

### TRIPURA PUBLIC SERVICE COMMISSION AGARTALA

Advt. No. 08/2025

Online applications are invited from bonafide citizen of India for recruitment to the posts of Junior Engineer, Grade-I & Grade-II, Civil Engineering under Rural Development Department, Govt. of Tripura through the "Combined Competitive Examination Rules-2022".

Details of posts are given below:-

### Item No-1.

Sl No	Name of Post	Scale of Pay	Distribution of posts as proposed for Direct Recruitment			Posts Reserved for PH candidates	
	Junior Engineer,	Rs. 47,600/- as per Tripura Pay Matrix,	UR	sc	ST	Total	
1	Grade-I, Degree Civil, Group-B Gazertte'd {(equivalent to TES Grade-V(A)}	2018, Cell-1 of Level-13 (Subject to revision by the Govt. from time to time) plus other admissible allowances.	55(Ex- SM-2)	18	32 (Ex-SM- 1)	105 (Ex-SM- 3)	Including 04 nos. of PH

Distribution of posts reserved for Women candidates for Junior Engineer, Grade-I:-

Sl No		Total no. of post	33% Reservation for Women candidate			
	Name of Post(Grade)		UR	ST	sc	Total
1	Junior Engineer, Grade-I, Degree Civil, Group-B Gazertted	105	19	11	06	36

### Educational and other qualifications required for direct recruitment:

Essential:- i)Degree in Civil Engineering or its equivalent qualification from a recognized University/Institution.

ii) Permanent Resident Certificate of Tripura(PRTC) would be required while applying for job.

### Desirable:

### 1. Knowledge of Bengali or Kokborok

Age:- 18-40 years as on 21-03-2025. Upper age limit is relaxable by 5(five) years in case of ST/SC/PH candidates and Government servants. Provided that Govt. servants belonging to ST/SC/PH category shall not get this relexation over and above the general relaxation of 5(five) years available to them.

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### Item No-2.

Sl No	Name of Post	Scale of Pay	Distribution of posts as proposed for Direct Recruitment			Posts Reserved for PH candidates	
	Junior	Rs.34,700/- as per	UR	SC	ST	Total	
1	Engineer, Grade-II, Diploma Civil Group-C Non- Gazetted {(Equivalent to TES Grade-V(B)}	Tripura Pay Matrix, 2018, Cell-1 of Level-10 (Subject to revision by the Govt. from time to time) plus other admissible allowances.	48 (Ex- SM-01)	16	29 (Ex-SM- 01)	93 (Ex- Sm-02)	Including 04 Nos. of PH

Distribution of posts reserved for Women candidates for Junior Engineer, Grade-II:-

Sl No	Name of Post(Grade)	Total no. of post	33% Reservation for Women candidate			
			UR	ST	sc	Total
1	Junior Engineer, Grade-II, Diploma Civil, Group-C Non- Gazetted	93	16	10	06	32

### Educational and other qualifications required for direct recruitment:

Essential: i) Must have a Diploma in Civil Branch of Engineering or its equivalent academic qualification from a recognized University/Institution.

ii)Permanent Resident Certificate of Tripura (PRTC) would be required while applying for job.

### Desirable:

1. Knowledge of Bengali or Kokborok.

Age:-Upto 40 years as on  $\underline{21\text{-}03\text{-}2025}$ . Upper age limit is relaxable by 5(five) years in case of ST/SC/PH candidates and Government servants. Provided that Govt. servants belonging to ST/SC/PH category shall not get this relexation over and above the general relaxation of 5(five) years available to them.

The total & category wise number of vacancies is subject to increase or decrease depending upon the requirement of the Department /other Departments under the purview of Tripura Engineering Service.

For detailed classification/notification of PH category, Ex-Service Men & Women Reservation to the post of Junior Engineer, Gr-I(Degree) & Gr-II(Diploma), Civil Please visit <a href="http://tpsc.tripura.gov.in">http://tpsc.tripura.gov.in</a>

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Selection Procedure: The selection procedure will be governed as per No.F.6(14)-PWD(E)-2022/13642-91 dated 27-10-2022 and these Rules may be called "Combined Competitive Examination Rules, 2022." for direct recruitment to Engineers to different Department of Govt. of Tripura.

The last date of submission of online application is <u>21.03.2025</u> (upto 5.30 PM). The application(s) received after the closing date will not be entertained.

### Selection Process:

The examination shall have the following three parts namely:

Preliminary Examination (MCQ Type) carrying 100 marks. The Preliminary Examination is meant to serve as a screening test only for the purpose of selection of candidates for the Main Examination. The marks obtained in this examination by the candidates will not be considered for final selection. A limited number of candidates, maximum 05(five) times of total posts (category wise) will be selected merit wise on the basis of the result of Preliminary Examination, subject to securing minimum qualifying marks (40% for UR & 30% for reserved category candidates). Only those candidates who will be declared qualified at the Preliminary Examination will be eligible for admission to the Main Examination.

