**3.2 CASELETS**

**Practice Exercise – Easy**

**Directions (Q. Nos. 1 – 3):** *Answer the questions based on the following information.*

In a survey regarding a proposal measure to be introduced, 2878 person took part of which 1652 were males. 1226 persons voted against the proposal in which 796 were males. 1425 persons voted for the proposal. 196 females were undecided.

1. How many females voted for the proposal?

a. 430 b. 600 c. 624 d. 640

2. How many males were undecided?

a. 31 b. 227 c. 426 d. 581

3. How many females were not in the favor proposal?

a. 430 b. 496 c. 586 d. 1226

**Directions (Q. Nos. 4 – 10):** *Answer the questions based on the following information.*

Of the total production of Sugarcane, only 80% sugarcane was used for processing and converting into different product. Out of the used sugarcane 20% was used for making jaggery, 30% was used for making sugar and the rest was used to make dry juice. An amount equal to 16% of the total production was also imported from Pakistan and this imported sugarcane was used to make jaggery, sugar and dry juice in ratio 4:5:7. The total amount of sugarcane used to make sugar is 1885 tons.

4. What was the total production of Sugarcane in India?

a. 6000 b. 6500

c. 6800 d. Can't be determined

5. Out of the total sugarcane produced in India what percentage was used to make jaggery?

a. 12.5% b. 16%

c. 20% d. Can't be determined

6. How many tons of sugarcane (in total) was used to produce dry juice?

a. 2945 b. 3055

c. 3315 d. Can't be determined

7. What percentage of sugarcane used in jaggery is imported from Pakistan?

a. 12.5% b. 15%

c. 20% d. Can't be determined

8. In the next year, the total sugarcane used for the sugar production was 10% less than then last year and the total sugarcane used for dry juice was 8% less than last year. If there is no change in the amount of sugarcane being used in the production of jaggery, then how many tons of sugarcane was used in the total process?

a. 5807.1 tons b. 6125.3 tons

c. 6587.9 tons d. Can't be determined

9. In the next year the sugarcane used in total is 90% of the last years use. By what percent does the imports from Pakistan gets reduced if the total use of domestic sugar-cane in production in the next year remains the same?

a. 46% b. 52%

c. 60% d. Can't be determined

10. Government decided to also produce husk from next year by using the sugarcane. For this purpose 250 tons of sugarcane was imported from Sri Lanka. If in the next year the use of home grown sugarcane increases by 15% and the imports from Pakistan increase by 10%, then sugarcane from Sri Lanka is what percentage of total sugarcane used next year?

a. 2.9% b. 3.4%

c. 3.75% d. Can't be determined

**Directions (Q. Nos. 11 – 15):** *Answer the questions based on the following information.*

Nitin has recently purchased books from New Delhi Book Fair to be kept at his institute. The books belong to 3 categories viz. Quantitative, LRDI and Verbal. Out of the total books that Nitin purchased 54% books were paperback and the rest were hardbound. There were 324 paperback books of Quantitative which were equal to 40% of the total paperback books. 40% of the hardbound books were of Verbal. The number of paperback and hardbound books on Quantitative is in ratio 4:3. Out of the total paperback books, 50% books are on Verbal.

11. What is the total number of books purchased by Nitin from the book fair?

a. 1200 b. 1375 c. 1465 d. 1500

12. What is the percentage of LRDI books are paper back?

a. 25% b. 32.14%

c. 67.8% d. None of these

13. How many Verbal books are hardbounds?

a. 171 b. 243

c. 276 d. None of these

14. Paperback books of Verbal are what percent of the total books purchased by Nitin?

a. 25% b. 27%

c. 31% d. None of these

15. Hardbound books on Verbal are what percent of the paperback books on Quantitative?

a. 65.16% b. 78.29%

c. 84.31% d. None of these

**Directions (Q. Nos. 16 – 20):** *Answer the questions based on the following information.*

Recently a survey was conducted regarding the amount of pollution in the top 5 rivers of the state. According to the report 4800 tons of waste was dumped in total in the 5 rivers in the year 2014. The waste is divided in to 2 categories viz. industrial waste and domestic waste. The ratio of industrial waste to domestic waste in total was 7 : 5. 12% of the total industrial waste was dumped in river R1. 24% of the domestic waste was dumped in the river R5. The ratio of industrial waste to domestic waste in river R1 is 7 : 9. One fifth of the waste from household was dumped in river R3. 40% of the industrial waste was dumped in the river R4. The amount of household waste in R4 is 12% of the industrial waste dumped in the same river. The total amount of waste dumped in R3 was 850 tons. 18% of the industrial waste was dumped in river R2.

