle BCE is 8, what is the area of the square ABCD?

- (A) 8
- (B) 82
- (C) 16
- (D) 4
- (E) 22

12. One side of a rectangle has length x. If the perimeter of the rectangle is 12, then the area, as a function of x, is

- (A)  $x(12 - x)$
- (B)  $x(6 - x)$
- (C)  $(6 - x)^2$
- (D)  $x(12 - 2x)$
- (E) None of the above

13. A man 6 feet tall stands 'x' feet away from an 18 feet high street light. If the man's shadow is 's' feet long then s =

- (A) 3
- (B)  $x/3$
- (C)  $x/2$
- (D)  $3x$
- (E) None of the above

14. The straight line which passes through the points (-1, -2) and (2,5) is

- (A)  $3y = 7x^2 + 1$

- (B)  $7y = 3x^2 + 1$   
 (C)  $7y = 3x - 1$   
 (D)  $7y = 3x + 1$   
 (E)  $3y = 7x + 1$
15. The slope of the line  $3y = 6x - 11$  is
- (A)  $11/3$   
 (B)  $-11/3$   
 (C)  $-2$   
 (D)  $2$   
 (E)  $6$
16. The curves  $y = x^2$  and  $y = -x + 6$  intersect at points whose x-coordinates are
- (A)  $x = -3, -2$   
 (B)  $x = 2, 3$   
 (C)  $x = -3, 2$   
 (D)  $x = -2, 3$   
 (E) None of the above
17. If  $-3 \leq 2 - 5x \leq 12$ , then
- (A)  $-2 \leq x \leq 1$   
 (B)  $x \leq -2$  or  $1 \leq x$   
 (C)  $2 \leq x \leq -1$   
 (D)  $x \leq -2$  and  $1 \leq x$   
 (E) None of the above
18.  $(2x^4y^2)^3 (x^2y)^2 =$
- (A)  $8x^{11}y^7$   
 (B)  $2x^{11}y^7$   
 (C)  $2x^{14}y^7$   
 (D)  $8x^{16}y^8$   
 (E) None of the above
19. Which of the following are right-angled triangles?
- I. A triangle with sides of length 2, 3, and 4.  
 II. A triangle with sides of length 3, 4, and 5.  
 III. A triangle with sides of length 5, 12, and 13.
- (A) I, II and III  
 (B) I and II  
 (C) I and III  
 (D) II and III  
 (E) II only
20. One half of a number is 7 more than one third of that number. Find the number.
- (A) 72  
 (B) 63  
 (C) 21  
 (D) 42  
 (E) 14

**SECTION : ENGLISH LANGUAGE**

**There will be three sections of 25 minutes each.**

(a)     **Antonyms**

*Directions:* For each question in this section, read the five choices marked (A), (B), (C), (D) and (E) in your test book. Select the letter of the choice which you consider is the correct answer. Then fill in the corresponding oval on your answer sheet.

1.     SPURIOUS
  - (A)     planned
  - (B)     genuine
  - (C)     calm
  - (D)     slow
  - (E)     expected
  
2.     PROSAIC
  - (A)     poetry
  - (B)     touch
  - (C)     imaginative
  - (D)     common
  - (E)     opposing
  
3.     VACILLATING
  - (A)     building
  - (B)     decisive
  - (C)     entering
  - (D)     unyielding
  - (E)     accepting
  
4.     LAVISH
  - (A)     active
  - (B)     free
  - (C)     gauche
  - (D)     spartan
  - (E)     dull
  
5.     LISTLESS
  - (A)     friendly
  - (B)     present
  - (C)     animated
  - (D)     listed
  - (E)     mature

*Directions:* For each question in this section, read the five choices marked (A), (B), (C), (D) and (E) in your test book. Select the letter of the choice which you consider is the correct answer. Then fill in the corresponding oval on your answer sheet.