Main (written) Examination carrying 500 marks. The minimum cut off marks to qualify for interview cum Personality test in main Examination is 40% in aggregate for UR & 30% in aggregate for Reserved Category Candidates. The selected candidates on the basis of results of the Main(Written) Examination will be allowed to appear in the Interview-cum-Personality Test.

An Interview-cum-Personality Test carrying 50 marks.

Preliminary Examination: The preliminary examination will consist of only one paper viz a paper on "General Studies & Engineering Aptitude". The paper will be of an Objective Type consisting of 100 Multiple Choice questions. The paper will carry 100 Marks and will be of 2(two) hours duration.

The paper will include questions covering the following field of knowledge:

i) English Composition

- 10 marks

ii)General Knowledge & Current events of Local, National &

International Importance

- 10 marks.

iii)Engineering Aptitude (in related branch) -80 marks

Total - 100 marks

Negative marking will be as per TPSC norms.

### Main Examination:

Compulsory:

General Studies

100 marks

1 hour duration

Engineering Papers:

200 marks in each paper

3 hours duration

a) Civil Engineering Paper-I

b) Civil Engineering Paper-II

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### Interview cum Personality test

i) The Commission shall conduct an Interview-cum personality test of those candidates, who have obtained qualifying marks in the Main (written part) of the examination. The pattern of the Interview-cum-Personality Test shall be decided by the Commission in accordance with the requirement of the service and the post for which the examination is conducted.

ii) The Interview-cum-Personality Test shall be to assess the personal qualities of a candidate e.g., his intellectual ability, social traits, interest in current affairs, critical power of judgment, variety and depth of interest, ability for leadership, moral integrity etc.

iii) In no case shall a candidate be called for Interview-cum-Personality Test unless he/she appears in all the papers of the Main examination.

appears in an the papers of the Main examination.

Ratio for calling of Candidates for Interview-Cum-Personality Test provided that he/she secured minimum cut off marks in the main exam:

No of vacancies	No of candidates to be called for interview cum Personality Test (Category wise)		
1(one)	5(five) candidates		
2(two)	8(eight) candidates		
3(three)	3(three) times the number of vacancies.		

iv) Final selection shall be made in order of merit on the basis of the marks obtained by a candidate in aggregate in the Main (written) examination and the marks obtained by him/her in the Interview-cum-Personality Test and following other norms of the TPSC in this regard. If a candidate remains absent in Interview-cum-Personality Test his/her candidature will not be considered for final selection.

v) In the list of recommendation, merit position of candidates securing equal marks will be finalized as per their seniority of age. The same procedure is to be followed for preparing waiting list, if there be any.

Further, provided that, in the list of recommendation, merit position of candidates securing equal marks in aggregate and also of the same age will be decided on the basis of percentage of marks obtained in the minimum educational qualification prescribed in Recruitment Rules.

vi) Ranks of the candidates are not prepared for the candidates beyond the recommendation list & wait list (if there be any).

For detailed syllabus & scheme of examination please visit <a href="http://tpsc.tripura.gov.in">http://tpsc.tripura.gov.in</a>

### Other Important information:

1. Online Application Portal:

(a) Candidates will have to submit application through Online Application Portal only. The Commission will not entertain any hard copy application. Before submission of online application, read carefully the necessary instructions regarding filling up of online application. (b) Online Application Portal will be available on Commission's website from 24-02-2025 to 21-03-2025 (5.30 PM). Before applying for the post, an applicant shall register his/her biodata particulars through One Time Profile Registration (OTPR) on the Commission's Website viz. <a href="https://tpsc.tripura.gov.in">https://tpsc.tripura.gov.in</a>. Once applicant registers his/her particulars, a User ID is generated and sent to his/her registered mobile number and email ID. Applicants need to apply for the post using the OTPR User ID through Commission's website.

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(c) Applicants should avoid submitting multiple applications. However, if due to any unavoidable circumstances, any applicant submits multiple applications then he/she must ensure that the application with latest Receipt Number is complete in all respects.

(d) In case of multiple applications, the application with latest Receipt Number shall only be entertained by the Commission and fee paid against one Receipt Number shall not be adjusted

against any other Receipt Number.

2. (a) Candidates are not required to upload/submit with their respective applications any certificate in support of their claims regarding Age, Educational Qualifications, Scheduled

Castes/ Scheduled Tribes etc.

