# Section II

**Answer questions 26 to 28 based on the following information:**

For admission to various affiliated colleges, a university conducts a written test with four different sections, each with a maximum of 50 marks. The following table gives the aggregate as well as the sectional cut-off marks fixed by six different colleges affiliated to the university. A student will get admission only if he/she gets marks greater than or equal to the cut-off marks in each of the sections and his/her aggregate marks are at least equal to the aggregate cut-off marks as specified by the college.

| | Sectional Cut-off Marks | | | | Aggregate Cut-off Marks |
|---|---|---|---|---|---|
| | Section A | Section B | Section C | Section D | |
| College 1 | 42 | 42 | 42 | | 176 |
| College 2 | | 45 | 45 | | 175 |
| College 3 | | | 46 | | 171 |
| College 4 | 43 | | | 45 | 178 |
| College 5 | 45 | | 43 | | 180 |
| College 6 | | 41 | | 44 | 176 |

**26.** Aditya did not get a call from even a single college. What could be the maximum aggregate marks obtained by him?

(1) 181 (2) 176 (3) 184 (4) 196 (5) 190

**27.** Bhama got calls from all colleges. What could be the minimum aggregate marks obtained by her?

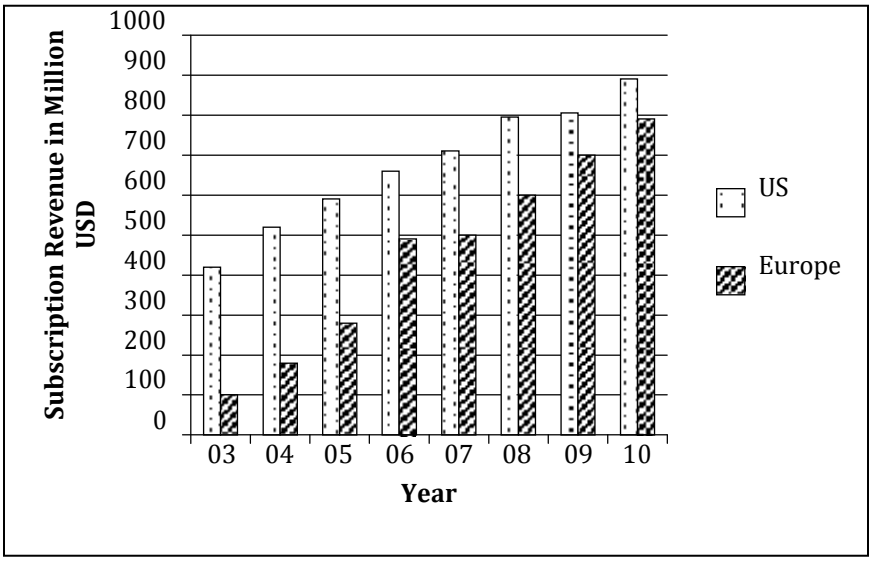
(1) 180 (2) 181 (3) 196 (4) 176 (5) 184

**28.** Charlie got calls from two colleges. What could be the minimum marks obtained by him in a section?

(1) 0 (2) 21 (3) 25 (4) 35 (5) 41

**Answer questions 29 to 32 based on the following information:**

The bar chart below shows the revenue received, in million US Dollars (USD), from subscribers to a particular Internet service. The data covers the period 2003 to 2007 for the United States (US) and Europe. The bar chart also shows the estimated revenues from subscription to this service for the period 2008 to 2010.



**29.** While the subscription in Europe has been growing steadily towards that of the US, the growth rate in Europe seems to be declining. Which of the following is closest to the percent change in growth rate of 2007 (over 2006) relative to the growth rate of 2005 (over 2004)?

(1) 17 (2) 20 (3) 35 (4) 60 (5) 100

**30.** The difference between the estimated subscription in Europe in 2008 and what it would have been if it were computed using the percentage growth rate of 2007 (over 2006), is closest to:

(1) 50 (2) 80 (3) 20 (4) 10 (5) 0

**31.** In 2003, sixty percent of subscribers in Europe were men. Given that woman subscribers increase at the rate of 10 percent per annum and men at the rate of 5 percent per annum, what is the approximate percentage growth of subscribers between 2003 and 2010 in Europe? The subscription prices are volatile and may change each year.

