

## Sample Entrance TEST (SET A) – RECRUITMENT FOR INTAKE 2013

### SECTION 1 - ENGLISH

40 Questions

#### SECTION A – Grammar and Structure (25 marks)

#### MULTIPLE CHOICES

##### Question 1 – 25.

Choose the **BEST** answer for each question.

1. The word boycott derives from the name of Charles C. Boycott, an English land agent in Ireland that was ostracised for refusing to reduce rent.  
A. that was ostracised for refusing  
B. who was ostracised for refusing  
C. which was ostracised for refusing  
D. that had been ostracised for refusing
2. Last night the weather forecaster announced that this is the most rainy season the area has had in the past decade.  
A. this is the most rainy season the  
B. this has been the most rainy season the  
C. this was the most rainy season the  
D. this is the rainiest season the
3. I would have lent you my textbooks if you would have asked me.  
A. would have asked me  
B. could of asked  
C. could ask  
D. had asked

**Analyse the error in the questions below and choose the BEST answer.**

4. Jabir was known for belching; and telling inappropriate jokes in public.  
A. Capitalization B. Punctuation C. Spelling D. Grammar
5. The bachelor never married. Most people thought it was because of misogini.  
A. Capitalization B. Punctuation C. Spelling D. Grammar

## Question 6 - 10

Choose the BEST answer for each question.

### Ferdinand Magellan

In the sixteenth century, an age of great marine and terrestrial exploration, Ferdinand Magellan led the first expedition to sail around the world. As a young Portuguese noble, he served the king of Portugal, but he became involved in the quagmire of political intrigue at court and lost the king's favour. After he was dismissed from service to the king of Portugal, he offered to serve the future Emperor Charles V of Spain. A papal decree of 1493 had assigned all land in the New World west of 50 degrees W longitude to Spain and all the land east of that line to Portugal. Magellan offered to prove that the East Indies fell under Spanish authority. On September 20, 1519, Magellan set sail from Spain with five ships. More than a year later, one of these ships was exploring the topography of South America in search of a water route across the continent. This ship sank, but the remaining four ships searched along the southern peninsula of South America. Finally they found the passage they sought near a latitude of 50 degrees S. Magellan named this passage the Strait of All Saints, but today we know it as the Strait of Magellan.

One ship deserted while in this passage and returned to Spain, so fewer sailors were privileged to gaze at that first panorama of the Pacific Ocean. Those who remained crossed the meridian we now call the International Date Line in the early spring of 1521 after ninety-eight days on the Pacific Ocean. During those long days at sea, many of Magellan's men died of starvation and disease. Later Magellan became involved in an insular conflict in the Philippines and was killed in a tribal battle. Only one ship and seventeen sailors under the command of the Basque navigator Elcano survived to complete the westward journey to Spain and thus prove once and for all that the world is round, with no precipice at the edge.

6. The sixteenth century was an age of great \_\_\_ exploration.  
A. cosmic B. land C. mental D. none of the above
  
7. Magellan lost the favour of the King of Portugal when he became involved in a political \_\_\_\_\_.  
A. entanglement B. discussion C. negotiation D. none of the above
  
8. The Pope divided New World lands between Spain and Portugal according to their location on one side or the other of an imaginary geographical line 50 degrees west of Greenwich that extends in a \_\_\_ direction.  
A. north and south B. crosswise C. easterly D. south east\_\_\_\_\_Sample EntranceTEST
  
9. One of Magellan's ships explored the \_\_\_ of South America for a passage across the continent.  
A. coastline B. mountain range C. physical features D. none of the above
  
10. Four of the ships sought a passage along a southern \_\_\_\_\_.  
A. coast B. inland C. body of land with water on three sides D. answer not available

## SECTION 2 - MATHEMATICS

### 20 Questions

1. What simple interest rate will Sally need to secure to make \$5,000 in an interest on a \$20,000 principal over 5 years?
2. Jim is reviewing his algebra quiz. He is very sure that one of his solutions is incorrect. Which one?
3. If two planes leave the same airport at 3:00 PM, how many miles apart will they be at 5:00 PM if one travels directly east at 150 mph and the other travels directly south at 200 mph?
4. A solid cube of side 6 is first painted black and cut into smaller cubes of side 2. How many of the smaller cubes have paint on exactly two sides?
5. Solve:  $0.25 + 0.65$
6. There are 8 ounces in a  $\bullet\bullet\bullet$  pound. How many ounces are there in  $7\bullet\bullet\bullet$  lbs?
7. If  $9b = 81$ , then  $\sqrt{b} \bullet \sqrt{3b} =$
8. If the *product* of  $(1 + 2)$ ,  $(2 + 3)$ , and  $(3 + 4)$  is equal to one-half the sum of 20 and  $x$ , what is the value of  $x$ ?
9. How many numbers from 1 to 200 inclusive are equal to the cube of an integer?
10.  $-32 + 7$  equals

### SECTION 3 - SCIENCE

#### 20 Questions

1. There is a graph with variable  $y$  at vertical axes and variable  $x$  at the horizontal axes. The two variables are related by the equation  $y = mx + c$ , where  $m$  and  $c$  are the constants. What is the slope of the graph?
2. Which one is in ascending order?
  - A.  $1 \times 10^{-4}$  km,  $1 \times 10^{-2}$  m,  $1 \times 10^4$  mm
  - B.  $1 \times 10^{-4}$  km,  $1 \times 10^4$  mm,  $1 \times 10^{-2}$  m
  - C.  $1 \times 10^{-2}$  m,  $1 \times 10^{-4}$  km,  $1 \times 10^4$  mm
  - D.  $1 \times 10^{-2}$  m,  $1 \times 10^4$  mm,  $1 \times 10^{-4}$  km
3. When measuring a length with a ruler, the eye must always be placed vertically above the mark being read. This is to avoid
4. The refractive index for the glass is 1.7. What is the critical angle for the glass?
5. An object is located at the principle focus of a converging lens. The lens has the focus length of  $f$ . What is the distant of the image formed?
6. A house has 240V supply. A given circuit has six lamps, all in parallel connection. Each lamp is rated 60W, 240V. What is the total current passing through the whole circuit?
7. The primary and the secondary coils of a transformer have 2000 and 500 turns respectively. If the primary is connected to a 120 V a.c. supply, what will be the secondary current if there is a 20 W resistor connected in secondary coils?
8. When some impurities are added to the liquid, the boiling point will
9. A car with the mass of 1000 kg and is traveling with the constant speed of  $10 \text{ ms}^{-1}$ . Once the brake is push consistently, the car is stop in 25 m. What is the total force required to stop the car?
10. An electric motor is supplied with 12 V and the current flowing is 5A. The motor is used to lift an object with the mass of 6 kg through 3 m height, in 4 s. What is the efficiency of the motor?