- (b) Applicants must be in possession of the prescribed minimum qualification(s) for the post on the closing date for submission of application as mentioned in the advertisement. Their admission at all the stages of examination for which they are admitted for the Examination will be purely provisional, subject to their satisfying the prescribed eligibility conditions. Mere issue of admission certificate to the candidate will not imply that his/her candidature has been finally cleared by the Commission. After publication of result of Preliminary Examination, successful candidates will be asked to submit self attested copies of the relevant documents to the Reception Counter of TPSC or online within a specified time failing which the candidature of candidates will be summarily rejected. On scrutiny of documents if a candidate found ineligible as per terms and condition of the advertisement (including prescribed recruitment fees) his/ her candidature will be rejected. If employed, must apply through proper channel or attach a "No Objection Certificate" from his /her employer. If the application is not routed through proper channel, at the day of interview candidates will have to submit 'no objection' certificate'. In that no-objection certificate, it is to be clearly mentioned that your employer has 'No objection' if you are considered for recruitment to the post for which you have applied for.
- (3) Rate of Recruitment Fees:

(a) i) Group-B Gazetted posts:-Rs. 350/-(Rupees three hundred and fifty) for General Candidates and Rs.250/-(Rupees two hundred & fifty) only for ST/SC/ BPL card holders/Physically Handicapped Candidates.

ii) Group-C non-Gazetted Posts: - Rs.200/- (Rupees two hundred) only for General Candidates and Rs.150/-(Rupees one hundred & fifty) only for ST/SC/ BPL card holders/Physically

Handicapped Candidates.

- b) If a candidate submits incomplete application in respect of terms & condition of the Advertisement and without requisite recruitment fee, his/her candidature will be rejected.
- c)Recruitment fee so deposited, is non-refundable.
- (4) Decision of the Commission as to the eligibility or otherwise of a candidate at any stage of the selection process shall be final.
- (5) Assessment and evaluation of the answer scripts done by the Commission shall be final and shall not be open to scrutiny by any external authority.
- (6) The Examination venue shall be closed 10 minutes before the Scheduled Commencement of Examination. No candidate shall be allowed entry into the examination venue after closure of entry. No functionary has any direction in this regard.

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(7) Candidates are at liberty to make correction(s) in any field(s) of the 'Online Application Form' for the respective advertisement after closing day of submission of online application window of the said advertisement. The window for making correction(s) only will remain open for 7(seven) days from the closing day of submission of 'Online Application Form'.

After completion of such process the Commission will not entertain any application/representation for making correction(s) any field(s) of the 'Online Application Form'.

- (8) Candidates are instructed to visit the Commission's website for information regarding steps of recruitment process time to time.
- 9) Mobile Phone/Electronic Gadgets etc. are banned in the Campus of the Examination Premises/Interview Premises. Any Phone/Electronic Gadget found in possession of any candidate in the Examination Premises/Interview premises shall be confiscated forthwith and he/she may be debarred from appearing at the Examination/Interview and also for the Examination(S)/Interview to be conducted by the Commission in future Violation of such instruction will be dealt as per Law.
- (10) Entry in the Examination hall/Interview Premises with Jacket, Coat, Pull over & this type of garments will not be allowed.

(S. Mog, IAS) Secretary,

Tripura Public Service Commission

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Dated, Agartala, 27th October, 2022

### **NOTIFICATION**

In exercise of the powers conferred by the provisions to article 309 of the Constitution of India and all other powers enabling him in this behalf, the Governor, Tripura is pleased to make the following Rules in connection with syllabus, mode of examination and selection of direct recruitment of Engineers to different Departments of the Government namely:

### 1. Short title and commencement

- i) These Rules may be called "Combined Competitive Examination Rules, 2022" for direct recruitment of Engineers to different Departments of the Government such as PWD, Agriculture, ARDD, Education, Food and Civil Supplies & Consumer Affairs, Rural Development, Science & Technology, Police (Home), ST Welfare, Fisheries Departments and such other Departments as may be notified by the Government from time to time.
- ii) They shall come into force on the date of their publication in the Official Gazette.
- iii) All the Departments concerned will be required to submit requisitions to the PWD which will work as Nodal Department for the purpose. And thereafter, the PWD will compile the said requisitions and submit materials to the TPSC twice in a year in the month of January and June as per requisition received from those Departments.

### 2. Definition

In these rules, unless the context otherwise requires:

- a). 'Commission' means the Tripura Public Service Commission
- b) 'Rules' means Tripura Engineering Service Rules (7th Amendment), 2014
- c) 'Service' means Tripura Engineering Service.
- d)'Department' means PWD, Agriculture, ARDD, Education, Food and Civil Supplies & Consumer Affairs, Rural Development, Science & Technology, Police (Home), ST Welfare, Fisheries and such other Departments as notified by the Government from time to time.
- e) 'Government' means the Government of Tripura.