(1) 62 (2) 15 (3) 78 (4) 84 (5) 50

**32.** Consider the annual percent change in the gap between subscription revenues in the US and Europe. What is the year in which the absolute value of this change is the highest?

(1) 03-04 (2) 05-06 (3) 06-07 (4) 08-09 (5) 09-10

**Answer the questions 33 to 35 based on the following information:**

There are 100 employees in an organization across five departments. The following table gives the department-wise distribution of average age, average basic pay and allowances. The gross pay of an employee is the sum of his/her basic pay and allowances.

There are limited numbers of employees considered for transfer/promotion across departments. Whenever a person is transferred/promoted from a department of lower average age to a department of higher average age, he/she will get an additional allowance of 10% of basic pay over and above his/her current allowance. There will not be any change in pay structure if a person is transferred/promoted from a department with higher average age to a department with lower average age.

| Department | Number of Employees | Average Age (Years) | Average Basic Pay (Rupees) | Allowances (% of Basic Pay) |
|---|---|---|---|---|
| HR | 5 | 45 | 5000 | 70 |
| Marketing | 30 | 35 | 6000 | 80 |
| Finance | 20 | 30 | 6500 | 60 |
| Business Development | 35 | 42 | 7500 | 75 |
| Maintenance | 10 | 35 | 5500 | 50 |

**33.** There was a mutual transfer of an employee between Marketing and Finance departments and transfer of one employee from Marketing to HR. As a result, the average age of Finance department increased by one year and that of Marketing department remained the same. What is the new average age of HR department?

(1) 30 (2) 35 (3) 40 (4) 45
(5) Cannot be determined

**34.** What is the approximate percentage change in the average gross pay of the HR department due to transfer of a 40-year old person with basic pay of Rs. 8000 from the Marketing department?

(1) 9% (2) 11% (3) 13% (4) 15% (5) 17%

**35.** If two employees (each with a basic pay of Rs. 6000) are transferred from Maintenance department to HR department and one person (with a basic pay of Rs. 8000) was transferred from Marketing department to HR department, what will be the percentage change in average basic pay of HR department?

(1) 10.5% (2) 12.5% (3) 15% (4) 30% (5) 40%

**Answer questions 36 to 40 based on the following information:**

Abdul, Bikram and Chetan are three professional traders who trade in shares of a company XYZ Ltd. Abdul follows the strategy of buying at the opening of the day at 10 am and selling the whole lot at the close of the day at 3 pm. Bikram follows the strategy of buying at hourly intervals: 10 am , 11 am, 12 noon, 1 pm and 2 pm, and selling the whole lot at the close of the day. Further, he buys an equal number of shares in each purchase. Chetan follows a similar pattern as Bikram but his strategy is somewhat different. Chetan's total investment amount is divided equally among his purchases. The profit or loss made by each investor is the difference between the sale value at the close of the day less the investment in purchase. The "return" for each investor is defined as the ratio of the profit or loss to the investment amount expressed as a percentage.

**36.** On a "boom" day the price of XYZ Ltd. keeps rising throughout the day and peaks at the close of the day. Which trader got the minimum return on that day?

(1) Bikram (2) Chetan
(3) Abdul (4) Abdul or Chetan
(5) Cannot be determined

**37.** On a day of fluctuating market prices, the share price of XYZ Ltd. ends with a gain, i.e., it is higher at the close of the day compared to the opening value. Which trader got the maximum return on that day?

(1) Bikram
(2) Chetan
(3) Abdul
(4) Bikram or Chetan
(5) Cannot be determined

**38.** Which one of the following statements is always true?

(1) Abdul will not be the one with the minimum return
(2) Return for Chetan will be higher than that of Bikram
(3) Return for Bikram will be higher than that of Chetan
(4) Return for Chetan cannot be higher than that of Abdul
(5) none of the above

**39.** One day, two other traders, Dane and Emily joined Abdul, Bikram and Chetan for trading in the shares of XYZ Ltd. Dane followed a strategy of buying equal numbers of shares at 10 am, 11 am and 12 noon, and selling the same numbers at 1 pm, 2 pm and 3 pm. Emily, on the other hand, followed the strategy of buying shares using all her money at 10 am and selling all of them at 12 noon and again buying the shares for all the money at 1 pm and again selling all of them at the close of the day at 3 pm. At the close of the day the following was observed:

i. Abdul lost money in the transactions.
ii. Both Dane and Emily made profits.
iii. There was an increase in share price during the closing hour compared to the price at 2 pm.
iv. Share price at 12 noon was lower than the opening price.