1.     DIATRIBE
  - (A)     speech
  - (B)     tirade
  - (C)     tribal
  - (D)     opposite
  - (E)     clan
  
2.     PRODIGIOUS
  - (A)     good
  - (B)     evil
  - (C)     large
  - (D)     prodigal
  - (E)     clumsy
  
3.     IMPEDIMENT
  - (A)     obstacle
  - (B)     fabrication
  - (C)     quarrel
  - (D)     foot
  - (E)     accusation
  
4.     TRANSIENT
  - (A)     stubborn
  - (B)     cold
  - (C)     unknown
  - (D)     temporary
  - (E)     communicative
  
5.     INTREPID
  - (A)     clumsy
  - (B)     intelligent
  - (C)     poor
  - (D)     rash
  - (E)     courageous

(b)     **Synonyms**

(c)     **Sentence Completion**

**Directions:** For each question in this section select the letter corresponding to the **word or pair of words** from the given choices which **best completes** the sentence. Then fill the corresponding oval on your answer sheet.

1. In an age without radio or recordings, an age \_\_\_\_\_ by print, fiction gained its greatest ascendancy.
  - (A) decimated
  - (B) published
  - (C) dominated
  - (D) emphasized
  - (E) resurrected
  
2. Scientists' pristine reputation as devotees of the selfless pursuit of truth has been \_\_\_\_\_ by recent evidence that some scientists have deliberately \_\_\_\_\_ experimental results to further their own careers.
  - (A) reinforced ... published
  - (B) validated ... suppressed
  - (C) exterminated ... replicated
  - (D) compromised ... fabricated
  - (E) resuscitated ... challenged
  
3. As their attention was diverted to other matters, Aamir and Adnan's initial fascination with the fortunes of those jockeying for power in the law firm \_\_\_\_\_ after a few months.
  - (A) revived
  - (B) emerged
  - (C) intensified
  - (D) waned
  - (E) persisted
  
4. A war, even if fought for lofty ideals, individual liberty and democratic rights, usually requires that these principles be \_\_\_\_\_, for they are \_\_\_\_\_ the regimentation and discipline necessary for military efficiency.
  - (A) espoused ... contrary to
  - (B) suppressed ... fulfilled through
  - (C) followed ... disruptive of
  - (D) rejected ... inherent in
  - (E) suspended... incompatible with

(d) **Written Expression**

This section consists of a number of sentences, which are partially underlined. Each sentence is followed by five choices. The first (A) choice simply repeats the underlined part. The subsequent four choices suggest other ways to express the underlined part of the original sentence. Select one letter (from A through E) corresponding to the choice which you consider the most **correct and effective**. Grammar, sentence structure, word usage, and punctuation are to be considered in your decision. Regardless of which choice you make, the original meaning of the sentence must be retained.

1. The Black Hole in space has entered the popular imagination as an object too massive that neither light nor matter can escape its gravitational pull.
  - (A) too massive that neither light nor matter can escape its
  - (B) too massive for either allowing light or matter to escape its
  - (C) massive enough that either light or matter cannot escape their
  - (D) so massive that neither light nor matter could escape their
  - (E) so massive that neither light nor matter can escape its
  
2. As rare as something becomes, be it a musical recording, sports trivia or a postage stamp, the more avidly it is sought by collectors.
  - (A) As rare as something becomes, be it
  - (B) As rare as something becomes, whether it is
  - (C) As something becomes rarer and rarer, like
  - (D) The rarer something becomes, like as
  - (E) The rarer something becomes, be it
  