### 3. Competitive examination for direct recruitment

- (i) As provided in Part —IV of the Service, selection of candidates for direct recruitment to the service and other equivalent posts under various departments shall be made by the Commission on the basis of a common competitive examination to be conducted by it.
- (ii) Every year, preferably in the month of January, the Public Works Department (PWD) being the nodal Department will send requisition to the Commission after receipt of requirement from the departments of

the State Government. Having regard to the number of vacancies mentioned in the requisition, the Commission shall conduct a combined competitive examination for direct recruitment. The Commission will complete the process of selection of the candidates through the examination ordinarily within a period of 1 year and recommend to the PWD a list of selected candidates according to merit.

- (iii) Before holding the examination, the Commission shall issue an advertisement notifying, inter alia, the Department wise vacancies with the breakup of the posts earmarked for the unreserved and reserved category of candidates and inviting applications from the candidates with their choice of Departments willing to appear in the examination. The advertisement shall also indicate that the number of vacancies so notified may increase or decrease according to necessity.
- (iv) In case a communication is received by the Commission from the employer of a candidate withholding permission to appear at the examination, his application shall be rejected/ candidature shall be cancelled by the Commission;

Provided that a candidate who gets appointment to any post after submission of his application for admission to the examination must furnish forthwith evidence to show that his employer has no objection to his being selected for a post on the results of the examination. Further the candidates are instructed to follow the advertisement scrupulously.

### 4. Preference

- (i) After publication of result of preliminary examination a candidate should clearly indicate in his /her application the Department for which he/she wishes to be considered in order of preference as per format of TPSC. No request for alteration in the preference indicated by a candidate in his/her application shall be entertained.
- (ii) Selection of candidates will be made in order of merit and according to the number of vacancies available. Due consideration will be given, as far as practicable, to the preferences indicated by a candidate, if any, but the commission reserves the right to allot the candidate to any department or post for which he/she is a candidate on consideration of his/her candidature who has paid application fees as prescribed and fulfilled the terms of advertisement will receive an Admit Card and a time table for the examination. The admission will be deemed to be provisional subject to determination of his eligibility in all respects; fitness and number vacancies available.

### 5. Eligibility

Eligibility of candidates shall be determined as per relevant recruitment rules of the respective Departments.

### 6. Application form, application fees and booklets containing syllabus

- (i) Application forms will be filled up online and required fees are to be paid online or in the manner as prescribed by the Commission.
- (ii) Syllabus will be available in the Commission's & PWD's website after publication of advertisement.
- (iii) Documents, Papers etc. to be attached with the application form and its mode of submission to the Commission shall be clearly notified by the Commission at the time of advertisement.

### 7. Admission Certificate

(i) A candidate who has paid application fees as prescribed and fulfilled the terms of advertisement will receive an Admission Certificate and a time table for the examination or as instructed by Commission. The admission will be deemed to be provisional subject to determination of his eligibility in all respects;

(ii) No candidate shall be admitted to the examination unless he holds an Admission Certificate. If at any stage after issue of the Admission Certificate, a candidate is found to be ineligible for admission in terms of the regulations of the examination; his candidature shall be cancelled without further reference to him.

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Consequences of violation of rules, regulations, instructions etc.

A candidate who violates the rules, regulations and instructions issued by the Commission, Supervisor or Invigilator on duty in the Examination Hall, be liable to expulsion from the Examination Hall and/or other penalties as provided in the regulations of the Commission.

9. Matters for which no specific provision has been made in the regulations shall be decided by the Commission.

### **PART-I**

### 10. Nature and syllabus of the examination

The examination shall have the following three parts namely:

- (i) Preliminary Examination (MCQ type) carrying 100 marks. The Preliminary Examination is meant to serve as a screening test only for the purpose of selection of candidates for the Main Examination. The marks obtained in this examination by the candidates will not be considered for final selection. A limited number of candidates, maximum 05 (five) times of total posts (category wise) will be selected merit wise on the basis of the result of Preliminary Examination, subject to securing minimum qualifying marks (40% for UR & 30% for reserved category candidates). Only those candidates who will be declared qualified at the Preliminary Examination will be eligible for admission to the Main Examination.
- (ii) Main (Written) Examination carrying 500 marks. The minimum cut off marks to qualify in Main Examination is 40% in aggregate for UR & 30% in aggregate for Reserved Category Candidates. The selected candidates on the basis of results of the Main (Written) Examination will be allowed to appear in the Interview Cum Personality Test as per ratio given in Para 12(iii).
- (iii) An Interview-cum-personality Test carrying 50 marks.

### 11. Written part of the examination

Preliminary Examination: The preliminary Examination will consist of only one paper viz. a paper on "General Studies & Engineering Aptitude". The paper will be of an Objective Type consisting of 100 Multiple Choice questions. The paper will carry 100 Marks and will be of 2 (two) hours duration.

The paper will include questions covering the following field of knowledge:

i) English Composition

ii) General Knowledge & Current events of Local, National & International

Importance

10 marks

iii)Engineering Aptitude (in related branch)

80 marks

Total

100 marks

Negative marking will be as per TPSC norms.