Which of the following is necessarily false?

(1) Share price was at its lowest at 2 pm
(2) Share price was at its lowest at 11 am
(3) Share price at 1 pm was higher than the share price at 2 pm
(4) Share price at 1 pm was higher than the share price at 12 noon
(5) None of the above

**40.** Share price was at its highest at

*Note:* Use data from the previous question.

(1) 10 am (2) 11 am (3) 12 noon
(4) 1 pm (5) Cannot be determined

**Answer questions 41 to 43 based on the following information:**

i. There are three houses on each side of the road.
ii. These six houses are labelled as P, Q, R, S, T and U.
iii. The houses are of different colours, namely, Red, Blue, Green, Orange, Yellow and White.
iv. The houses are of different heights.
v. T, the tallest house, is exactly opposite to the Red coloured house.
vi. The shortest house is exactly opposite to the Green coloured house.
vii. U, the Orange coloured house, is located between P and S.
viii. R, the Yellow coloured house, is exactly opposite to P.
ix. Q, the Green coloured house, is exactly opposite to U.
x. P, the White coloured house, is taller than R, but shorter than S and Q.

**41.** What is the colour of the tallest house?

(1) Red (2) Blue (3) Green
(4) Yellow (5) None of these

**42.** What is the colour of the house diagonally opposite to the Yellow coloured house?

(1) White (2) Blue (3) Green
(4) Red (5) None of these

**43.** Which is the second tallest house?

(1) P (2) S (3) Q
(4) R (5) Cannot be determined

**Answer questions 44 to 47 based on the following information:**

In a sports event, six teams (A, B, C, D, E and F) are competing against each other. Matches are scheduled in two stages. Each team plays three matches in Stage-I and two matches in Stage-II. No team plays against the same team more than once in the event. No ties are permitted in any of the matches. The observations after the completion of Stage-I and Stage-II are as given below.

**Stage-I:**

- One team won all the three matches.
- Two teams lost all the matches.
- D lost to A but won against C and F.
- E lost to B but won against C and F.
- B lost at least one match.
- F did not play against the top team of Stage-I.

**Stage-II:**

- The leader of Stage-I lost the next two matches.
- Of the two teams at the bottom after Stage-I, one team won both matches, while the other lost both matches.
- One more team lost both matches in Stage-II.

