



IIM INDORE AND IIT INDORE JOINTLY OFFER
A TWO-YEAR DEGREE PROGRAMME
MASTER OF SCIENCE IN DATA SCIENCE AND MANAGEMENT
(Blended Learning Mode)
Data science and Management Aptitude Test
Sample Question Paper

DMAT Quantitate Section

Q.1

The equation of the straight line passing through the point M (-5, 4), such that the portion of it between the axes is divided by the point M in to two equal halves, is

- a) $10y - 8x = 80$
- b) $8y + 10x = 80$
- c) $10y + 8x = 80$
- d) $8y + 10x + 80 = 0$

Q.2

The remainder when $(29^{29})^{29}$ is divided by 9 is

- a) 1
- b) 2
- c) 3
- d) 4

Q.3

The area enclosed by the curve $2|x| + 3|y| = 6$ is

- a) 12 square units
- b) 3 square units
- c) 4 square units
- d) 24 square units

Q.4

The set of all real values of p for which the equation $3 \sin^2 x + 12 \cos x - 3 = p$ has at least one solution is

- a) $[-12, 12]$
- b) $[-12, 9]$
- c) $[-15, 9]$
- d) $[-15, 12]$

Q.5

ABCD is a quadrilateral whose diagonals AC and BD intersect at O. If triangles AOB and COD have areas 4 and 9 respectively, then the minimum area that ABCD can have is

- a) 26
- b) 25
- c) 21
- d) 16

Q.6

ABCD is a quadrilateral whose diagonals AC and BD intersect at O. If triangles AOB and COD have areas 4 and 9 respectively, then the minimum area that ABCD can have is

- a) 26
- b) 25
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Q.7

In a city, 50% of the population can speak in exactly one language among Hindi, English and Tamil, while 40% of the population can speak in at least two of these three languages. Moreover, the number of people who cannot speak in any of these three languages is twice the number of people who can speak in all these three languages. If 52% of the population can speak in Hindi and 25% of the population can speak exactly in one language among English and Tamil, then the percentage of the population who can speak in Hindi and in exactly one more language among English and Tamil is

- a) 22%
- b) 25%
- c) 30%
- d) 38%

Q.8

Two points on a ground are 1m apart. If a cow moves in the field in such a way that its distance from the two points is always in ratio 3:2 then the cow moves in a straight line

- a) the cow moves in a circle
- b) the cow moves in a parabola
- c) the cow moves in a hyperbola

Q.9

In a given village there are only three sizes of families: families with 2 members, families with 4 members and families with 6 members. The proportion of families with 2, 4 and 6 members are roughly equal. A poll is conducted in this village wherein a person is chosen at random and asked about his/her family size. The average family size computed by sampling 1000 such persons from the village would be closest to

- a) 4
- b) 4.667
- c) 4.333
- d) 3.667

DMAT DI/LR Section

Q.1-5

The table below presents the quoted buy and sell prices of five stocks during the five trading days of a given week. The quoted sell price is the price at which an investor can sell a stock in the market. The quoted buy price is the price at which an investor can buy a stock from the market. All the quoted numbers are in Indian Rupees.

Day	Monday		Tuesday		Wednesday		Thursday		Friday	
Quote	Sell	Buy	Sell	Buy	Sell	Buy	Sell	Buy	Sell	Buy
Dabur	460	462	455	458	432	433	444	447	461	462
Marico	345	346	335	336	365	368	372	375	372	374
HUL	1931	1933	1952	1955	1979	1981	2044	2048	1966	1969
ITC	237	238	238	239	246	251	221	225	253	256
Britannia	3044	3046	3100	3101	3110	3115	3025	3027	3140	3144

Q.1

If an investor had Rs.36,00,000 to invest in any particular single stock, and she could buy the stock only on Monday and sell it off only on Friday, then the stock she should buy on Monday to earn the maximum possible profit during the week is

- a) Marico
- b) HUL
- c) ITC
- d) Britannia

Q.2

If an investor planned to invest Rs.36,00,000 in purchasing the stocks of HUL on Monday, sell them off on Wednesday and use the entire proceeds to purchase the stocks of Britannia on the same day and sell them off again on Friday, then the total investment return during the week would be

- a) 2.80 percent
- b) 3.00 percent

- c) 3.20 percent
- d) 3.40 percent

Q.3

The difference between the quoted buy and sell price of a stock is referred to as the spread of the stock. The average spread of the stocks is lowest on

- a) Monday
- b) Tuesday
- c) Thursday
- d) Friday

Q.4

A brokerage firm charges 0.1 percent trading commission on the value of shares bought or sold through its trading platform. If an investor bought 1000 shares of Britannia on Tuesday, and sold all of them on Thursday, then the total brokerage fee that will be charged from the investor is

- a) 6,12
- b) $6,12\bar{5}$
- c) 6,12
- d) $6,12\bar{5}$

Q.5

If you had decided to invest Rs.36,00,000 worth of ITC stocks on Monday, then the day of the week you should choose to sell the stocks to earn the maximum possible profit would be

- a) Tuesday
- b) Wednesday
- c) Thursday
- d) Friday

Q.6-10

In a football tournament six teams A, B, C, D, E and F participated. Every pair of teams had exactly one match among them. For any team, a win fetches 2 points, a draw fetches 1 point, and a loss fetches no points. Both the teams E and F ended with less than 5 points. At the end of the tournament points table is as follows (some of the entries are not shown):

Teams	Played	Wins	Losses	Draws	Points
A	5		0		8
B	5		2		6
C	5		2		5
D	5		1		5
E	5		1		
F	5				

It is known that: (1) Team B defeated Team C, and (2) Team C defeated Team D.

