to Ex-Servicemen but shall not be permitted to leave the uniform until they complete the specified term of engagement in the Armed Forces of the Union.

# (III) SELECTION PROCESS:

# A) PATTERN OF ONLINE TEST

The online test will comprise of Phase-I and Phase-II exams.

# i) The online exam of Phase-I shall be common irrespective of the post. The test structure for Phase I Online exam is as follow:-

S.No.	Name of the Test	Number of Questions	Maximum Marks	Duration (minutes)	Version
1	English Language	25	25	15 minutes	English
2	Reasoning Ability	25	25	15 minutes	Bilingual
3	Numerical Aptitude	25	25	15 minutes	Bilingual
4	General Studies* comprising of History, Geography, Economy, General Science upto Class 8 <sup>th</sup> level. (20 questions)  Current Affairs (5 Questions)	25	25	15 minutes	Bilingual
		100	100	60 minutes	

<sup>\*</sup>The nature of questions will be such that they do not require specialised study of any discipline.

NOTE: In the Phase-I of online test, the test will be Objective type (Multiple Choice Questions). Each question will carry equal 1 (one) mark. For each wrong answer, there will be negative marking of one-fourth (1/4) of the mark assigned to that question. If a question is left blank, i.e. no answer is marked by the candidate; there will be no negative marking for that question. The marks obtained in Phase-I will NOT be reckoned in final merit ranking.

# ii) Phase-II online exam will comprise of:

Post	Post Code	Paper	Description
J.E. (Civil Engineering)	А	Paper-I and Paper-II	Candidates will appear in Paper-I to be followed by Paper-II. ONLINE TEST for Paper - I & Paper - II shall be held in single sitting only.
J.E.(Electrical Mechanical Engineering)	В	Paper-I and Paper-II	Candidates will appear in Paper-I to be followed by Paper-II. ONLINE TEST for Paper - I & Paper - II shall be held in single sitting only.
Steno. Grade- II	С	Paper-III only	Candidates applying for the post code C will have to appear in Paper-III. Thereafter the candidates will undergo a Skill-Test in <b>typing and shorthand</b> which will be of qualifying nature. The language of Skill Test i.e (Typing,

			Short Hand) will be in <b>English.</b> The candidates shall be		
			informed about the venue of skill/typing test through		
			website (https://www.fci.gov.in).		
			The final merit for the post of Steno. Grade-II will be deci-		
			on the basis of Paper-III subject to qualifying the Skill Test.		
AC III (Conoral)	D	Paper-I	Candidates applying for the post code D will have to		
AG-III (General)	U	only	appear in Paper-I.		
			Candidates will appear in Paper-I to be followed by Paper-		
AG-III (Accounts)	Е	and	II. ONLINE TEST for Paper - I & Paper – II shall be held in		
		Paper-II	single sitting only.		
			Candidates will appear in Paper-I to be followed by Paper-		
AG-III (Technical)	F	and	II. ONLINE TEST for Paper - I & Paper – II shall be held in		
		Paper-II	single sitting only.		
AC III (Danat)	_	Paper-I	Candidates applying for the post code G will have to		
AG-III (Depot)	G	only	appear in Paper-I.		
		Paper I	Condidates and in a few the most gode II will besset		
AG-III (Hindi)	Н	and	Candidates applying for the post code H will have to		
		Paper II	appear in Paper-I and Paper II.		

Note: Paper-I is common for post code A, B, D,E, F, G and H.

Paper Type	Paper Type Number of questions and Marks		Negative marking
Paper – I	120 Multiple Choice Questions, each carrying 1 mark. (Maximum 120 marks)	90 minutes	Candidate should note that there will be
Post specific Paper-II (in phase II)	60 Multiple Choice Questions, each carrying 2 marks. (Maximum 120 marks)	60 minutes	negative marking of one fourth of the mark assigned to a question in
Paper-III	120 Multiple Choice Questions each carrying 1 mark. (Maximum 120 marks)	90 minutes	Phase –II. If a question is left blank, i.e. no answer is marked by the candidate; there will be no negative marking for that question.

