



**On-line Examination - Recruitment of
Junior Engineer (Electrical), Junior Engineer (Civil), Junior Engineer (Control &
Instrumentation), Junior Engineer (Fire & Safety), Junior Chemist**

INFORMATION HANDOUT

This handout contains details pertaining to various aspects of the online exam you are going to undertake and important instructions about related matters. You are advised to study the handout carefully as it will help you in preparing for the examination.

The on-line examination will comprise the following objective type multiple choice tests as stated below :

Sr. No.	Name of the Test	Number of Questions	Maximum Marks	Duration
Part A	Professional Knowledge	60	120	60 Minutes
Part B (i)	Reasoning & Mental Ability	20	20	60 Minutes
(ii)	General Knowledge & Everyday Science	20	20	
(iii)	Hindi General	14	14	
(iv)	English General	14	14	
(v)	Mathematics	12	12	
	TOTAL	140	200	

PART B OF THE TEST PAPER WILL BE “OMNIBUS”, WITHOUT CREATING ANY SECTION/SUB-SECTION IN THE TEST PAPER

Both Part A & Part B are separately timed. You can attempt any question in allotted 60 minutes for the respective part. You will not be able to attempt any question from Part B while attempting Part A and vice versa.

The total time for the test is 120 minutes; however you may have to be at the venue for approximately 240 minutes including the time required for attendance marking, submission of Admit Card with photocopy of the photo ID proof, logging in etc. All tests except test of Hindi General will be in English only. All the questions will have multiple choices. Out of the five answers to a question only one will be the correct answer. **You have to select the most appropriate answer and ‘mouse click’ that alternative which you feel is appropriate/correct. The alternative/ option that you have clicked on will be highlighted and will be treated as your answer to that question. There will be penalty for wrong answers marked by you. For every wrong answer marked by you, 1/4 of the marks assigned to that question will be deducted as penalty.**

Please note that the types of questions in this handout are only illustrative and not exhaustive. In the actual examination you will find questions of a higher difficulty level on some or all of these types and also questions on the types not mentioned here.

SAMPLE QUESTIONS

Part- "A" - PROFESSIONAL KNOWLEDGE

JUNIOR ENGINEER (ELECTRICAL)

Q.1. Which of the following insulation classes is mainly used in electrical machines ?

- (1) Class - Y (2) Class - A (3) Class - F (4) Class - C (5) Class - H

JUNIOR ENGINEER (CIVIL)

Q.2. If the load on the beam is increased, the tensile stress in concrete below the neutral axis will -----

- (1) decrease (2) increase (3) remain constant
(4) vary in both ways (5) Other than those given as options

Q.3. Marble is an example of ____

- (1) aqueous rock (2) metamorphic rock (3) sedimentary rock
(4) igneous rock (5) Other than those given as options

JUNIOR ENGINEER (CONTROL & INSTRUMENTATION)

Q.4. Which of the following is an undesirable dynamic characteristic of an instrument?

- (1) Time lag (2) Reproducibility (3) Dead zone
(4) Static error (5) Bias

JUNIOR ENGINEER (FIRE & SAFETY)

Q.5. Fire involving gases under pressure such as LPG, butane, propane etc. can be classified as -

- (1) Class 'A' fire (2) Class 'B' fire (3) Class 'C' fire
(4) Class 'D' fire (5) Other than those given as options

JUNIOR CHEMIST

Q.6. Which of the following is true about Legionnaires' disease?

- (1) It caused by a Gram-positive coccus
(2) It is a contagious disease
(3) It has an incubation period of 2 days to 3 years
(4) It is characterised by the development of pneumonia
(5) It can be prevented by vaccination

Part- "B" - Illustrative questions for Part "B" as follows :

REASONING & MENTAL ABILITY

This is a test to see how well you can think. It contains questions of various kinds. Here are some sample questions.

Q.1-2. Directions : In each of the following questions, there are five groups of letter groups or words in each question. Four of these letter groups or words are alike in some way, while one is different. Find the one which is different.

Q.1. (1) black (2) red (3) green (4) paint (5) yellow

Q.2. (1) BC (2) MN (3) PQ (4) XZ (5) ST

Q.3. If the letters in the word TOPS can be rearranged to form a meaningful word beginning with O, the last letter of that word is your answer. If more than one such word can be formed, M is the answer and if no such word can be formed, X is the answer.

- (1) T (2) P (3) M (4) S (5) X

Q.4. If the letters of the following alphabet interchange positions, so that A takes the place of Z and Z takes the place of A; B takes the place of Y and Y takes the place of B and so on, what will be the 13th letter from the right ?