3. Psychologists now contend that the way adults think and feel is determined as

- much by their early childhood peers as by their parents.
- (A) is determined as much by their early childhood peers as by their
- (B) are determined as much by peers in early childhood as do their
- (C) are determined as much by their peers in early childhood than by their
- (D) have been determined by childhood peers as much as their
- (E) was determined as much by one's peers in childhood as by one's
4. To reduce rather than eliminate, corruption would require tremendous commitment and effort.
- (A) To reduce rather than eliminate,
- (B) To reduce and eliminate,
- (C) To reduce, let alone eliminate,
- (D) To reduce, as opposed to eliminate,
- (E) To reduce, as well as eliminate,
5. Foreign investors, because of their growing confidence in their capability to making profitable investments in Pakistan, have been led to move from passive involvement in commercial partnerships to active development of their own increasingly ambitious projects.
- (A) Foreign investors, because of their growing confidence in their capability to making profitable investments in Pakistan, have been led
- (B) Foreign investors, growing confident about their capability for making profitable investments in Pakistan, had led them
- (C) Growing confidence in their ability to make profitable investment in Pakistan has led foreign investors
- (D) Growing confidence in their ability for making profitable investments in Pakistan have led foreign investors
- (E) Growing confident about their capabilities for making profitable investment in Pakistan, foreign investors had been led
6. My younger brother insists that he is as tall as me.
- (A) that he is as tall as me.
- (B) that he is so tall as me.
- (C) that he is tall as me.
- (D) that he is as tall as I.
- (E) he is as much tall as me.
7. It is so dark that I can't hardly see.
- (A) I can't hardly see.
- (B) I can hardly see.
- (C) I cannot hardly see.
- (D) I cannot see hardly.
- (E) I can see hardly.

**(e) Reading Comprehension**

*Directions:* The passage given below is followed by questions based on its content. After reading the passage, choose the **best** answer to each question from the five choices marked (A), (B), (C), (D) and (E) in your test book. Then fill in the corresponding oval on your answer sheet.

All questions should be answered on the basis of what is stated or implied in the passage.

Since the nineteenth century when rigorous studies of poverty began, researchers have tried to establish a fixed yardstick against which to measure poverty. Ideally, such a yardstick would be applicable to all societies and should establish a fixed level, usually known as the poverty line, below which poverty begins and above which it ends. This concept of poverty is known as absolute poverty. It usually involves a judgement of basic human needs and is measured in terms of the resources required to maintain health and physical efficiency. Most measures of absolute poverty are concerned with establishing the quality and amount of food, clothing, and shelter deemed necessary for a healthy life. Absolute poverty is often known as subsistence poverty since it is based on assessments of minimum subsistence requirements. It is usually measured by pricing the basic necessities of life, drawing a poverty line in terms of this price, and defining those as poor whose income falls below that figure.

There have been many attempts to define and operationalise - put into a form which can be measured - the concept of absolute poverty. For example Drewnowski and Scott in their 'Level of Living Index', define and operationalise 'basic physical needs' in the following way: nutrition, measured by factors such as intake of calories and protein; shelter, measured by quality of dwelling and degree of overcrowding; and health, measured by factors such as the rate of infant mortality and the quality of available medical facilities.

Some concepts of absolute poverty go beyond the notion of subsistence poverty by introducing the idea of 'basic cultural needs'. This broadens the idea of basic human needs beyond the level of physical survival. Drewnowski and Scott include education, security, leisure and recreation in their category of basic cultural needs. The proportion of children enrolled at school is one indication of the level of educational provision; the number of violent deaths relative to the size of the population is one indication of security; and the amount of leisure relative to work time is one measure of the standard of leisure and recreation.

The concept of absolute poverty has been widely criticised. It is based on the assumption that there are minimum basic needs for all people, in all societies. This is a difficult argument to defend even in regard to subsistence poverty measured in terms of food, clothing and shelter. Such needs vary both between and within societies. Thus Peter Townsend argues, 'It would be difficult to define nutritional needs without taking account of the kinds and demands of occupations and of leisure time pursuits in a society'. For example, the nutritional needs of the nomadic hunters and gatherers of the Kalahari Desert in Africa may well be very different from those of members of Western society. Within the same society, nutritional needs may vary widely, between, for example, the bank clerk sitting at his desk all day and the labourer on a building site. A similar criticism can be made of attempts to define absolute standards of shelter. Jack and Janet Roach give the following illustrations: 'City living, for example, requires that

“adequate” shelter not only protects one from the elements, but that it does not present a fire hazard to others and that attention be paid to water supplies, sewage and garbage disposal. These problems are simply met in rural situations’. Thus flush toilets, which may well be considered a necessary part of adequate shelter in the city, could hardly be considered essential fixtures in the dwellings of traditional hunting and gathering, and agricultural societies.