**Main Examination** 

Compulsory

a) General Studies

100 Marks

1 hour duration

Optional (Any two of the following papers in the appropriate branch of engineering)

200 marks in each paper

3 hours duration

a) Civil Engineering paper -I

b) Civil Engineering paper - II



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- c) Mechanical Engineering paper -1
- d) Mechanical Engineering paper -II
- e) Electrical Engineering paper -I
- f) Electrical Engineering Paper -II
- (ii). As shown in the above table General Studies is compulsory for candidates of all Grades of the Service i.e. Grade-IV, Grade-V(A) and Grade-V(B) and respective equivalent posts of other departments. Civil Engineering papers are compulsory for candidates who apply for posts in Civil Engineering Branch, Mechanical Engineering papers are compulsory for candidates who apply for posts in Mechanical Engineering Branch and Electrical Engineering papers are compulsory for candidates who apply for posts in Electrical Engineering Branch. Similar restriction shall apply to all similar ranking posts.
- (iii). Detailed syllabus and group-wise break up of marks for each of the above-mentioned subjects/papers for Grade-IV, Grade-V(A) and Grade-V(B) and respective equivalent posts of other departments have been given in Schedule-I, Schedule-II & Schedule-III, Schedule-II, Schedule-II & Schedule-IV and Schedule-I, Schedule-II & Schedule-V respectively to these Rules.
- (iv). Qualifying marks for unreserved category shall be minimum 40% in aggregate and that of reserve category shall be minimum 30% in aggregate.
- (v). In exceptional circumstances categories the Commission, at its discretion, shall fix the minimum qualifying marks for a paper and the minimum qualifying aggregate marks for all the papers otherwise; Provided that in case a candidate fails to secure the qualifying marks, so fixed in any paper compulsory or optional, marks in that paper shall not be considered for calculating the aggregate.
- (vi). Questions in all the papers shall be answered only in English and in no other language.

### 12. Interview-cum-personality test

- (i). The Commission shall conduct an Interview-cum-personality test of those candidates, who have obtained qualifying marks in the written part of the examination. The pattern of the Interview-cumpersonality test shall be decided by the Commission in accordance with the requirement of the service and the post for which the examination is conducted.
- (ii). The personality test shall be to assess the personal qualities of a candidate e.g., his intellectual ability, social traits, interest in current affairs, critical power of judgment, variety and depth of interest, ability for leadership, moral integrity etc.
- (iii). In no case shall a candidate be called for personality test unless he appears in all the papers of the examination.

Ratio for calling of Candidates for Interview-Cum- Personality Test provided he/she secured minimum cut off marks in the Main exam:

No of vacancies	No of candidates to be called for Personality Test/ Interview (Category wise)		
1(one)	5(five) candidates		
	8(eight) candidates		
2(two)	3(three) times the number of vacancies.		
3(three)	3(three) times the number of vacantives		

### 13. Final Selection and validity of the Select List

(i). Final selection shall be made in order of merit on the basis of the marks obtained by a candidate in aggregate in the written examination and the marks obtained by him in the personality test and following other norms of the TPSC in this regard. If a candidate remains absent in the personality test, his candidature shall not be considered for final selection.

(ii). The Select List recommended by the Commission shall remain valid for a period of 6 months from the date of recommendation and in no case for more than a period of one year, if so extended by the Government in consultation with the Commission.

### 14. Repeal & Savings:

- (i) The Combined Competitive Examination Rules, 2009 for direct recruitment of Engineers to different Departments of the Government such as PWD, Agriculture, ARDD, Education, Food and Civil Supplies & Consumer Affairs, Rural Development, Science & Technology, Police (Home), ST Welfare, Fisheries Departments and such other Departments are hereby repealed.
- done whatsoever anything action taken such repeal any (ii) Notwithstanding been taken or done under repealed shall be deemed to have under the rules so the corresponding provisions of these Rules.

By order of the Governor of Tripura,

**Deputy Secretary** Public Works Department

To,

- 1. Principal Secretary/ Secretary, Government of Tripura All Departments....
- 2. Principal Secretary, GA (P&T) Department, Govt. of Tripura in reference to their UO No \* 4816/GA(P&T)/22 dated 21.09.2022.
- 3. Secretary, Law Department, Govt. of Tripura in reference to Note No. 8 dated 13.10.2022.
- 4. Secretary, TPSC, Agartala, Tripura vide letter No.F.6(710)-SM/TPSC/2020/857dated
- 5. Deputy Secretary, GA(C&C) Department, Govt. of Tripura in reference to Letter No F.1(11)-GA(CAB)/2009 dated 26.10.2022.
- 6. All Head of the Department,
- 7. Manager, Tripura Government Press, Agartala with request to publish the matter in next issue of Tripura Gazette.
- 8. ITCC, PWD.
- 9. Guard File

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### SCHEDULE—I COMPULSORY FOR ALL GRADE/POSTS/BRANCHES

Preliminary Examination\*: The paper will carry 100 Marks (MCQ Type) and will be of 2 (two) hours duration.

