ANSWER KEY & MARKING SCHEME · CBSE CLASS 11

Introduction (Statistics for Economics)

Economics · Chapter 1 · Use this with the Board Paper · Companion to Quick Drill

HOW TO USE

Attempt the Board Paper first (closed-book, full time). Then come here. For 2-mark+ questions, compare your answer to the model. For 3-4 mark questions, also consult the **Topper Templates** below — these show the exact step-by-step structure that scores full marks per CBSE marking-scheme conventions.

MODEL ANSWERS · BOARD PAPER

Section A — Very Short Answer (1 mark x 5)

Q1. Define statistics in the plural sense. [1 mark]

Ans: In the plural sense, statistics means the quantitative facts or numerical data themselves, collected for a definite purpose (e.g., population statistics).

Q2. Name the three economic activities. [1 mark]

Ans: Consumption, Production and Distribution.

Q3. State one limitation of statistics. [1 mark]

Ans: Statistics studies only quantitative facts (it cannot directly study qualitative characteristics like honesty). [Any one valid limitation accepted.]

Q4. Why does the central economic problem arise? [1 mark]

Ans: Because human wants are unlimited but the resources to satisfy them are limited (scarcity), which forces choice.

Q5. Is a single isolated figure 'statistics'? Why? [1 mark]

Ans: No. Statistics requires a set of comparable figures collected for a purpose; a single isolated number is not statistics.

Section B — Short Answer I (3 marks x 3)

Q6. Define statistics in the singular and plural sense. [3 marks]

Ans: SINGULAR sense: statistics is the science/method of collecting, organising, presenting, analysing and interpreting numerical data — it is a body of methods, not the data itself. PLURAL sense: statistics means the quantitative facts/data themselves, collected for a definite purpose, e.g., 'India's employment statistics'. Contrast: singular = the method/science; plural = the data. The same word, two distinct uses.

Q7. Explain the three economic activities with one example each. [3 marks]

Ans: (1) CONSUMPTION — using up goods/services to satisfy wants, e.g., eating food. (2) PRODUCTION — creation of goods/services, e.g., a factory making cars. (3) DISTRIBUTION — sharing the income/output among factors of production and people (wages, rent, interest, profit), e.g., paying wages to workers. Statistics provides data on all three.

Q8. State and explain any three limitations of statistics. [3 marks]

Ans: (1) Studies AGGREGATES, not individuals — results are true only on an average, e.g., average income need not describe any one person. (2) Studies only QUANTITATIVE facts — qualitative traits like honesty cannot be measured directly. (3) Can be MISUSED — the same figures, selectively chosen or wrongly interpreted, can support opposite conclusions (the 'distrust of statistics'); the fault is in misuse, not the science.

Section C — Short Answer II / Long Answer (4 marks x 4)

Q9. Explain any four functions of statistics. [4 marks]

Ans: (1) PRESENTS FACTS IN DEFINITE FORM — converts vague statements into precise numbers ('prices are rising' becomes 'inflation is 5.1%'). (2) SIMPLIFIES & CONDENSES — reduces a mass of data into representative figures like averages and percentages. (3) ENABLES COMPARISON — across time, place and

groups (e.g., GDP this year vs last year). (4) HELPS FORECASTING & POLICY — projects trends and guides government/business planning, and helps frame and test economic laws.

Q10. Explain the importance / scope of statistics in economics. [4 marks]

Ans: Statistics is indispensable to economics: (1) it MEASURES economic variables — national income, inflation, unemployment, poverty; (2) it ENABLES COMPARISON across years and regions; (3) it supports FORECASTING of future trends; (4) it underpins POLICY-MAKING by government and firms; and (5) it allows economic LAWS AND THEORIES to be tested against real data. Because economic problems are about magnitudes, modern economics is largely an empirical, data-based science.

Q11. 'Statistics gives concrete numbers to qualitative statements.' Explain this role of statistics in economics with an example. [4 marks]

Ans: Economics is full of vague qualitative statements such as 'the economy is doing well' or 'prices are rising', which carry little conviction and cannot be compared. Statistics converts these into precise, quantitative facts — 'GDP grew by 7%', 'inflation is 5.1%'. This makes economic statements: (1) PRECISE and unambiguous; (2) COMPARABLE across time and regions; (3) suitable for FORECASTING; and (4) usable for POLICY. Example: instead of saying 'unemployment is high', statistics lets us say 'the unemployment rate is 7.8%', which can be compared with last year and acted upon. Thus statistics turns qualitative economics into a measurable, empirical science.