Q.6

Total number of matches ending in draw is

- a) 12
- b) 4
- c) 5
- d) 6

Q.7

Which team had highest number of draws?

- a) Team A
- b) Team C
- c) Team D
- d) Team E

Q.8

Total points Team F got was

- a) 0
- b) 1
- c) 2
- d) 3

Q.9

Which team was not defeated by Team A?

- a) Team B
- b) Team C
- c) Team D
- d) Team F

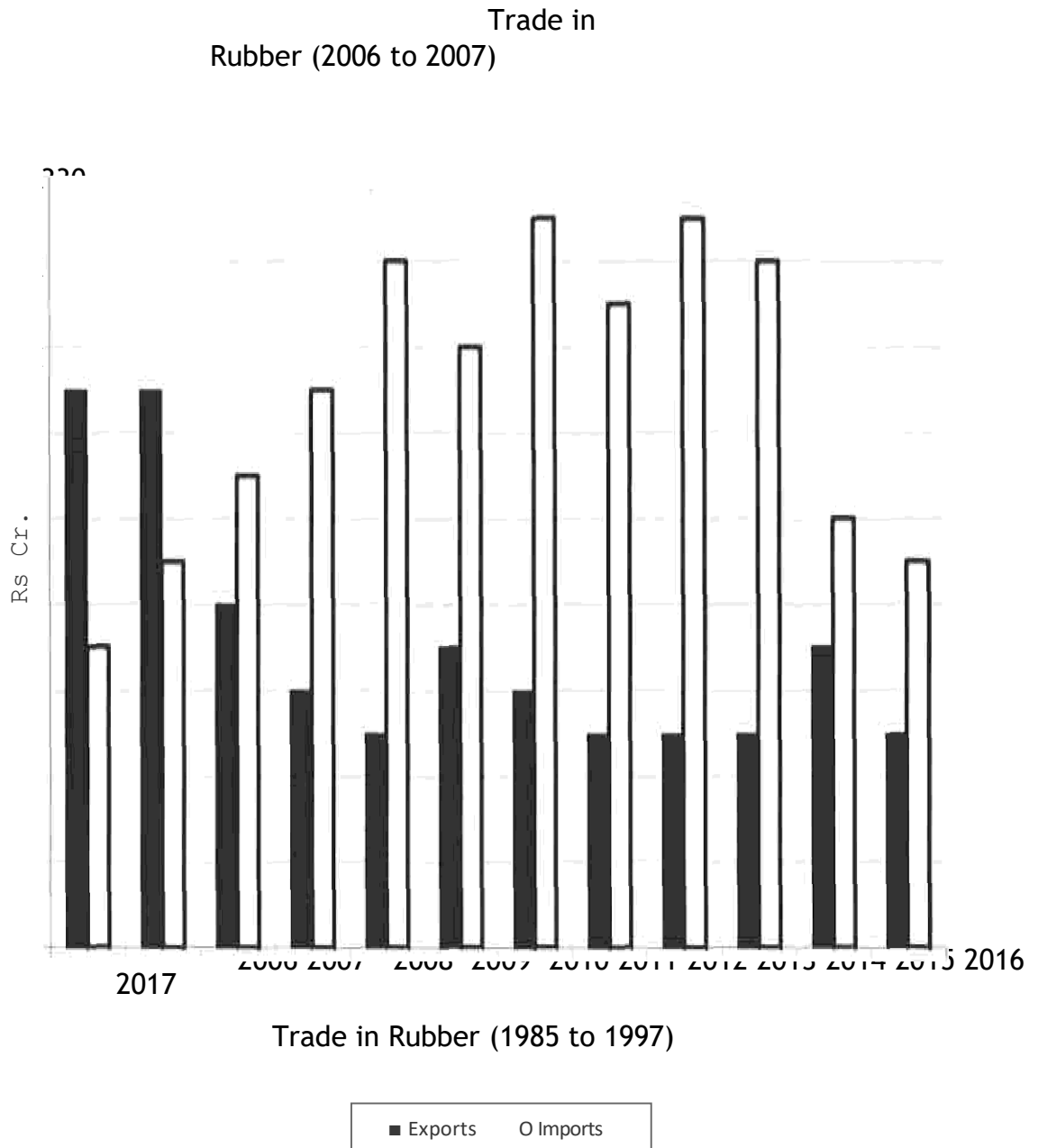
Q.10

Team E was defeated by

- a) Teams A and B only
- b) Only Team A
- c) Only Team B
- d) Teams A, B and D only

Q.11-15

Analyze the given data for exports and imports of rubber in Rs. crores from 2006 to 2017 and answer the questions based on the analysis.



Q.11

Average annual exports for the given period (2006-2017) was approximately

- (a) Rs.230 Cr
- (b) Rs.220 Cr
- (c) Rs.210 Cr
- (d) Rs.190 Cr

Q.12

The percentage decline in exports during the period 2006-2011 is more than the percentage decline in exports during 2012-2017 by approximately percent

- (a) 16.5
- (b) 20.5
- (c) 12.5
- (d) 21.5

Q.13

The maximum difference between imports and exports is

- (a) Rs.60 Cr
- (b) Rs. 110 Cr
- (c) Rs.120 Cr
- (d) Rs.100 Cr

Q.14

Balance of trade is defined as imports subtracted from exports (=exports-imports). Which of the following blocks of three years has witnessed the largest average negative balance of trade?

- (a) 2007-2009
- (b) 2015-2017
- (c) 2014-2016
- (d) 2010-2012

Q.15

The percentage increase in imports over the previous year is maximum during

- (a) 2009 to 2010
- (b) 2010 to 2011
- (c) 2013 to 2014
- (d) 2008 to 2009