

SYLLABUS FOR DIRECT RECRUITMENT TO JUNIOR TECHNICAL ASSISTANT (JTA) LEVEL -04 OF THE PAY MATRIX UNDER GEOLOGY & MINING, COMMERCE & INDUSTRIES DEPARTMENT

PAPER – I	200 MARKS
PAPER – II (Technical Paper-I)	200 MARKS
PAPER – III (Technical Paper-II)	200 MARKS
TOTAL	600 MARKS

DETAILED SYLLABUS

Paper	Subject	Marks	Duration
Paper-I	General Knowledge (<i>50 questions</i>)	50	3 hours with additional time of 20 minutes/hour for Visually handicapped/ Cerebral palsy candidates
	General English (<i>25 questions</i>)	25	
	Essay Writing	15	
	English Comprehension	10	
	Simple Arithmetic (<i>50 questions</i>)	50	
	Basic Computer Knowledge (<i>50 questions</i>)	50	
	Total	200	
Paper – II (<i>Technical paper - I</i>)	Ref: Physics upto Class – XII level (MBSE) MCQs 75 questions Descriptive 10 questions	150 50	3 hours with additional time of 20 minutes/hour for Visually handicapped/ Cerebral palsy candidates
	Total	200	
Paper – III (<i>Technical paper - II</i>)	Ref: Chemistry upto Class-XII level (MBSE) MCQs 75 questions Descriptive 10 questions	150 50	3 hours with additional time of 20 minutes/hour for Visually handicapped/ Cerebral palsy candidates
	Total	200	

Notes:

- (i) Questions in Paper – II & III i.e. *Technical Paper – I & II*, shall be 75 percent Objective in the form of Multiple Choice Questions (MCQs) with all questions carrying equal marks and 25% Descriptive carrying 5 equal marks in each questions. However, Paper – I (*non-technical paper*) shall be 100 percent Objective.
- (ii) MCQ answers for each of the questions shall be marked using blue or black ball point pen. In other words, there shall be multiple probable answers (at-least four) wherein the candidate has to choose the correct answer for every objective type question. No negative marks will be awarded for wrong answers.
- (iii) Questions will be set in tune with the level of educational qualifications prescribed in the corresponding Recruitment Rules for the post.
- (iv) A brief description of the syllabus as well as mark distribution for technical papers for recruitment to the post of Junior Technical Assistant is appended under Appendix I & II respectively.

Appendix – I

DESCRIPTION OF SYLLABUS FOR DIRECT RECRUITMENT OF JTA

Paper-I

General Knowledge: Questions will be designed to test the candidate's knowledge of current events and of such matters of everyday observation and experience as may be expected of an educated person. The test will also include questions relating to Indian history and culture, Indian polity including the Constitution of India, geography, economy and general science. Questions on Mizo history and culture will also form part of the syllabus.

General English: Questions will be designed to test the candidate's understanding and knowledge of English language, vocabulary, spelling, grammar, sentence structure, synonyms, antonyms, sentence completion, phrases and idiomatic use of words etc. There will be questions on comprehension of a passage also.

Essay Writing: Question on essay writing will be designed to test the candidate's grasp of his material, its relevance to the subject chosen, and to his ability to think constructively and to present his ideas logically, constructively and concisely.

English Comprehension: There will be questions on comprehension of passages also to test the vocabulary, grammar, logical thought ability and overall grasp of the candidate over English language.

Simple Arithmetic: Number system, simplification, roots, averages, discounts, percentages, profit & loss, ratio and proportion, partnership, chain rule, time & work, time & distance, simple & compound interest, mensuration, permutations & combinations, heights & distances, line graphs, bar graphs, pie charts and tabulation.

Basic Computer knowledge: Introduction to Computers, introduction to Graphical user interface based Operating System, elements of Word Processing, Spreadsheets, Power-point presentations, Computer communication and internet, world wide web and web browser, communication and collaboration.

Paper-II (Technical Paper - I)

Physics: Units & Measurements, Motion, Work, Energy and Power, Gravitation, Oscillations and Waves, Electricity, Magnetism, Optics, Pressure, The Universe, Atomic & Nuclear Physics, SI Units of Physical Quantity

Paper-III (Technical Paper - II)

Chemistry: Structure of Atom, Periodicity (s, p, d & f blocks), Chemical Bonding, Thermodynamics, Equilibrium, Redox Reactions, Solid States, Electro Chemistry, Chemical Kinetics, General Principles and Processes of Isolation of Elements, Coordination Compounds, Organic Chemistry

Appendix – II

MARKS DISTRIBUTION FOR TECHNICAL PAPERS

PHYSICS			CHEMISTRY		
Sl. No.	Topics	Marks	Sl. No.	Topics	Marks
1.	Units and Measurements	16	1.	Structure of Atom	8
2.	Motion	12	2.	Periodicity (s,p,d& f blocks)	20
3.	Work, Energy and Power	20	3.	Chemical Bonding	8
4.	Gravitation	8	4.	Thermodynamics	12
5.	Oscillations and Waves	20	5.	Equilibrium	8
6.	Electricity	32	6.	Redox Reactions	12
7.	Magnetism	28	7.	Solid States	20
8.	Optics	8	8.	Electro Chemistry	20
9.	Pressure	12	9.	Chemical Kinetics	12
10.	The Universe	12	10.	General Principles and Processes of Isolation of Elements	28
11.	Atomics & Nuclear Physics	12	11.	Coordination Compounds	12
12.	SI Units of Physical Quantity	20	12.	Organic Chemistry	40
	Total	200			200