16. How much industrial waste was dumped in R3 as a percentage of the total industrial waste?

a. 10 b. 8 c. 12 d. 14

17. What amount of industrial waste was dumped in R5?

a. 680 b. 540 c. 700 d. 420

18. The total amount of waste dumped in river R5 is what percentage of the total waste dumped in the 5 rivers altogether?

a. 17.25% b. 19.67% c. 21.67% d. 25%

19. Amount of household waste dumped in R4 is what percentage of the total household waste dumped in the 5 rivers altogether?

a. 5.14% b. 6.72% c. 6.89% d. 7.25%

20. Which river has the highest amount of waste dumped in it?

a. R5 b. R4 c. R2 d. R1

Practice Exercise – Medium

**Directions (Q. Nos. 1 – 5):** *Answer the questions based on the following information.*

Krishna distributed 10-acre land to Gopal and Ram who paid him the total amount in the ratio 2 : 3. Gopal invested a further Rs. 2 lakh in the land and planted coconut and lemon trees in the ratio 5 : 1 on equal areas of land. There were a total of 100 lemon trees. The cost of one coconut was Rs. 5. The crop took 7 years to mature and when the crop was reaped in 1997, the total revenue generated was 25% of the total amount put in by Gopal and Ram together. The revenue generated from the coconut and lemon trees was in the ratio 3 : 2 and it was shared equally by Gopal and Ram as the initial amount spent by them were equal.

1. What was the total output of coconuts?

a. 24,000 b. 36,000

c. 18,000 d. 48,000

2. What was the value of output per acre of lemon trees planted?

a. 0.24 lakh per acre b. 2.4 lakh per acre

c. 24 lakh per acre d. Can't be determined

3. What was the amount received by Gopal in 1997?

a. Rs. 1.5 lakh b. Rs. 3 lakh

c. Rs. 6 lakh d. None of these

4. What was the value of output per tree for coconuts?

a. Rs. 36 b. Rs. 360

c. Rs. 3,600 d. Rs. 240

5. What was the ratio of yields per acre of land for coconuts and lemons (in terms of number of lemons and coconuts)?

a. 3 : 2 b. 2 : 3

c. 1 : 1 d. Can't be determined

**Directions (Q. Nos. 6 – 11):** *Answer the questions based on the following information.*

Zambia and South Sudan are the poorest countries of the African continent. They lack basic infrastructure and basic health care for its citizens. 10% of the infants in Zambia and South Sudan die in infancy and an equal number die before reaching the age of 5. Out of all these death 90% are due to malnutrition.

Those who survive those initial 5 years, a third of them start working to support their family and earn food. Out of the remaining only 50% attend the schools. Out of the students going to school only 2/5 are able to reach class 5th.

In Africa, 30% of the children worked as labors and the combined population of child laborers in these 2 countries is 1/3rd of the total child laborer of Africa. In Africa 1/15th of its total population are child laborers. In the two countries out of the 100 students enrolled in the school, 32 are girls. When this count was done for students studying in class 10th only 10 out of 100 are girls. In the continent of Africa 38% females and 57% males are literate. The population of the continent of Africa is 90 million. For every 1000 males there are 900 females in Africa?