- A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(1) M (2) N (3) O (4) L (5) Other than those given as options

GENERAL KNOWLEDGE & EVERYDAY SCIENCE

This test is intended to give an index of your awareness of people and events past and present in different walks of life.

- Q.1.** Who is the person closely associated with operation flood programmes and was honoured by Padma Vibhushan recently ?
(1) Dr. V. Kurien (2) Dr. M. S. Swaminathan (3) Dr. Amartya Sen
(4) Narendra Modi (5) Other than those given as options
- Q.2.** "Kumbh-Mela" is held in our country after every _____
(1) 6 years (2) 10 years (3) 12 years (4) 14 years (5) Other than those given as options
- Q.3.** Why we cannot see the objects in the dark ?
(1) These objects emit light
(2) These objects absorb light
(3) There is no light coming to our eyes from these objects
(4) The light gets obstructed by the darkness.
(5) Other than those given as options
- Q.4.** Which of the following samples of water can be termed as pure water ?
(1) Water in which alum is added (2) Clean water (3) Filtered water
(4) No other substance added to it (5) Other than those given as options

HINDI GENERAL

This is a test to see how will you 'Know' Hindi. Your Hindi Language ability would be tested through questions on grammar, vocabulary, sentence completion, synonyms, antonyms, comprehension of a passage, etc.

प्र.1-3. नीचे दिये गये प्रश्नों में से हरेक में एक वाक्य दिया गया है जिसे (1), (2), (3) और (4) भागों में बांटा गया है। वाक्य को पढ़ कर ज्ञात कीजिये कि वाक्य में शब्दों के गलत प्रयोग, वर्तनी या व्याकरण की कोई त्रुटि तो नहीं है। त्रुटि अगर होगी तो वाक्य के किसी एक ही भाग में होगी। इस भाग का क्रमांक ही आपका उत्तर है। अगर वाक्य त्रुटिहीन है तो उत्तर (5) दीजिये अर्थात् त्रुटि नहीं।

प्र.1. चालीस लडकों का एक मिला जुला / ठहाका उठा था और / कक्षा की छत पे टकरा कर /

(1) (2) (3)

सब का सब एकदम मेरे भीतर उतर गया था /

त्रुटि नहीं

(4)

(5)

उत्तर (3)

प्र.2. सेठ पुरुषोत्तम दास पूना की सरस्वती पाठशाला / का मुआयना करने के बाद में / बाहर निकले तो एक लड़की ने /

(1) (2) (3)

दौड़ कर उनका दामन पकड़ लिया /

त्रुटि नहीं

(4)

(5)

उत्तर (2)

प्र.3. वह झपट कर कुरसी से उठी / और बड़े वेग से कई कमरो / और बरामदो को पार करती /

(1) (2) (3)

मैनेजर के सामने को आकर खड़ी हो गई /

त्रुटि नहीं

(4)

(5)

उत्तर (4)

प्र.4-5. नीचे दिए गए प्रश्नों में से एक शब्द समूह या वाक्यांश दिया गया है और फिर उसके बाद पाँच ऐसे शब्द सुझाए गए हैं जो कि इस पूरे वाक्यांश या शब्द समूह का अर्थ एक शब्द में स्पष्ट कर देते हैं। आपको वह शब्द ज्ञात कर उसको उत्तर के क्रम में दर्शाना है।

प्र.4. जिसका कभी नाश न हो।

- (1) अपनाश (2) निरामिष (3) अटल (4) अविनाशी (5) सर्व व्यापक

प्र.5. कम बोलने वाला

- (1) मिठबोला (2) समदर्शी (3) मृदुभाषी (4) संयमित (5) मितभाषी

In addition to the above questions, there may be a passage in Hindi Comprehension. You will be asked question based on the passage.

ENGLISH GENERAL

This is a test to see how well you know English. Your English language ability would be tested through questions on grammar & vocabulary, synonyms, antonyms, sentence completion, comprehension of a passage etc.

Direction : Pick out the most appropriate word from the words given below each sentence to complete it meaningfully.

Q.1. He quickly glanced the book to find what it said about the Indian economy.
(1) at (2) through (3) in (4) to (5) over

Q.2. The counsel urged the court to down the obnoxious law.
(1) enact (2) enforce (3) cancel (4) strike (5) declare

Directions : Read each sentence to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. The number of that part of the sentence is your answer. If there is no error, the answer is 'No error'.

Q.3. I am twenty / two years old / when I first / joined the bank. No error
(1) (2) (3) (4) (5)

Q.4. To the Hindus / the Ganga is / holier than / any other river. No error
(1) (2) (3) (4) (5)

In addition to the above questions, there may be a passage in Hindi Comprehension. You will be asked question based on the passage.