Q12. Why do people sometimes distrust statistics? Is the distrust justified? [4 marks]

Ans: People distrust statistics because it can be MISUSED — knowingly or unknowingly. (1) The same figures can be SELECTIVELY chosen to support opposite conclusions. (2) AVERAGES hide variation (a high average salary may hide widespread low pay). (3) Misleading GRAPHS (chopped axes) and PERCENTAGES quoted without a base distort the picture. This gives rise to sayings like 'lies, damned lies and statistics'. However, the distrust is NOT justified against the science itself: the fault lies in the MISUSE and misinterpretation by people, not in statistics as a method. Used honestly and with expertise, statistics is a reliable and powerful tool.

★ TOPPER ANSWER TEMPLATES

3 TEMPLATES · MEMORISE THE FORMAT

★ TOPPER TEMPLATE — 3-mark: 'Define statistics in the singular and plural sense.'

Most school papers + SQP

Step 1 [1 mark]	**Singular sense**	In the SINGULAR sense, statistics is the SCIENCE and METHOD of dealing with numerical data — that is, the techniques of COLLECTING, ORGANISING, PRESENTING, ANALYSING and INTERPRETING data. Here statistics refers to a body of methods, not the data itself.
Step 2 [1 mark]	**Plural sense**	In the PLURAL sense, statistics means the QUANTITATIVE FACTS or DATA themselves — the numerical figures collected for a definite purpose, e.g., 'the statistics of India's population', 'employment statistics'. Here statistics = aggregates of numbers.
Step 3 [1 mark]	**One-line contrast + example**	Thus the same word has two uses: singular = the method/science; plural = the data. Example: 'Statistics (singular) is used to analyse the unemployment statistics (plural) of India.'

COMMON LOSS OF MARKS:

- Giving only ONE sense for a question that asks for both.
- Defining the plural sense as 'just numbers' without saying 'collected for a definite purpose / aggregates'.
- Omitting the five-step method (collect-organise-present-analyse-interpret) in the singular sense.

★ TOPPER TEMPLATE — 4-mark: 'Explain any four functions of statistics.'
Annual

Step 1 [1 mark]	**Presents facts in definite form**	Statistics presents facts in a DEFINITE, NUMERICAL form. A vague statement like 'prices are rising' becomes precise — 'prices rose by 5.1% this year'. Numbers carry more conviction than words.
Step 2 [1 mark]	**Simplifies and condenses data**	Statistics SIMPLIFIES and CONDENSES a mass of data into a few representative figures (averages, percentages, indices) that the human mind can grasp. A single average summarises thousands of observations.
Step 3 [1 mark]	**Enables comparison**	Statistics facilitates COMPARISON across time, place and groups — e.g., comparing this year's GDP with last year's, or one state's literacy with another's. Comparison is impossible without quantified facts.
Step 4 [1 mark]	**Helps forecasting + policy**	Statistics enables FORECASTING of future trends and the FORMULATION of policies. Governments and firms use statistical data to plan output, budgets and welfare schemes. (Also acceptable: 'helps in formulating and testing economic laws/ relationships'.)

COMMON LOSS OF MARKS:
- Listing functions as one-word points without a sentence of explanation.
- Repeating the same idea twice (e.g., 'comparison' and 'helps compare').
- Giving fewer than four functions for a 4-mark question.

★ TOPPER TEMPLATE — 3-mark: 'State any three limitations of statistics.'
Frequent

Step 1 [1 mark]	**Studies aggregates, not individuals**	Statistics studies only AGGREGATES and is true on an AVERAGE — it does not describe a single individual unit. The statement 'average income is ₹50,000' need not be true for any one person.
Step 2 [1 mark]	**Quantitative only**	Statistics studies only QUANTITATIVE facts. Qualitative characteristics like honesty, intelligence or beauty cannot be studied unless first converted into numbers, so much of human behaviour lies outside its direct reach.
Step 3 [1 mark]	**Can be misused**	Statistics can be MISUSED. The same figures, selectively chosen or wrongly interpreted, can support opposite conclusions — hence the saying 'figures can lie'. This is the basis of the 'distrust of statistics'; the fault is in misuse, not the science.

COMMON LOSS OF MARKS:
- Confusing a limitation (quantitative only) with a function.
- Saying 'statistics is always wrong' — examiner wants 'true on an average / can be misused', not a blanket condemnation.
- Listing only one or two limitations for a 3-mark question.

MARKING SCHEME — GENERAL NOTES
- Singular-vs-plural answers must give BOTH senses to score full marks; one sense alone caps at half.
- For 'functions' / 'limitations' / 'importance', each distinct point with a one-line explanation earns its mark; repeated ideas are not double-counted.
- Reward precise wording 'collecting, organising, presenting, analysing and interpreting' for the singular definition.
- In the distrust question, the conclusion 'fault is in misuse, not the science' is required for the final mark.
- Accept any valid example in place of those given, provided it correctly illustrates the concept.