CHAPTER - 13

Direct and Inverse Proportions

Questions carrying 1 Mark each :-

Q.1   When one quantity is increased, the other quantity is also increased. This

proportion is called ....

Q.2   State whether the following is a case of direct or indirect proportion :

"Number of persons needed to do a piece of work and time".

Questions carrying 2 marks each :-

Q.3   If a and b vary inversely, find the value of x :

a	50	25
b	2	x

Q.4   Show that a and b vary directly :-

a	3	6	15
b	10	20	50

Questions carrying 3 marks each :-

Q.5   72 books are packed in 4 cartons of the same size. How many cartons are

required for 360 books?

Q.6   If 36 men can complete a work in 24 days, how many extra men be employed

so as to complete the work in 18 days?

Q.7   A garrison of 300 men had provision of food for 50 days. A reinforcement of

200 men arrived. Find the number of days for which the food will last.

Q.8   12 men can dig 8 meters long trench in a day. How many men should be

employed for digging 50 meter long trench of the same type in one day?

Q.9   In an army camp, there are 320 soliders. They have sufficient food for 80 days.

If after 20 days, 20 soliders left the camp, for how many more days will the food

last?

Q.10   A journey by bus takes 45 minutes at 40 km/hour. How fast must a car go to

undertake the same journey in 25 minutes?

Multiple Choice Questions carrying 1 mark each

Q.11   When two quantities x and y are in direct proportion, then

    a) $x \alpha y$ b)   c) $x = y$ d) $x = \dfrac{x}{y}$

Q.12   When two quantities x and y are in inverse proportion, then

    a) $x = \dfrac{x}{y}$ b) $x \alpha \dfrac{x}{y}$ c) $x = y$ d) $x \alpha y$