6. In Zambia and South Sudan (taken together), what percentage of children study in class 5th?

a. 15 b. 11 c. 20 d. 23

7. The number of child laborers in the African continent are:

a. 15 million b. 16 million

c. 12 million d. 6 million

8. Taking the 2 countries together, what percent of the children born work as child laborers?

a. 27 b. 30 c. 54 d. 35

9. In Zambia and South Sudan what percentage of girls enrolled in schools reach the 10th standard?

a. 10% b. 32%

c. 60% d. Data insufficient

10. What is the number of literates in the continent of Africa?

a. 16.2 million b. 27 million

c. 43.2 million d. Data insufficient

11. What is the total number of illiterates taking South Sudan and Zambia together?

a. 18 Million b. 13.2 Million

c. 15.6 Million d. Data insufficient

**Directions (Q. Nos. 12 – 15):** *Answer the questions based on the following information.*

In the 2011 World Cup the 2nd semifinal was played between India and Pakistan. India batted first and made a score of 260 runs while Pakistan managed only 231 runs in the reply. Umar Gul bowled 8 overs and conceded 69 runs. Abdul Razzak bowled only 2 overs and conceded 14 runs. Riaz, Ajmal, Afridi and Hafeez all bowled 10 overs each. They conceded 46, 44, 45 and 34 runs respectively. Riaz took 5 wickets, Ajmal took 2 and Hafeez took 1 wicket and these were the only Pakistan bowlers to get the wickets. None of the Pakistan bowlers bowled a maiden over.

When Pakistan came to bat, India used 5 bowlers. Yuvraj, Harbhajan, Patel and Nehra all bowled their quota of 10 overs, while Zaheer Khan bowled 9.5 overs. All the Indian bowlers took 2 wickets apiece. Patel and Yuvraj were the only Indian bowlers who bowled a maiden over each. Zaheer gave away 58 runs, Nehra gave 33 runs, Patel gave 40 runs, Harbhajan gave 43 runs and Yuvraj gave away 57 runs in the overs bowled by each of them.

12. Which bowler has the lowest strike rate? (Strike rate = number of balls bowled/number of wickets taken)

a. Yuvraj b. Riaz c. Ajmal d. Zaheer

13. Which bowler has the lowest average? (Average = number of runs conceded/number of wickets taken)

a. Ajmal b. Riaz c. Nehra d. Patel

14. Which bowler has the lowest economy rate? (Economy rate = number of runs conceded/number of overs bowled)

a. Nehra b. Patel c. Hafeez d. Ajmal

15. How many runs were conceded in form of extras? (Byes, Leg Byes, Wides and No-Balls are extras)

a. 14 runs b. 9 runs

c. 23 runs d. Can't be determined

**Directions (Q. Nos. 16 – 20):** *Answer the questions based on the following information.*

Ankush Gupta after completing his MBA, started a water pipe manufacturing unit. His father gave him a funding of Rs. 20 lakhs and he was able to raise another Rs. 80 lakhs in form of bank loan. He decided to set up a factory to produce 2 differenet varieties of pipe viz. Plastic and Steel pipes. The plant that was set up has a capacity of manufacturing 10000 plastic pipes or 5000 steel pipes. The manufacturing capability was calculated by taking 200 working days in the year.

In the first year of his operations the manufacturing unit was used to its full capacity. Selling price of each plastic pipe was Rs. 600 while each steel pipe was sold for Rs. 100 more than the 2 times price of a plastic pipe. The cost of production of a plastic pipe was three fifth the selling price and it was 40% of the cost of manufacturing one steel pipe.

In the second year of operations he decided to dedicate equal time to the production of steel and plastic pipes. Again the manufacturing facility was used to its fullest. Selling price of a steel pipe remained the same while the selling price of a plastic pipe was Rs. 100 more than the selling price of the last year. The cost of the production for both the pipes was same as the last year.

In both the years he was able to sell all the pipes that were produced.

At the end of the 2nd year he was required to make a presentation to the bank about the profits of the past two years. While making the presentation he realised that the profit in the 2nd year of operation was 20% more than the profit realised in the 1st year.

16. How many plastic and steel pipes were manufactured the 1st year of operations?

a. 5000, 2500 b. 6250, 1875

c. 7200, 1300 d. 7150, 1565

17. What is the difference in the sales of Plastic and Steel pipes in the first year of operations?

a. 1312500 b. 2500000

c. 1252500 d. Data insufficient

18. Bank has asked Ankush to also calculate and bring the value of profit in the first year as a percenrtage of the investements. What is the value that Ankush will tell atthe bank?

a. 52.5% b. 37.5% c. 22.5% d. 10%

19. Ankush decided to manufacture equal quantities of Steel and Plastic pipes from 3rd year. If he tries to utilize the capactiy to its manximum then what will be the ratio of production of plastic and steel pipes?