MATHEMATICS

This is a test designed to see how fast and accurately you can deal with numbers viz. computation, quantitative reasoning, interpretation of data etc. Also, there may be some questions based on graphs and tables.

Directions : In each of the following questions one number is missing. The place where the number is missing is shown by a question mark (?). You have to find out which one of the answers shown against 1, 2, 3 and 4 can replace the question mark. If none of these four can replace the question mark, you will indicate (5) i.e. 'Other than those given as options' as your answer.

Q.1. $\frac{24}{65} \times \frac{13}{56} \times \frac{5}{7} = ?$

- (1) $\frac{3}{49}$ (2) $\frac{15}{245}$ (3) $\frac{3}{77}$ (4) $\frac{15}{56}$ (5) Other than those given as options

Q.2. $(27 + 498) \div 25 = ?$

- (1) 17 (2) 25 (3) 21 (4) 12 (5) Other than those given as options


Q.3. The interest on a certain deposit at 9% per annum is Rs.405 in one year. How much will be the additional interest in one year on the same deposit at 10% per annum ?


- (1) Rs. 40.50 (2) Rs. 450 (3) Rs. 855 (4) Rs.45 (5) Other than those given as options


(A) Details of the Online Examination :


- (1) The examination would be conducted on-line i.e. on a computer.
- (2) All tests, except test of Hindi General, will be in English.
- (3) All the questions will have multiple choices. Out of the five answers to a question only one will be the correct answer. **The candidate has to select the correct answer and 'mouse click' that alternative which he/ she feels is correct. The alternative/ option that is clicked on will be treated as the answer to that question. Answer to any question will be considered for final evaluation, only when candidates have submitted the answers by clicking on "Save & Next" or "Mark for Review & Next".**
- (4) The clock has been set at the server and the countdown timer at the top right corner of your screen will display the time remaining for you to complete the exam. When the clock runs out the exam ends by default - you are not required to end or submit your exam.
- (5) The question palette at the right of screen shows one of the following statuses of each of the questions numbered:


 You have not visited the question yet.

 You have not answered the question

 You have answered the question

 You have NOT answered the question, but have marked the question for review

 The question(s) "Answered and Marked for Review" will be considered for evaluation.

 The question(s) "Marked for Review" will not be considered for evaluation. Hence, no marks will be allocated for the same.

The Marked for Review status simply acts as a reminder that you have set to look at the question again. *If an answer is selected for a question that is Marked for Review, the answer will be considered in the final evaluation.*

- (6) To select a question to answer, you can do one of the following :
 - (a) Click on the question number on the question palette at the right of your screen to go to that numbered question directly. Note that using this option **does NOT save your answer** to the current question.
 - (b) Click on '**Save & Next**' to save answer to current question and to go to the next question in sequence.
 - (c) Click on '**Mark for Review and Next**' to save answer to current question, mark it for review, and to go to the next question in sequence.
- (7) To select your answer, click on one of the option buttons.
- (8) To change your answer, click another desired option button.
- (9) To save your answer, you **MUST** click on **Save & Next**.
- (10) To deselect a chosen answer, click on the chosen option again or click on the **Clear Response** button.
- (11) To mark a question for review click on **Mark for Review & Next**. *If an answer is selected for a question that is Marked for Review, the answer will be considered in the final evaluation.*
- (12) To change an answer to a question, first select the question and then click on the new answer option followed by a click on the **Save & Next** button.
- (13) Questions that are saved or marked for review after answering will ONLY be considered for evaluation.**
- (14) The candidates are requested to follow the instructions of the "Test Administrator" carefully. If any candidate does not follow the instructions / rules, it would be treated as a case of misconduct/ adoption of unfair means and such a candidate would be liable for debarment from appearing for examinations for a period as decided by Vidyut Nigams.

- (15) The candidates may ask the Test Administrator about their doubts or questions only before the commencement of the test. No query shall be entertained after the commencement of the examination.
- (16) After the expiry of test duration, the candidates will not be able to attempt any question or check their answers. The answers of the candidate would be saved automatically by the computer system even if he/ she has not clicked the "Submit" button.
- (17) **Please note :**
- (a) **Candidates will not be allowed to "finally submit" unless they have exhausted the actual test time.**
- (b) **Under no circumstances should a candidate click on any of the 'keyboard keys' once the exam starts as this will lock the exam.**