The concept of absolute poverty is even more difficult to defend when it is broadened to include the idea of ‘basic cultural needs’. Such ‘needs’ vary from time to time and place to place and any attempt to establish absolute, fixed standards is bound to fail. Drewnowski and Scott’s basic cultural need of security is a case in point. Financial security for aged members of the working class in nineteenth-century England involved younger relatives providing for them, whereas today it is largely met by state old age pensions and private insurance schemes. Increasing longevity, reduction in the size of families, and earlier retirement have altered the circumstances of the aged. Definitions of adequate provision for old age have changed since the last century. Thus, in terms of security, both the situation and expectations of the aged in England have changed and are not strictly comparable over time. A similar criticism can be applied to attempts to apply absolute standards to two or more societies. For instance, recreational and leisure provision in the West may be measured in terms of the number of televisions, cinemas, parks and playing fields per head of the population. However, the concept of leisure on which this is based and the items in terms of which it is measured may be largely irrelevant for other societies. For example, the Hopi and Zuni Indians of the Southwestern USA have an elaborate ceremonial life which forms the central theme of their leisure activities. Recreational needs are therefore largely determined by the culture of the particular society. Any absolute standard of cultural

needs is based in part of the values of the researcher which to some degree reflect his particular culture. Peter Townsend notes that when societies are compared in terms of recreational facilities, ‘Cinema attendance and ownership of radios take precedence over measures of direct participation in cultural events’, such as religious rituals and other ceremonies. This is a clear illustration of Western bias.

1. What is the writer’s main intention in the first paragraph?
  - (A) to compare absolute poverty with subsistence poverty
  - (B) to describe various interpretations of the poverty line
  - (C) to introduce various ways in which poverty can be measured
  - (D) to suggest a clear definition of poverty
  - (E) to introduce the concept of absolute poverty
  
2. The ‘Level of Living Index’ described in paragraph 2
  - (A) contradicts the ideas expressed in paragraph 1.
  - (B) questions the ideas expressed in paragraph 1.
  - (C) establishes the ideas expressed in paragraph 1.
  - (D) amplifies the ideas expressed in paragraph 1.
  - (E) has no connection with the ideas expressed in paragraph 1.
  
3. What is the primary purpose of the 3rd paragraph?
  - (A) It serves as a summary of the preceding two paragraphs.
  - (B) It counter balances the existing discussion.
  - (C) It justifies the writer’s main contention.
  - (D) It extends the definitions introduced in the preceding two paragraphs.

- (E) It negates the concepts introduced in the preceding two paragraphs.
4. According to the text, what is the main criticism levelled against the concept of absolute poverty?
- (A) It is impossible to measure people's basic needs.  
 (B) One cannot assume people share the same basic needs.  
 (C) One cannot formulate any comprehensive definition of absolute poverty.  
 (D) It is impossible to describe the needs of different societies.  
 (E) Absolute poverty should be avoided.
5. According to the writer, all the following have primarily contributed to the change in situation and expectations of the aged EXCEPT:
- (A) Longer life expectancies  
 (B) Smaller family systems  
 (C) More recreational opportunities  
 (D) Earlier retirement age  
 (E) Financial security through pensions and insurance

**SECTION : ANALYTICAL**

**Time Allowed: 25 Minutes**

**Directions:** For each question in this section, read the five choices marked (A), (B), (C), (D) and (E) in your test book. Select the letter of the choice which you consider is the correct answer. Then fill in the corresponding oval on your answer sheet.

For Questions 1 to 3 select the set of words which best matches the analogy.