a. 2 : 1 b. 1 : 1 c. 3 : 2 d. 1 : 2

20. How many times was the production of plastic pipes as compared to the steel pipes in the 2nd year of operations?

a. 2 times b. Half times

c. Same d. 5 times

Practice Exercise – Difficult

**Directions (Q. Nos. 1 – 4):** *Answer the questions based on the following information.*

Venkat, a stockbroker, invested a part of his money in the stock of four companies — A, B, C and D. Each of these companies belonged to different industries, viz., Cement, Information Technology (IT), Auto, and Steel, in no particular order. At the time of investment, the price of each stock was Rs. 100. Venkat purchased only one stock of each of these companies. He was expecting returns of 20%, 10%, 30% and 40% from the stock of companies A, B, C and D, respectively. Returns are defined as the change in the value of the stock after one year, expressed as a percentage of the initial value. During the year, two of these companies announced extraordinarily good results. One of these two companies belonged to the Cement or the IT industry, while the other one belonged to either the Steel or the Auto industry. As a result, the returns on the stocks of these two companies were higher than the initially expected returns. For the company belonging to the Cement or the IT industry with extraordinarily good results, the returns were twice that of the initially expected returns. For the company belonging to the Steel or the Auto industry, the returns on announcement of extraordinarily good results were only one and a half times that of the initially expected returns. For the remaining two companies which did not announce extraordinarily good results, the returns realized during the year were the same as initially expected. **[CAT 2005]**

1. What is the minimum average return Venkat would have earned during the year?

a. 30% b. 311/4%

c. 321/2% d. Can't be determined

2. If Venkat earned a 35% return on average during the year, then which of these statements would necessarily be true?

I. Company A belonged either to Auto or to Steel Industry.

II. Company B did not announce extraordinarily good results.

III. Company A announced extraordinarily good results.

IV. Company D did not announce extraordinarily good results.

a. I and II only b. II and III only

c. III and IV only d. II and IV only

3. If Venkat earned a 38.75% return on average during the year, then which of these statement(s) would necessarily be true?

I. Company C belonged either to Auto or to Steel Industry.

II. Company D belonged either to Auto or to Steel Industry.

III. Company A announced extraordinarily good results.

IV. Company B did not announce extraordinarily good results.

a. I and II only b. II and III only

c. I and IV only d. II and IV only

4. If Company C belonged to the Cement or the IT industry and did announce extraordinarily good results, then which of these statement(s) would necessarily be true?

I. Venkat earned not more than 36.25% return on average.

II. Venkat earned not less than 33.75% return on average.

III. If Venkat earned 33.75% return on average, Company A announced extraordinarily good results.

IV. If Venkat earned 33.75% return on average, Company B belonged either to Auto or to Steel Industry.

a. I and II only b. II and IV only

c. II and III only d. III and IV only

**Directions (Q. Nos. 5 – 9):** *Answer the questions based on the following information.*

Three industrialists Bhambani, Hittal and Sirla have net worth of Rs.1170 crores, Rs.1300 crores and Rs. 1560 crores (not in any order). They formed a consortium to buy 3 foreign companies viz. Arcelor, JLRA and PT Arutmin. The amount of each foreign company was share by Bhambani, Hittal and Sirla in the ratios 1 : 1 : 2, 2 : 3 : 1, 2 : 1 : 2 for Arcelor, JLRA and PT Arutmin respectively. All the net worth of the 3 industrialist was spent in these acquisitions and the total amount of the acquired companies was equal to the total of the new worth of the 3.

5. What was the net worth of Bhambani?

a. 1170 crores b. 1300 crores

c. 1560 crores d. Can't be determined

6. What was the net worth of Sirla?

a. 1170 crores b. 1300 crores

c. 1560 crores d. Can't be determined

7. For what amount was JLRA acquired?

a. 936 crores b. 1222 crores

c. 1248 crores d. Can't be determined

8. Which of the acquired companies were acquired at the least cost?

a. Arcelor b. JLRA

c. PT Arutmin d. Can't be determined

9. Which of the acquired companies were acquired at the highest cost?

a. Arcelor b. JLRA

c. PT Arutmin d. Can't be determined

**Directions (Q. Nos. 10 – 15):** *Answer the questions based on the following information.*

During the Kargil war, the Indian Military has set up eight military depots M1 to M8 (all in a line) in the Drass sector. The distance between any two depots was 20kms and each depot has one commandant deported there. Some highly classified information has reached Lieutenant Aakash Verma. He decided to call all the commandants at depot 8. He drops a message written on a paper at M1 at 9 a.m., then he starts his Jeep with a speed of 40 kmph towards M2 and continues this at the same speed dropping the message at each depot. Aakash takes a 30 minutes break exactly at the center of depot 4 and depot 5, but when he realizes he is getting late he increases his speed to 50 kmph as soon as his break is finished. He continues with the increased speed till the last depot.

