9 (B). Combined Graduate Level (Tier-II) Examination:

Tier-II of the Combined Graduate Level Examination -2012 will be of **Objective Type Multiple Choice** and will be conducted over a period of two days on 15th September,2012 & 16th September,2012.

SCHEME OF TIER-II WRITTEN EXAMINATION (TIER-II)

Date of Exam	Paper No.	Subject / Paper	Max. Marks	Number of Questions	Duration & Timings for General candidates	Duration & Timings for VH candidates
15.09.2012	III	Statistics	200	200	2 Hours 2.00 PM to 4.00 PM	2 Hours and 40 Min. 2.00 PM to 4.40 PM
16.09.2012 FN	I	Quantitative Abilities	200	100	2 Hours 10.00 AM to 12.00 Noon	2 Hours. and 40 Min. 10.00 AM to 12.40 PM
16.09.2012 AN	II	English Language & Comprehension	200	200	2 Hours 2.00 PM to 4.00 PM	2 Hours. and 40 Min. 2.00 PM to 4.40 PM

NOTE I: Paper-I & II are compulsory for all the categories of posts .**Paper-III is only for those candidates who apply for the posts of Statistical Investigators Gr.II & Compiler.**

General Instructions:-

(i) OMR Type of Answer Sheets will be supplied by the Commission to candidates for recording their answers to Multiple Choice Objective Type Questions. Candidates are advised to read the following instructions very carefully, in their own interest.

a) All the parts of OMR Answer Sheet to be filled in Blue/Black Ball Pen only.

b) Candidate should write and code his/her name, Roll Number, Ticket Number, Name of the Examination etc. as mentioned in Admission Certificate, Date of birth and Test Form Number fully and **correctly** in the relevant places in OMR Answer Sheet. Answer Sheet not bearing candidate's Name, Roll Number, Test Form Number, Ticket Number and signature and improper/ incomplete coding of these details will **not** be evaluated and 'Zero' marks will be awarded to them. The Commission prime-facie considers presence of mistakes in such details/coding as attempt to commit malpractice in the examination or to impersonate. Candidates are advised to follow these instructions meticulously and also duly and fully coded in the appropriate places.

c) Candidates are requested to affix their Left Thumb Impression and Signature in the OMR answer sheet, Admission Certificate and Attendance lists. They are also requested to write the Test Form Number and Serial number of the Question Booklet in the Attendance List. Answer Sheets without the signature and LTI of the candidates will not be evaluated and the candidate awarded Zero.

(ii) Candidates should carefully read instructions on the cover page of Test Booklet, OMR Sheet and Admission Certificate and follow them scrupulously in their own interest.

Paper-I : Quantitative Ability : The questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be the computation of whole numbers, decimals ,fractions and relationships between numbers, Percentage. Ratio & Proportion,Square roots, Averages, Interest, Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time & Work, Basic algebraic identities of School Algebra & Elementary surds, Graphs of Linear Equations, Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles, Triangle, Quadrilaterals, Regular Polygons , Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square base, Trigonometric ratio, Degree and Radian Measures, Standard Identities, Complementary angles, Heights and Distances, Histogram, Frequency polygon, Bar diagram & Pie chart

Paper-II : English Language & Comprehsion : Questions in this components will be designed to test the candidate's understanding and knowledge of English Language and will be based on spot the error, fill in the blanks, synonyms, antonyms, spelling/detecting mis-spelt words, idioms & phrases, one word substitution, improvement of sentences, active/passive voice of verbs, conversion into direct/indirect narration, shuffling of sentence parts, shuffling of sentences in a passage, cloze passage & comprehension passage.

Paper-III : Statistics for Investigator Grade-II, Ministry of Statistics & Programme Implementation & Compiler in RGI.

Collection Classification and Presentation of Statistical Data – Primary and Secondary data, Methods of data collection; Tabulation of data; Graphs and charts; Frequency distributions; Diagrammatic presentation of frequency distributions.

Measures of Central Tendency- Common measures of central tendency – mean median and mode; Partition values- quartiles, deciles, percentiles.

Measures of Dispersion- Common measures dispersion – range, quartile deviations, mean deviation and standard deviation; Measures of relative dispersion.

Moments, Skewness and Kurtosis – Different types of moments and their relationship; meaning of skewness and kurtosis; different measures of skewness and kurtosis.

Correlation and Regression – Scatter diagram; simple correlation coefficient; simple regression lines; Spearman's rank correlation; Measures of association of attributes; Multiple regression; Multiple and partial correlation (For three variables only).

Probability Theory – Meaning of probability; Different definitions of probability; Conditional probability; Compound probability; Independent events; Bayes' theorem.

Random Variable and Probability Distributions – Random variable; Probability functions; Expectation and Variance of a random variable; Higher moments of a random variable; Binomial , Poisson, Normal and Exponential distributions; Joint distribution of two random variable (discrete).

Sampling Theory – Concept of population and sample; Parameter and statistic, Sampling and non-sampling errors; Probability and non-probability sampling techniques(simple random sampling, stratified sampling, multistage sampling, multiphase sampling, cluster sampling, systematic sampling, purposive sampling, convenience sampling and quota sampling); Sampling distribution(statement only); Sample size decisions.

Statistical Inference - Point estimation and interval estimation, Properties of a good estimator, Methods of estimation (Moments method, Maximum likelihood method, Least squares method), Testing of hypothesis, Basic concept of testing, Small sample and large sample tests, Tests based on Z, t, Chi-square and F statistic, Confidence intervals.

Analysis of Variance - Analysis of one-way classified data and two-way classified data.

Time Series Analysis - Components of time series, Determinations of trend component by different methods, Measurement of seasonal variation by different methods.

Index Numbers - Meaning of Index Numbers, Problems in the construction of index numbers, Types of index number, Different formulae, Base shifting and splicing of index numbers, Cost of living Index Numbers, Uses of Index Numbers.

NOTE- I: (i)The Commission will have full discretion to fix separate minimum qualifying marks in each of the papers in Tier II and in the aggregate of all the papers separately for each category of candidates (viz. SC/ST/OBC/ **including minority sub-quota** /PH/ExS/General (UR)). **Only those candidates who qualify in all the papers as well as in the aggregate would be eligible to be considered for being called for Interview and/or Skill Test.**

(ii)There will be different set of Questions for Visually Handicapped (VH) candidates in Paper-I-Quantitative Ability, which shall not have any component of Map/Graphs/Statistical Data/ Diagrams/Figures/Geometrical problems/Pie-chart etc. However, components of other papers will be the same as that for general candidates.