The paper will include questions covering the following field of knowledge:

i) English Composition

10 marks

ii) General Knowledge & Current events of Local, National & International

Importance

10 marks

iii)Engineering Aptitude

(in related branch)

80 marks

Total

100 marks

Negative marking will be as per TPSC norms.

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		SCHEDULE—II	
Clause No		Description	
I	GENERAL STUDIES (	COMPULSORY FOR ALL GRADE/PO	OSTS/BRANCHES)
			TOTAL MARKS — 100
		Duration	of examination — 1 hour
	The break up of marks	on various topics will be as follows:-	
	Т	opic	Marks
i)	Comprehension of a giver	n passage	20
ii)	Usage (corrections)		10
iii)	Vocabulary (synonyms &	antonyms, idioms & phrases)	10
iv)	General knowledge		20
	(Questions will include k	nowledge of Indian and geography	
		e candidates should be able to answer	
		Questions on Tripura, its historian	
	topography will also be in	nciuded.)	
v)	Current Affairs		20
<b>v</b> )	(The questions will include	le knowledge of Indian current events	
	and of such matters of eve	ery day observation and experience in.	
	their scientific aspects as	may be expected of an educated person	
	who has not made a specia	al study of any scientific subject.)	
vi)	Mental Ability.		20
	Total		100
II.	ENGINEERINGS SUBJEC	CT PAPER - I & II(OPTIONAL FOR ALL GRA	ADES / BRANCHES)
			MARKS—200 (each paper)
		Duratio	on of examination —3 hours
	The break up of marks w	rill be as follows:	
			Marks
	Topic		90
i)	15 questions of 6 marks e restricted to 40 words.	acii iiaviiig alis wots	
ii)	40 multiple choice type		80
11)	questions of 2 marks each		
iii)	05 numerical questions	of 6 marks each	30 ,
	Total		200
		3	$\overline{}$

# SCHEDULE – IV Syllabus for Grade V (A)/Junior Engineer (Degree holder) CIVIL ENGINEERING PAPER — I

Total Marks — 200
Duration of Examination — 3 Hours

### 1BUILDING MATERIALS

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Timber: Different types and species of structural timber, density-moisture relationship, strength in different directions, defects, influence of defects on permissible stress, preservation, dry and wet rots, codal provisions for design, Plywood.

Bricks: Types, Indian Standard classification, absorption, saturation factor, strength in masonry, influence of mortar strength on masonry strength.

Cement: Compounds of different types, setting times, strength.

Cement Mortar: Ingredients, proportions, water demand, mortars for plastering and masonry.

Concrete: Importance of W/C Ratio, Strength, ingredients including admixtures, workability, testing for strength, elasticity, non-destructive testing, mix design methods

### 2. SOLID MECHANICS:

Elastic constants, stress, plane stress, Mohr's circle of stress, strains, plane strain, Mohr's circle of strain, combined stress; Elastic theories of failure; Simple bending, shear; Torsion of circular and rectangular sections and simple members.

### 3. DESIGN OF STEEL STRUCTURES:

Principles of working stress method. Design of connections, simple members, Builtup sections and frames, Design of Industrial roofs. Principles of ultimate load design.

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### 4. DESIGN OF CONCRETE AND MASONRY STRUCTURES:

Limit state design for bending, shear, axial compression and combined forces. Codal provisions for slabs, beams, walls and footings. Working stress method of design of R.C. members.

Principles of prestressed concrete design, materials, methods of prestressing, losses. Design of simple members and determinate structures.

### 5. CONSTRUCTION PRACTICES, PLANNING AND MANAGEMENT:

Concreting Equipment: Weight Batcher, Mixer, vibrator, batching plant, concrete pump. Cranes, hoists, lifting equipment.

Earthwork Equipment: Power shovel, hoe, dozer, dumper, trailers and tractor, rollers, sheep foot rollers, pumps.

Construction, Planning and Management: Bar chart, linked bar chart, work-break down structures, Activity - on - arrow diagrams. Critical path, probabilistic activity durations; Event-based networks.

### CIVIL ENGINEERING PAPER — II

Total Marks - 200 Duration of Examination - 3 Hours

### 1. (a) FLUID MECHANICS, OPEN CHANNEL FLOW, PIPE FLOW:

Fluid Properties, Pressure, Thrust, Buoyancy; Flow Kinematics; Integration of flow equations; Flow measurement; Relative motion; Moment of momentum; Viscosity, Boundary layer and Control, Drag, Lift; dimensional Analysis, Modeling; Cavitation; Flow oscillations; Momentum and Energy principles in Open channel flow, Flow controls, Hydraulic jump, Flow sections and properties; Normal flow, Gradually varied flow; Surges; Flow development and losses in pipe flows, Measurements; Siphons; Surges and Water hammer.