1. **ACCENT : SPEAK**

- (A) tongue : talk
- (B) mood : behave
- (C) see : eye
- (D) ear : listen
- (E) gait : walk

2. **BRAVE : FEAR**

- (A) coward : caution
- (B) suspicious : question
- (C) sophisticated : vulgarity
- (D) cultivated : breeding
- (E) friend : enemy

3. **CURIOSITY : KNOWLEDGE**

- (A) aptitude : skill
- (B) language : address
- (C) complacency : ignorance
- (D) effort : progress
- (E) memory : remember

4. Select the option from the given choices which best completes the sequence:

7, 11, 27, 91, \_\_\_\_\_

- (A) 347
- (B) 327
- (C) 155
- (D) 271
- (E) 387

5. Three stacks containing an equal number of chips are to be made from 10 red chips, 8 blue chips, and 6 green chips. If all of these chips are used and each stack contains at least 2 chips of

each colour, what is the maximum number of red chips in any one stack?

- (A) 8
- (B) 7
- (C) 6
- (D) 4
- (E) 3

Questions 6 and 7 relate to the following data:

Some, but not all K's are M's  
 Some, but not all K's are L's  
 Some, but not all M's are L's  
 No P's are M's  
 All P's are K's  
 Some P's are L's

6. If all Q's are not M's, which of the following is not possible?

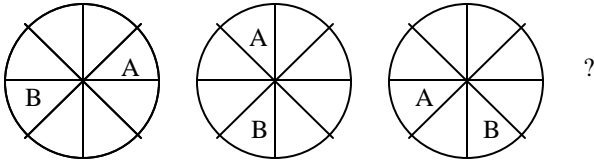
- (A) All Q's are P's
- (B) All Q's are K's
- (C) All K's are Q's
- (D) All Q's are not P's
- (E) All P's are Q's

7. If all R's are not K's, which of the following is not possible?

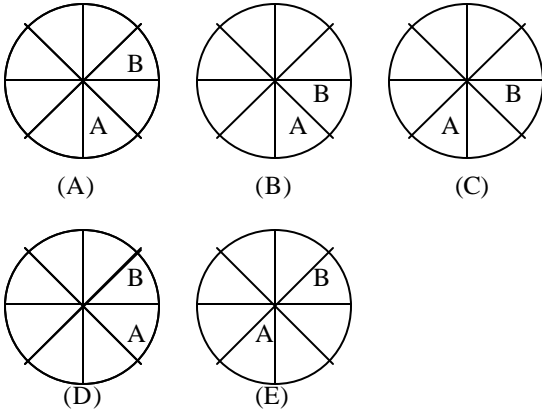
- (A) Some R's are L's
- (B) Some R's are M's
- (C) Some R's are neither L's nor M's
- (D) Some R's are L's and M's
- (E) Some R's are L's and P's

8.

(E) 44



Which is the next figure in sequence?



Questions 9 and 10 relate to the following data:

Each member of a group of 64 students had to select three out of four electives - Marketing, Finance, Production, and Economics.

9. If the number of students in each elective ends up to be equal, the number of students in each elective will be

- (A) 64
- (B) 48
- (C) 40
- (D) 32
- (E) 16

10. If 28 students selected Economics, 60 students selected Marketing, and the number of students in Production and Finance are equal, how many students are there in Production?

- (A) 104
- (B) 24
- (C) 48
- (D) 52

**ANSWERS TO THE SAMPLE QUESTIONS**

**Mathematics**

- |         |         |
|---------|---------|
| 1. (B)  | 11. (C) |
| 2. (B)  | 12. (B) |
| 3. (C)  | 13. (C) |
| 4. (E)  | 14. (E) |
| 5. (C)  | 15. (D) |
| 6. (A)  | 16. (C) |
| 7. (E)  | 17. (A) |
| 8. (C)  | 18. (D) |
| 9. (B)  | 19. (D) |
| 10. (C) | 20. (D) |