As soon as the message is dropped, the commandant picks it up and reads it. It takes 30 min for them to read the message and prepare to go to depot 8. The speeds of the commandants are 50 kmph (starting from M1), 47.5kmph (starting from M2), 45kmph (starting from M3) and so on.

10. Does commandant from M1 meets the commandant

from M3 before reaching M8?

a. No, because commandant from M1 will not overtake the one from M3

b. No, because commandant from M1 has already crossed M3 before M3 starts from his home.

c. Yes, they meet at 12:18 p.m.

d. Yes, they meet at 1:00 p.m.

11. Aakash meet commandants from which depots while he was on break?

a. M2, M3 and M4 b. M1, M2 and M3

c. M1, M3 and M4 d. None of these

12. How much time does the commandant from M1 have to wait for commandant from M3 at the base M8?

a. 0 mins b. 20 min c. 26 min d. 32min

13. How much more time does Aakash took to reach M8 after the commandant from M1 reached there?

a. 9 min

b. 21 min

c. 24min

d. Aaksah arrived before the commandant from M1.

14. What is the difference between the starting times of the commandants of starting from M5 and M7?

a. 48 min b. 36 min

c. 53 min d. None of these

15. If the commandant from M3 takes only 10 minutes to read the message and leave instead of 30 minutes, when will he meet the commandant from M1 on the way?

a. 10.45 a.m.

b. 11.30 a.m.

c. 10.58 a.m.

d. They will not meet on the way

**Directions (Q. Nos. 16 – 20):** *Answer the questions based on the following information.*

Two traders, Chetan and Michael, were involved in the buying and selling of MCS shares over five trading days. At the beginning of the first day, the MCS share was priced at Rs. 100, while at the end of the fifth day it was priced at Rs. 110. At the end of each day, the MCS share price either went up by Rs. 10, or else, it came down by Rs. 10. Both Chetan and Michael took buying and selling decisions at the end of each trading day. The beginning price of MCS share on a given day was the same as the ending price of the previous day. Chetan and Michael started with the same number of shares and amount of cash, and had enough of both. Below are some additional facts about how Chetan and Michael traded over the five trading days.

I. Each day if the price went up, Chetan sold 10 shares of MCS at the closing price. On the other hand, each day if the price went down, he bought 10 shares at the closing price.

II. If on any day, the closing price was above Rs. 110, then Michael sold 10 shares of MCS, while if it was below Rs. 90, he bought 10 shares, all at the closing price. **[CAT 2006]**

16. If Chetan sold 10 shares of MCS on three consecutive days, while Michael sold 10 shares only once during the five days, what was the price of MCS at the end of day 3?

a. Rs. 90 b. Rs. 100 c. Rs. 110 d. Rs. 120

17. If Chetan ended up with Rs. 1300 more cash than Michael at the end of day 5, what was the price of MCS share at the end of day 4?

a. Rs. 90

b. Rs. 100

c. Rs. 110

d. Not uniquely determinable

18. If Michael ended up with 20 more shares than Chetan at the end of day 5, what was the price of the share at the end of day 3?

a. Rs. 90 b. Rs. 100 c. Rs. 110 d. Rs. 120

19. If Michael ended up with Rs. 100 less cash than Chetan at the end of day 5, what was the difference in the number of shares possessed by Michael and Chetan (at the end of day 5)?

a. Michael had 10 less shares than Chetan.

b. Michael had 10 more shares than Chetan.

c. Chetan had 10 more shares than Michael,

d. Both had the same number of shares.

20. What could have been the maximum possible increase in combined cash balance of Chetan and Michael at the end of the fifth day?

a. Rs. 3700 b. Rs. 4000

c. Rs. 4700 d. Rs. 5000