### (b) HYDRAULIC MACHINES AND HYDROPOWER:

Centrifugal pumps, types, performance parameters, scaling, pumps in parallel; Reciprocating pumps, air vessels, performance parameters; Hydraulic ram;

Hydraulic turbines, types, performance parameters, controls, choice; Power house, classification and layout, storage, pondage, control of supply.

### 2 (a) HYDROLOGY:

Hydrological cycle, precipitation and related data analyses, PMP, unit and synthetic hydrographs; Evaporation and transpiration; Floods and their management, PMF; Streams and their gauging.

### (b) WATER RESOURCES ENGINEERING:

Multipurpose uses of Water: Soil-Plant-Water relationships, irrigation systems, water demand assessment; Storages and their yields, ground water yield and well hydraulics; Water logging, drainage design; Irrigation revenue.

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### 3. ENVIRONMENTAL ENGINEERING

### (a)WATER SUPPLY ENGINEERING:

Sources of supply, yields, design of intakes and conductors; Estimation of demand; Water quality standards; Control of Water-borne diseases; Primary and secondary treatment, detailing and maintenance of treatment units; Conveyance and distribution systems of treated water, leakages and control; Rural water supply; Institutional and industrial water supply.

### (b) WASTE WATER ENGINEERING:

Urban rain water disposal; Systems of sewage collection and disposal; Design of sewers and sewerage systems; pumping; Characteristics of sewage and its treatment, Disposal of products of sewage treatment, stream flow. Plumbing Systems, Rural and semi-urban sanitation.

### (c) SOLID WASTE MANAGEMENT:

Sources, classification, collection and disposal; Design and Management of landfills.

### 4(a) SOIL MECHANICS:

Properties of soils, classification and interrelationship; Compaction behavior, methods of compaction and their choice; Permeability and seepage, flow nets, Inverted filters; Compressibility and consolidation; Shearing, resistance, stresses and failure; soil testing in laboratory and in-situ; Stress path and applications; Earth pressure theories, stress distribution in soil; soil exploration, samplers, load tests, penetration tests.

### (b) FOUNDATION ENGINEERING:

Types of foundations, Selection criteria, bearing capacity, settlement, laboratory and field tests, Types of piles and their design and layout, Foundations on expansive soils, swelling and its prevention, foundation on swelling soils.

### 5.(a) SURVEYING:

Classification of surveys, scales, accuracy, Measurements of distances-direct and indirect methods, optical and electronic devices, Measurement of directions, prismatic compass, local attaraction, Theodolites-types, Measurement of elevations-sprit and trigonometric leveling, Relief representation, contours, Digital elevations modeling concept, Establisment of control by triangulations and traversing — measurements and adjustment of observations, computation of coordinates, Field astronomy, Concept of global positioning system.

### (b) TRANSPORTATION ENGINEERING:

Planning of highway systems, alignment and geometric design, horizontal and vertical curves, grade separation, Materials and construction methods for different surfaces and maintenance, Principles of pavement design, Drainage.

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### SCHEDULE - V

## Syllabus for Grade V (B) Junior Engineer (Diploma holder) CIVIL ENGINEERING PAPER — I

Total Marks — 200 Duration of Examination — 3 Hours

### 1.BUILDING MATERIALS & CONSTRUCTION:

**BRICKS AND TILE** 

STONES, SAND

**CEMENT** 

**MORTAR** 

CONCRETE

TIMBER

METALS AND OTHER ENGINEERING MATERIALS

PAINTS AND VARNISHES

**BUILDING CONSTRUCTION** 

CONSTRUCTION PLANNING AND STORAGE OF MATERIAL

**FOUNDATION** 

BRICKS AND STONE MASONRY

DAMP PROOFING

LINTEL AND ARCHES

ROOFS AND ROOF COVERINGS

DOORS AND WINDOWS

SCAFFOLDING

STAIR AND STAIRCASES

**FLOORING** 

WALL FINISH

### 2. STRENGTH OF MATERIALS & THEORY OF STRUCTURE:

STRENGTH OF MATERIALS

BENDING MOMENT & SHEER FORCE IN BEAMS

BENDING STRESS IN BEAMS

SHEARING STRESSES IN BEAMS

COLUMNS & STRUTS

COMBINED BENDING & DIRECT STRESS

COMPOUND & COMPLEX STRESS

STRAIN ENERGY & IMPACT LOADING

### THEORY OF STRUCTURES

DEFINITIONS & GENERAL PRINCIPLES

PRIMARY STRESS ANALYSIS FOR STATICALLY DETERMINATE PIN JOINTED

STRUCTURES.