4. General Instructions :

- (1) Please note date, time and venue address of the examination given in the Admit Card.
- (2) You may visit the venue one day before the Online Examination to confirm the location so that you are able to report **on time** (as printed on the Admit Card) on the day of the examination. Late comers will not be allowed to appear for the examination.
- (3) The Admit Card should be brought with you to the examination venue along with your recent passport size photograph duly pasted on it. (Preferably the same photograph as was uploaded).
- (4) You must scrupulously follow the instructions of the Test Administrator and Vidyut Nigams Representative at the examination venue. If you violate the instructions you will be disqualified and will be asked to leave the examination venue.
- (5) No use of calculators (separate or with watch), books, note books or written notes, cell phones (with or without camera facility), or any other electronic device will be allowed during the examination.
- (6) Please bring the Admit Card with your photograph affixed thereon, currently valid Photo identity proof in original and a photocopy of the same ID proof which you bring in original - THIS IS ESSENTIAL. Please hand over this Admit Card alongwith photocopy of photo identity proof duly stapled together to the invigilator. Currently valid photo identity proof may be PAN Card/Passport/Permanent Driving Licence/ Voter's Card/Bank Passbook with photograph/Photo Identity proof issued by a Gazetted Officer on official letterhead /Photo Identity proof issued by a People's Representative on official letterhead/Valid recent Identity Card issued by a recognised College/University/Aadhar Card/E-Aadhar Card with a photograph/Employee ID/Bar Council Identity card with photograph. **Please Note - Ration Card and Learner's Driving License will NOT be accepted as valid ID proof for this project.** Please note that your name as appearing on the Admit Card (provided by you during the process of registration) should exactly match the name as appearing on the photo identity proof. Female candidates who have changed first/last/middle name post marriage must take special note of this. If there is any mismatch between the name indicated in the Admit Card and Photo Identity Proof you will not be allowed to appear for the exam. In case of candidates who have changed their name will be allowed only if they produce Gazette notification/their marriage certificate/affidavit.
- (7) Biometric data (thumb impression and photograph) will be captured at the examination venue. With regards to the same, please note the following :
- (a) If fingers are coated (stamped ink/mehndi/coloured...etc), ensure to thoroughly wash them so that coating is completely removed before the exam day.
- (b) If fingers are dirty or dusty, ensure to wash them and dry them before the finger print (biometric) is captured.
- (c) Ensure fingers of both hands are dry. If fingers are moist, wipe each finger to dry it.
- (d) If the primary finger (thumb) to be captured is injured/damaged, immediately notify the concerned authority in the test centre.
- (Any failure to observe these points will result in non-admittance for the examination)

- (8) Your responses (answers) will be analysed with other candidates to detect patterns of similarity of right and wrong answers. If in the analytical procedure adopted in this regard, it is inferred/concluded that the responses have been shared and scores obtained are not genuine/valid, your candidature may be cancelled. Any candidate who is found copying or receiving or giving assistance or engaging in any behaviour unbecoming of a candidate will not be considered for assessment. Vidyut Nigams may take further action against such candidates as deemed fit by it.
- (9) You should bring with you a ball-point pen. A sheet of paper will be provided which can be used for rough work or taking down the question number you would like to review at the end of the test before submitting your answers. After the test is over you **MUST** hand over this sheet of paper to the Test Administrator before leaving the venue.
- (10) The possibility of occurrence of some problem in the administration of the examination cannot be ruled out completely which may impact test delivery and/or result from being generated. In that event, every effort will be made to rectify such problem, which may include movement of candidates, delay in test. Conduct of a re-exam is at the absolute discretion of test conducting body. Candidates will not have any claim for a re-test. Candidates not willing to move or not willing to participate in the delayed process of test delivery shall be summarily rejected from the process.
- (11) The scores across various sessions will be equated to adjust for slight differences in difficulty level of different test batteries used across sessions. More than one session are required if the nodes capacity is less or some technical disruption takes place at any centre or for any candidate.
- (12) Anyone found to be disclosing, publishing, reproducing, transmitting, storing or facilitating transmission and storage of test contents in any form or any information therein in whole or part thereof or by any means verbal or written, electronic or mechanical or taking away the papers supplied in the examination hall or found to be in unauthorised possession of test content is likely to be prosecuted.
- (13) Instances for providing incorrect information and/or process violation by a candidate detected at any stage of the selection, process will lead to disqualification of the candidate from the selection process and he/she will not be allowed to appear in any Vidyut Nigams recruitment process in the future. If such instances go undetected during the current selection process but are detected subsequently, such disqualification will take place with retrospective affect.

IMPORTANT POINTS TO REMEMBER

You are advised to bring with you the following:

- (i) Admit Card with photo affixed thereon and photo ID card in **Original** and photocopy as mentioned in point 6. (Please note that name on the Photo ID **MUST** be exactly same as printed on the Admit Card.)
- (ii) One Ball point pen

WISH YOU GOOD LUCK