Directions for questions 1 to 4: Answer the questions on the basis of the information given below.

ABC Company Limited produces and sells two crops - Tea and Coffee. The table given below shows the company's income and expenditure (in Rs. million) from tea and coffee during the period 2012 to 2021.

Year	Tea		Coffee	
	Income (in Rs. million)	Expenditure (in Rs. million)	Income (in Rs. million)	Expenditure (in Rs. million)
2012	3.5	2.5	2.5	1.5
2013	4	2	4.5	2.5
2014	2.5	1.5	4	2
2015	6.5	3.5	5	2.5
2016	8	4	3.5	1.5
2017	7.5	3	6	3
2018	6	1.5	5.5	2.5
2019	5	1.5	7.5	5
2020	5.5	2	6.5	4
2021	7	4	8	5

Q 1. Find the number of years during 2013 to 2021 for at least one of the two crops when both income and expenditure did not increase or decrease simultaneously compared to the previous year?

Q 2. Which of the following is the correct order of years in decreasing order of the total profit of ABC Company Limited?

1) 2017, 2015, 2019

2) 2020, 2018, 2013

3) 2016, 2021, 2014

4) 2018, 2016, 2015

Q 3. If in 2022, the expenditure for Tea, Coffee is increased by 25% and 20% respectively over 2021 and the income for both is decreased by 10% over 2021, then what will be the profit percentage of ABC Company Limited in 2022?

1) 11.33%

2) 22.72%

3) 20.66%

4) 24.22%

Q 4. Which of the following statements is/are true?

I. The percentage increase in the profit for Coffee in 2021 over 2020 is 20%.

II. The percentage decrease in the profit for Tea in 2019 over 2018 is 11.11%.

III. The difference between total expenditures on Tea and Coffee during the period 2012 to 2021 is Rs. 4 million.

1) I & II only

2) III only

3) I & III only
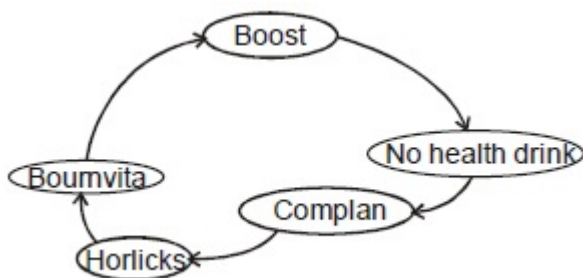
4) II & III only

Direction for questions 5 to 10: Answer the questions on the basis of the information given below.

A market survey was conducted to ascertain brand switching parameters among health drinks users. The initial and the current usage of the 4 brands of health drinks - Boost, Bournvita, Complan and Horlicks were checked out and presented as follows:

	Initial	Current
Boost	74	80
Boumvita	30	26
Complan	10	72
Horlicks	60	49
No health drink	16	25
Total	190	252

The people surveyed were known to use only one brand of health drink per person.

The diagram given below represents the brand switching pattern among the existing from one brand to another for the sample surveyed. For example, people have switched from Horlicks to Bournvita only and also those users of Bournvita who have switched brands have switched only to Boost. Both the numbers of people switching from Complan and to Complan is 10.

Q 5. In the sample surveyed, what is the increase in the number of people using the brand Boost as percentage of the total current sample population?

1) 6%

2) 2.38%

3) −4.5%

4) −7%

Q 6. If the total number of people using any of these 4 brands of health drink is defined as the size of the health drink market, what has been the increase in the size of the health drink market, based on the data obtained in the survey? (to the nearest integer)

1) 30%

2) 16%

3) 21%

4) 33%

Q 7. Which health drink brand was chosen by most of the new people included in the current sample survey?

1) Horlicks

2) Bournvita

3) Complan

4) Data insufficient

Q 8. How many people switched from Bournvita to Boost?

1) 21

2) 25

3) 19

4) Data insufficient

Q 9. The number of switchers from Boost is what percentage of number of switchers to Boost?