FIXED & CONTINUOUS BEAMS, PROPPED CANTILEVER

MOMENT DISTRIBUTION METHOD

RETAINING WALLS (EARTH RETAINING STRUCTURES)

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### 3. FOUNDATION ENGINEERING:

GENERAL CONSIDERATIONS FOR DESIGN OF FOUNDATIONS
TYPES OF FOUNDATION
BEARING CAPACITY OF SOILS
SETTLEMENT OF FOUNDATION
PILE FOUNDATION
SOIL STABILISATION
SOIL EXPLORATION
STRESS DISTRIBUTION IN SOILS
EARTH PRESSURE

### 4. CONCRETE TECHNOLOGY:

MATERIALS FOR CEMENT CONCRETE
PREPARATION OF CONCRETE
CONCRETE MIX DESIGN
QUALITY CONTROL
SPECIAL CONCRETE
DETERIORATION AND RESTORATION OF CONCRETE

### 5. QUANTITY SURVEYING

DEFINITION OF AN ESTIMATE AND TYPES SYMMETRICAL & UNSYMMETRICAL BOUNDARY WALL (USING MODULAR & TRADITIONAL BRICKS) CENTRE LINE, LONG WALL & SHORT WALL METHOD WITH EXAMPLE DEFINITION OF FLOOR AREA, CARPET AREA, PLINTH AREA, FAR ESTIMATE OF DIFFERENT ITEMS OF WORKS INVOLVED IN A SINGLE STOREY RESIDENTIAL BUILDING ESTIMATE OF R.C.C. BEAMS, CHUJIA, LINTEL AND SLAB (ONE WAY & TWO WAY REINFORCEMENT) SHOWING BAR BENDING SCHEDULE) CALCULATION OF QUANTITY OF MATERIALS OF DIFFERENT ITEMS OF WORKS CALCULATION OF VOLUME OF EARTH WORK OF DIFFERENT WORKS QUANTITY & COST ESTIMATE CONTRACTS PWD ACCOUNTS ARBITRATION VALUATION

### CIVIL ENGINEERING PAPER — II

Total Marks - 200 Duration of Examination-3 Hours

### 1. HYDRAULICS

INTRODUCTION
FLUID STATIC
FLUID FLOW
FLUID MEASUREMENT FLOW THROUGH
PIPES OPEN CHANNEL FLOW

### 2. IRRIGATION

HYDROLOGY WATER REQUIREMENT OF CROPS



10/5 6

CANAL IRRIGATION
WELL IRRIGATION
CANAL HEAD WORKS
FLOOD CONTROL
WATER LOGGING
LAND RECLAMATION
MAJOR IRRIGATION PROJECTS IN INDIA

### 3. ENVIRONMENTAL ENGINEERING

AIR POLLUTION
AIR POLLUTION CONTROL MEASURES & EQUIPMENT
METHODS & APPROACH OF AIR POLLUTION CONTROL
DIFFERENT SOURCES OF WATER POLLUTION
WATER POLLUTION & ITS CONTROL
SOLID WASTE DISPOSAL

### 4.SURVEYING

LINEAR MEASUREMENTS
CHAIN SURVEYING
COMPASS SURVEYING
LEVELLING
CONTOURING
THEODOLITE SURVEYING
EARTH WORK CALCULATION
PLANE TABLE SURVEYING
COMPUTATION OF AREAS
COMPUTATION OF VOLUME

### 5. TRANSPORTATION ENGINEERING

PROJECTS & PROFILES
PERMANENT WAY
TRACK GEOMETRICS
POINTS & CROSSINGS
STATIONS & YARDS
PERMANENT WAY MAINTENANCE
ROAD DRAINAGE
TRAFFIC ENGINEERING HIGHWAY MAINTENANCE

S.

# Distribution of post

Signed by Sagar Sobhan
Debnath
Date: 07-12-2024 17:25:48
[Er. S.S Debnath]
Chief Engineer,RD

# Distribution of post reserved for Women candidates

2	1	No.	SI.
Junior Engineer, Gr-II (Diploma),Civil Group C, Non Gazetted	Junior Engineer, Gr-I (Degree), Civil Group B, Gazetted		Name of Post
Pay of ₹ 34,700 Tripura pay matrix,2018, Cell-1 of Level -10	Pay of ₹ 47,600 Tripura pay matrix, 2018, Cell-1 of Level -13		Scale of Pay
48	55	UR	Propos
29	32	ST	ed for [
16	18	SC	Proposed for Direct Recruitment
93	105	Total	ruitment
16	19	UR	33% F
10	11	ST	Reservation fo
6	6	SC	33% Reservation for Women candidates
32	36	Total	didates

Signed by Sagar Sobhan Debnath
Date: 07-12-2024 17:20:47

[Er. S.S Debnath] Chief Engineer,RD