**English Language**

- |                   |              |                         |                        |
|-------------------|--------------|-------------------------|------------------------|
| (a) Antonyms      | (b) Synonyms | (c) Sentence Completion | (d) Written Expression |
| 1. (B)            | 1. (B)       | 1. (C)                  | 1. (E)                 |
| 2. (C)            | 2. (C)       | 2. (D)                  | 2. (E)                 |
| 3. (B)            | 3. (A)       | 3. (D)                  | 3. (A)                 |
| 4. (D)            | 4. (D)       | 4. (E)                  | 4. (C)                 |
| 5. (C)            | 5. (E)       |                         | 5. (D)                 |
|                   |              |                         | 6. (A)                 |
|                   |              |                         | 7. (B)                 |
| (e) Comprehension |              |                         |                        |
| 1. (E)            | 2. (D)       | 3. (D)                  | 4. (B)                 |
| 5. (C)            |              |                         |                        |
| <b>Analytical</b> |              |                         |                        |
| 1. (E)            | 2. (C)       | 3. (D)                  | 4. (A)                 |
| 5. (D)7           | 6. (C)       | 7. (E)                  | 8. (B)                 |
| 9. (B)            | 10. (D)      |                         |                        |



**GENERAL INSTRUCTIONS****FOR TAKING THE TEST****Test Date: - January 25, 2004****Reporting Time**

Reporting time for the test is 8:00 a.m. Registration: 8.00 to 8:45 a.m.

**Identification for admission to the Test Centre**

To be admitted to the test centre, you must bring one of the following photo-bearing forms of identification with you.

National Identity Card  
Valid Passport

**Test Centre Procedures and Regulations**

- The test will be conducted only on the scheduled day and time.
- You must bring your photo-bearing National Identity Card or valid passport to the centre.
- Remember to bring three or four sharpened soft-lead (# 2 or HB) pencils, an eraser, a sharpener, and a pen/ball point pen with you.
- No examinee will be admitted to the centre after test materials have been distributed.
- Items like scratch paper, calculators, watch calculators, books pamphlets, slide rules, protractors, compasses, rulers, highlighter pens, stereos or radios with headphones, watch alarms including those with flashing lights or alarm sounds, dictionaries, key board, or paper of any kind are not allowed.
- Eating, drinking, smoking or chewing tobacco is forbidden during the administration of the test.
- You can only leave the centre during the test if the Supervisor permits. You will not be permitted to make up lost time.
- You may wish to pace yourself with your own watch, but the Supervisor will be the official time keeper of the test.
- During the time allowed for each section of the test, you are allowed to work only on the particular section. After the Supervisor announces "Please stop work and put your pencil down," you must stop writing.
- You may use the test book to work out your answers but you must mark all your answers on the separate answer sheet before time is called.
- Answers to multiple-choice questions recorded in the test book will not be considered. Only the answers on the answer sheet will be graded.
- Visitors will not be allowed in the test centre while the test is in progress.
- Failure to comply with the Supervisor's directions will result in your test being cancelled.

- A Supervisor is authorised to dismiss you from the test session for:
  - Creating a disturbance;
  - Giving or receiving help;
  - Using any unauthorised aids including notes, books, calculators or paper of any kind;
  - Working on any part of a test after the time has been called;
  - Attempting to remove test materials or notes from the test centre;
  - Smoking; and
  - Eating and/or drinking during the test.

At the conclusion of the test you will be required to return your test books and answer sheets to the test Supervisor. These materials are the property of LUMS.

**Negative Marking**

Remember not to spend too much time on any one question. *Since 1/4th of a mark will be subtracted for each wrong answer*, it is important to manage your time and responses to test questions effectively.

**Completing your Answer Sheet**

You are responsible for the proper completion of your answer sheet to ensure accurate scoring. Ovals must be completely filled in. Before you take the test, be sure to read the instructions on the test book. Follow these instructions carefully as you complete your answer sheet.