1) 132%

2) 76%

3) 40%

4) Data insufficient

Q 10. How many people among the additional 62 people use Boost in the current survey?
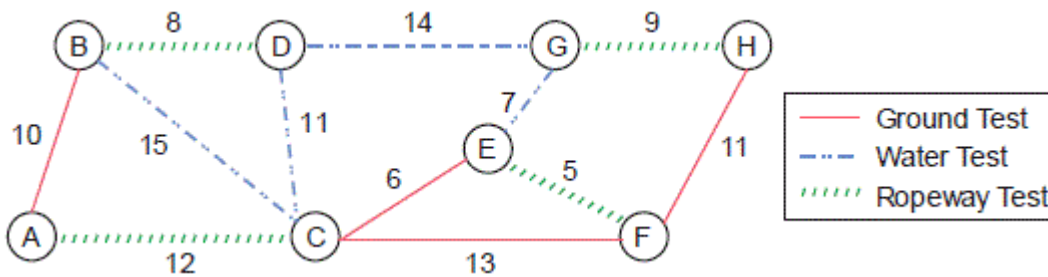

Directions for questions 11 to 14: Answer the questions on the basis of the information given below.

The process of selection of Lieutenants in the army has a mandatory physical endurance test. The diagram below shows the paths that can be taken by the candidates from the starting point A to reach the finishing point H. There are various hurdles to be crossed and the numbers mentioned in the figure indicate the points earned by crossing the hurdles on a particular path.
Further, it is also known that:
(i) A candidate cannot visit a point twice during the course of the endurance test.
(ii) A candidate can choose his path according to his endurance level.

(iii) A candidate is required to clear the physical endurance test with a minimum of 30 points.

(iv) A candidate has to complete at least one ground test, one water test and one ropeway test path to qualify.

Q 11. Vir appears for the endurance test and covers all the points from A to H, not necessarily in alphabetical order. Which of the following is/are **not true** about Vir's score in the endurance test?

I. Vir's score lies between 67 and 70.

II. Vir's score is more than 62 but less than 74.

III. Vir's score cannot be more than 72.

1) I only

2) II only

3) I & II only

4) I & III only

Q 12. Shaurya covers exactly 3 intermediate points between A and H and passes the endurance test. Which of the following can be the number of points that Shaurya receives?

1) 36

2) 34

3) 49

4) 46

Q 13. Dhiraj is a swimmer and he took all the paths that tested his endurance in water. What will be the maximum number of points scored by Dheeraj?

Q 14. Which of the following statements is **NOT** true regarding the structure of the test?

1) A candidate who moves on the path C-E-G definitely scores more than 33 points.

2) A candidate who moves on the path A-C-D has to go through F-H to qualify.

3) A candidate definitely covers two rope tests to qualify in the endurance test.

4) A candidate can cover all the four ground tests and qualify.

Directions for questions 15 to 20: Answer the questions on the basis of the information given below.

Four students - Aasha, Bheem, Carlos, and Dev - note down the scores obtained by them in eight unit tests across different subjects – A, B, C, D, E, F, G and H. For every subject there is one student who has expertise in that subject. Each student has expertise in two subjects and this pair of subjects is called her/his speciality. Having expertise in a subject does not necessarily ensure a top score in it. The following table shows the scores of four students in 8 unit tests across different subjects.

	A	B	C	D	E	F	G	H
Aasha	14	19	19	13	17	13	20	17
Bheem	15	19	17	15	15	13	16	18
Carlos	18	18	18	13	16	14	15	20
Dev	18	18	18	15	15	13	16	14

The cumulative score in speciality subjects of a student is the sum of that student's score in the unit tests of two subjects.
The following facts are known about the scores obtained by these four students and their speciality subjects.
(i) If someone's score in a subject is 20, then that is definitely their speciality subject.
(ii) Three different students had speciality in subjects A, B and C. Two different students had speciality in subjects A and H.
(iii) Cumulative scores of own specialities of exactly two people were even. Aasha's cumulative score of her own speciality subjects, is less than 35 and greater than cumulative scores of exactly two students in their own speciality subjects.
(iv) Dev's cumulative score of own specialities is an odd number. No one had same cumulative scores in their speciality subjects. Bheem didn't have equal scores in his speciality subjects.
(v) A student X envies another student Y if Y's cumulative score for X's speciality is more than X's cumulative scores. No one else envies others.

Q 15. What BEST can be said about subject B?

1) Dev or Carlos had expertise in B.

2) Dev had expertise in B.

3) Carlos had expertise in B.

4) Dev, Carlos or Bheem had expertise in B.

Q 16. Who among the following envies all other students?

1) Dev

2) Carlos

3) Bheem

4) Aasha

Q 17. What is Dev's cumulative scores of his speciality subjects?

Q 18. Subject A was the expertise of which person?

1) Bheem

2) Aasha

3) Carlos

4) Dev

Q 19. Subject E was the expertise of which person?

1) Dev

2) Bheem

3) Carlos

4) Aasha

Q 20. How many students does Dev envy?