# Paper-I (120 Multiple Choice Questions, Duration-90 Minutes):

S.No.	Name of the Test	Number of Questions	Maximum Marks	Version	Duration
1	English Language	25	25	English	20 Minutes
2	Reasoning Ability	25	25	Bilingual	20 Minutes
3	Numerical Aptitude	25	25	Bilingual	20 Minutes
4	General Studies* comprising of History, Geography, Economy – 25 questions  General Science upto Class 10 <sup>th</sup> level - 10 questions  Current Affairs – 5 questions  Computer Awareness - 5 questions	45	45	Bilingual	30 Minutes

	120	120	90 Minutes

<sup>\*</sup>The nature of questions will be such that they do not require specialised study of any discipline.

# Paper-II (Duration-60 minutes):

i. 60 Multiple Choice Questions on Civil Engineering, Electrical Engineering and Mechanical Engineering for Candidates applying for the Post Code A {Junior Engineer (Civil Engineering)}, Post Code B {Junior Engineer (Electrical Mechanical Engineering)}, to assess the post specific technical knowledge of relevant stream.

OR

**ii.** 60 Multiple Choice Questions on Commerce particularly General Accounting and Finance for candidates applying for the Post Code E {Assistant Grade-III (Accounts)} to assess the post specific technical knowledge of relevant stream.

OR

**iii.** 60 Multiple Choice Questions on Agriculture, Botany and Zoology (Group-A) or Agriculture, Chemistry and Physics (Group-B) for candidates applying for the Post Code F {Assistant Grade-III (Technical)} to assess the post specific technical knowledge of relevant stream.

OR

**iv.** 60 Multiple Choice Questions: General Knowledge related to Hindi Literature (4 Questions), word/sentences for Hindi to English translation (20 Questions), word/sentences for English to Hindi translation (20 Questions), Official Language Policy (4 Questions), Official Language Act (4 Questions), Official Language Rules (4 Questions), Annual Programme issued by Department of Official Language (4 Questions).

# The detailed syllabus for specified technical posts for Paper-II to assess the post specific technical knowledge of relevant stream is as under:

#### a. Junior Engineer (Civil Engineering) (Post Code A):

**Building Materials:** Physical and Chemical properties building stones, cement (Portland), Asbestos products, Timber and Wood based Products, laminates, bituminous materials, paints, varnishes etc.

**Surveying:** Principles of surveying, plane table surveying, theodolite, leveling and contouring, curvature, permanent adjustment of dumpy level, methods of contouring, tachometric survey etc.

**Soil Mechanics:** void ratio, porosity, saturation, water content, specific gravity of soil grains and unit weights, grain size, Atterberg's limits, soil classification, plasticity chart, permeability, consolidation of soils. Lab tests, moisture content, bearing capacity of soils, plate load test, standard penetration test etc.

**Estimating, Costing and Valuation:** Estimate, analysis of rates, earthwork, Brick, RCC work shuttering, Painting, Flooring, Plastering flexible pavements, Tube well, isolates and combined footings, Steel Truss, Piles etc.

**Transportation Engineering:** Types of pavements, pavement materials – aggregates and bitumen, Design of flexible and rigid pavements, bituminous construction, rigid pavement joint, pavement maintenance, Railway Engineering.

**Environmental Engineering:** Quality of water, purification, distribution, sanitation, sewerage and sewage treatments.

**Structural Engineering:** Theory of structures, bending moment and shear force diagrams retaining walls, eccentric loads, slope deflection, critical load and columns, torsion etc.

**Concrete Technology:** Latest technology and uses of concrete, water cement ratio, workability, mix design, placement, compaction, finishing and curing of concrete, quality control of concrete, repair and maintenance of concrete structure etc.

**RCC Designs**: RCC flexural strength, shear strength, bond strength, design of single reinforced beams, retaining walls, water tanks (RCC design questions may be based on both Limit State method and Working Stress method).

Steel Design: Steel design and construction of steel columns, beams, roof trusses, plate girders.

Construction Management: Construction scheduling Bar Chart, CPM and PERT etc.

#### b. Junior Engineer (Electrical Mechanical Engineering) (Post Code B):

Basic concepts, Concepts of current, voltage, power, energy and their units, Circuit law, AC Fundamentals, Measurement and measuring instruments, Electrical Machines, Synchronous Machines, Generation, Transmission and Distribution of power in different power stations, Estimation and costing, Utilization of Electrical Energy, Basic Electronics, Theory of Machines and Machine Design, Engineering Mechanics and Strength of Materials, Thermal Engineering, Air standard Cycles for IC engines, Rankine cycle of steam, Air Compressors & their cycles, Boilers Refrigeration cycles, Production Engineering.

