

**MAT - 3<sup>rd</sup> December, 2006 Samples Questions**

**Samples questions and answers that appeared in MA Section:**

Q1 There are 4 boys and 3 girls. What is the probability the boys and girls sit alternately?

Ans  $1/35$

Q2 Two trains are 2 kms apart. Speed of one train is 20m/s and the other train is running at 30 m/s . Lengths of the trains are 200 and 300m. In how much time do the trains cross each other?

Ans 50 seconds

Q3 A & B are two players. They need to select one number from 1 to 25. If both the players select the same numbers they will win the prize. What is the probability of not winning in a single trial?

Ans  $24/25$

Q4 Four different integers are in increasing AP such that one number is equal to sum of the squares of the other three numbers.

Ans  $-1,0,1,2$

Q5 A train runs first half of the distance at 40 km/hr and the remaining half at 60 km/hr. What is the average speed for the entire journey?

Ans 48km/hr

Q6 In a company there were 75 % skilled employees and the remaining unskilled. 80% of the skilled and 20% of the unskilled were permanent. If the temporary employees were 126 find the total number of employees.

Ans 360

Q7 A person sells a horse at 12.5% loss. If he sells for 92.5 more, he will have a profit of 6%. What is the CP?

Ans 500

Q8 One tap takes 15 min to fill, another tap takes 12 min to fill and the third tap can empty in 20 min. In how much time the tank would be full.

Ans 10 min

Q9 Three mixtures of water and milk are in the ratio 6:7, 5:9, 8:7. What would be the ratio if they were mixed together?

Ans: None of the options were correct. The right answer would be data insufficient.

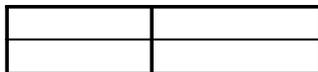
Q10. Two trains are separated by 200km. One leaves at 6:00 am from Delhi and reaches Merrut at 10:00 am. Another train leaves from Merrut at 8:00 am and reaches Delhi at 11:30 am. At what time two trains meet each other?

Ans 8:56 am

Q11 If the height of the triangle decreases by 40% and the breadth increases by 40%. Then the effect on the area is

Ans 16% decrease.

Q12



In how many ways can you go from one corner to the diagonally opposite corner if the movement is through the shortest route..

Ans: 6

Q13 There are only two candidates. 10% of the voter did not vote. 60 votes were invalid. If elected got 308 votes more than the opponent. The elected person got 47% of the total votes. How many votes did each get.

Ans: Option 4 ( only one option is having a difference of 308 votes.)

Q14. If area of circle is equal to area of triangle is equal to area of square then which is having the larger perimeter.

Ans: Triangle.

Q15. If  $\log_{12}27 = a$  then find the value of  $\log_6 16$

Ans.  $(4(3-a)) / (3+a)$

Q16 A grandfather has 5 sons and daughters and 8 grandchildren.. They have to be arranged in a row such that the first 4 seats and last four seats are to be taken by grandchildren and the grandfather would not sit adjacent to any of the grandchildren.

Ans.  $4 * 8! * 5!$

Q17 A parallelepiped of length = 5cm, breadth = 3cm and height 4 cm. Cube of side 4 cm, cylinder of radius 3 cm and length = 3cm and sphere of radius 3cm. Arrange them in descending order of volume

Ans: Sphere>Cylinder>Cube>Parallelepiped.

Q18 Which of the following statements is/are correct.

Ans: The correct Statements were

$$(1) 99/101 > 97/99 > 95/97 , (2) 99^2/101^2 > 97^2/99^2 > 95^2/97^2$$

Q19. A farmer has a rectangular plot. He wants to do fencing along one of the side with the help of the posts. Two posts being on two corners. He brings 5 post less than what he has initially plan because of which the distance between two consecutive post became 8 m instead of 6 m.. What is the length of the side and no of post?

Ans. 120 , 16

Q20: A circular ground of circumference of 88m. A strip of land 3m wide inside and along the circumference is to be leveled. What is the expenditure if leveling cost is Rs. 7 per metre square.

Ans. 1650

Q21: Four horses are tethered at the four corners of a square of side 14cm such that two horses along the same side can just reach each other. They were able to graze the area in 11 days. How many days will they take in order to graze the left out area?

Ans. 3

Q22: Two clocks are synchronized at 12 midnights. One clock gains 2 min per hour and the other clock loses 1min per hour. How many minutes apart its minute hand will be at 11.am

Ans. None of these.

### Sample Questions and Answers in GK Section:

Ques1. Bull and bear refer to

Ans: Stock exchange

Ques2. Bhakra Nangal dam was built on river

Ans. Sutlej

Ques3. Tetanus is caused by

Ans. Bacteria

Ques4. De beers manufacture

Ans: Diamonds

Ques5. Commercial vehicles are not manufactured by which of the following

Ans: Birla Yamaha

Ques6. Wings of fire autobiography by

Ans: President A.P.J Abdul Kalam.

Ques7. Which is not a courier company.

Ans: Essar

Ques8. Software and Services Company.

Ans: NASSCOM

Ques9. Panchayati Raj started from which state in India.

Ans: Rajasthan

Ques10. Duration of First five yr plan

Ans 1950-1951 to 1955-1956

Ques11. Which one of following is Banker's Bank

Ans: Reserve Bank of India

Ques12. Economic growth is indicated by

Ans: GDP

Ques13. All India service is created by

Ans: Parliament.

Ques14. Procedure for removal of which two are same out of the following...

Ans: CEC and Judge of the supreme court.

Ques15. Arrange PMs of India in chronological order.....

Ans: Morarjee Desai, Charan Singh, VP Singh, Chandrashekar.

Ques16. Volkswagen is from which country?

Ans: Germany

Ques17. First woman Prime minister in the world

Ans: Seremavo Bandarnaike

Ques18. Which is associated with football

Ans: Merdeka

Ques 19. Venue of XXI winter Olympics 2010

Ans: Canada

Ques 20. Crossed cheque can be Encashed .....

Ans: Through bank

Ques21. Standard chartered bank merged with.....

Ans: ANZ Grindlay's bank

Ques 22. Which disease is mentioned along with national policy with AIDS

Ans: Tuberculosis

Ques 23. National income in India compilation is done by...

Ans: CSO

Ques 24. Rajdhani Express runs between

Ans: Between Delhi and few state capitals

Ques 25. Maple leaf represents which one of the following countries

Ans: Canada

Ques 26. PAN is required for.....

Ans: D-Mat account

Ques 27. Which one of the following is not matched correctly....

Ans: Faraday-Diffusion of gases