**44.** The team(s) with the most wins in the event is (are):

(1) A (2) A & C (3) F
(4) E (5) B & E

**45.** The two teams that defeated the leader of Stage-I are:

(1) F & D (2) E & F (3) B & D
(4) E & D (5) F & D

**46.** The only team(s) that won both the matches in Stage-II is (are):

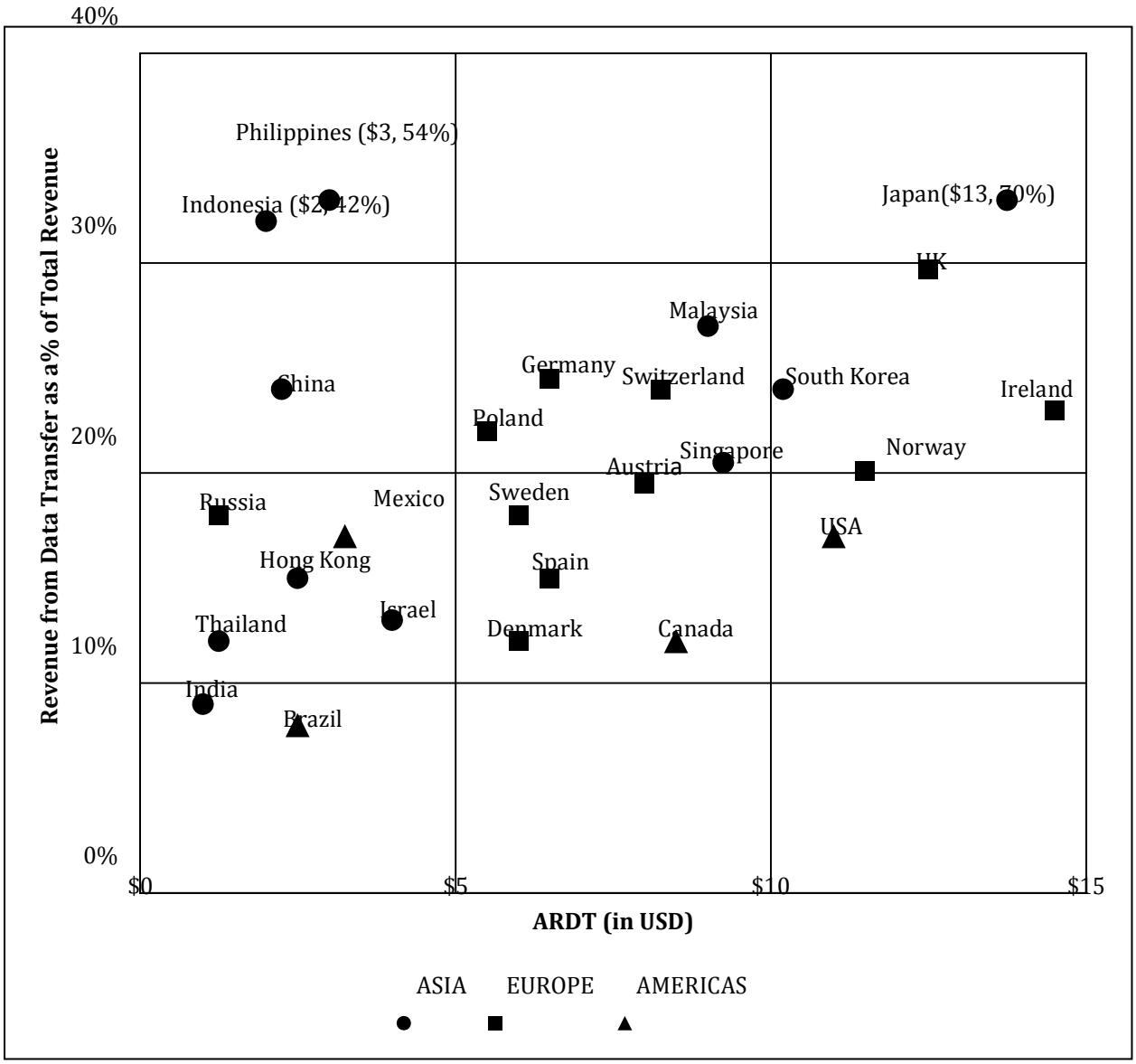
(1) B (2) E & F (3) A, E & F
(4) B, E & F (5) B & F

**47.** The teams that won exactly two matches in the event are:

(1) A, D & F (2) D & E (3) E & F
(4) D, E & F (5) D & F

**Answer questions 48 to 49 based on the following information:**

Telecom operators get revenue from transfer of data and voice. Average revenue received from transfer of each unit of data is known as ARDT. In the diagram below, the revenue received from data transfer as percentage of total revenue received and the ARDT in US Dollars (USD) are given for various countries.




**48.** If the total revenue received is the same for the pairs of countries listed in the choices below, choose the pair that has approximately the same volume of data transfer.

(1) Philippines and Austria (2) Canada and Poland (3) Germany and USA
(4) UK and Spain (5) Denmark and Mexico

**49.** It was found that the volume of data transfer in India is the same as that of Singapore. Then which of the following statements are true?

(1) Total revenue is the same in both countries
(2) Total revenue in India is about 2 times that of Singapore
(3) Total revenue in India is about 4 times that of Singapore
(4) Total revenue in Singapore is about 2 times that of India

(5) Total revenue in Singapore is about 4 times that of India

**50.** It is expected that by 2010, revenue from the data transfer as a percentage of total revenue will triple for India and double for Sweden. Assume that in 2010, the total revenue in India is twice that of Sweden and that the volume of data transfer is the same in both the countries. What is the percentage increase of ARDT in India if there is no change in ARDT in Sweden?

(1) 400% (2) 550% (3) 800% (4) 950% (5) Cannot be determined