# c. Assistant Grade-III (Accounts) (Post Code E):

- 1. Basic Accounting concept including preparation of books of accounts.
- 2. Taxation including Income Tax and Goods and Services Tax.
- 3. Auditing: (a) Auditing concepts and methods, (b) Internal & External audit of companies.
- 4. Commercial Laws:- (Basic Knowledge) (a) Basics of Contract Act, (b) Basics of Company Act, (c) Basics of Sales of Goods Act, (d) Negotiable Instrument Act
- 5. Basic of Computers: (a) Operating System, (b) Browsers, (c) Email, (d) Memory (Internal, External, portable), (e) Chats, (f) Office (Word, PowerPoint, Excel), (g) Networks.

### d. Assistant Grade-III (Technical) (Post Code F)

**Agriculture:**- Statics of Indian Agriculture (Cereals & Pulses), Elementary entomology, Plant Protection, Agricultural Economics.

**Botany:-** Cell Biology: Tissue, Organ & Organ System, Genetics, Plant Classification, Diversity, Ecology, Life Process: Photosynthesis, Respiration, Circulation, Movement etc, Basics of Biochemistry.

**Zoology:-** Animal Cell & Tissue, Organ System, Heredity & Variation, Animal Classification, Micro Organism, Insects & Rodents.

**Chemistry:-** Chemical bonding, Organic Chemistry: Basics of alkanes, alkenes, alkynes, alcohols, aldehydes and acids, Inorganic Chemistry in daily life.

**Physics:-** Measurements, Basic Physics, Light, Electricity.

The above syllabus for **Agriculture, Botany, Zoology, Chemistry and Physics** is grouped into following two categories:

GROUP A- Agriculture, Botany and Zoology.
GROUP B- Agriculture, Chemistry and Physics.

At the time of filling up of the online application form, the candidate applying for the post of AG-III (Tech) shall have to select any one of the above groups for online examination Paper-II i.e. either Group-A or Page **13** of **46** 

Group-B in which he/she wishes to appear in the examination. The option once exercised shall be final and no further changes will be allowed under any circumstances.

#### Paper-III (Duration-90 minutes):

120 Multiple Choice Questions on General English, General Awareness, General Intelligence and Computer Knowledge (with specific reference to MS Word, Excel, PowerPoint and Internet) for candidates applying for the Post Code C (Steno. Grade-II).

PAPER – III							
Sr. No.	Name of the Test	No. of Qs.	Max. Marks	Duration	Medium		
1.	General English	30	30	25 Minutes	English		
2.	General Awareness	30	30	20 Minutes	Bilingual (English and Hindi)		
3.	General Intelligence	30	30	25 Minutes	Bilingual (English and Hindi)		
4.	Computer Awareness (with specific reference to MS Word, Excel, PowerPoint and Internet)	30	30	20 Minutes	Bilingual (English and Hindi)		
	TOTAL	120	120	90 Minutes			

#### Note:

- i. Marks obtained in Phase-I online exam will not be reckoned for final merit list. The candidates @fifteen times the number of vacancies advertised shall be called for Phase-II examination.
- ii. The merit of **online** Test for Post Code D and G will be decided on the basis of marks secured in Paper -I **of Phase-II**
- iii. For post code A, B, E, F and H the merit will be decided on the basis of combined marks secured in Paper I & post specific Paper II of Phase-II.
- iv. Candidates applying for the Post of Steno. Grade-II (Post code-C) will need to take Paper III in Phase II for Online Test. The final merit for the post of Steno. Grade-II will be decided on the basis of marks secured in Paper-III, subject to qualifying the Skill Test.
- v. Candidates applying for AG-III (Hindi) (Post code-H) will need to take Paper I & II in Phase II. Final merit will be decided on the basis of combined marks secured by the candidates in both Paper I and Paper II.
- vi. A candidate has to appear in all the phases of the recruitment process to be considered for the selection. The candidates are advised to visit FCI Website regularly.
- vii. Online Test will be bilingual i.e. in English and Hindi except for language papers.

# viii. **GUIDELINES FOR PERSONS WITH DISABILITIES USING A SCRIBE**