



## ON-LINE EXAMINATION - RECRUITMENT OF MAINTAINERS

### 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.	Test	No. of Questions	Marks	Time
I	Malayalam Language	10	20	90 Minutes for all parts together
II	Quantitative Aptitude	30	30	
	Reasoning	30	30	
	General English	20	20	
III	Professional Knowledge	50	100	
	<b>Total</b>	<b>140</b>	<b>200</b>	

The time for the test is 90 minutes; however you may have to be at the venue for approximately 180 minutes including the time required for logging in, collection of the call letters, going through the instructions etc. The tests will be provided in English. You can attempt any question from 1 to 140 at any point of time within these 90 minutes. 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 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.**

The Scores of Online Examination will be obtained by adopting the following procedure :

- Number of questions answered correctly by a candidate in each objective test is considered for arriving at the Corrected Score after applying penalty for wrong answers.
- The Corrected Scores so obtained by a candidate are made equivalent to take care of the minor difference in difficulty level, if any, in each of the objective tests held in different sessions to arrive at the Equated Scores\*

\*Scores obtained by candidates on any test are equated to the base form by considering the distribution of scores of all the forms.

- Testwise scores and scores on total is reported with decimal points upto two digits.

Note : Cutoffs may be applied in two stages :

- On scores in individual tests (Candidates scoring minimum 40% marks in part-1 (Malayalam language) will only considered eligible for the post of maintainers)
- On Total Score

**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.**

Some sample questions are given below.

**SAMPLE QUESTIONS**  
**MALAYALAM LANGUAGE**

കാലഗതിയെ പിന്തുടരുന്ന ആഖ്യാനം പോലെതന്നെ സ്ഥല വിസ്താരത്തെ ആശ്രയിക്കുന്ന ആഖ്യാനവും മിക്ക കലാരൂപങ്ങളിലും കാണാം. ചുമർച്ചിത്രങ്ങളിൽ കാലത്തിന്റെ പ്രവാഹം സ്ഥലവിന്യാസത്തിലൂടെയല്ലെ അവതരിപ്പിക്കാൻ പറ്റും. പുത്രകാമേഷ്ടിയും കൗസല്യാഗർഭധാരണവും രാമജനനവും ഒന്നിനു പിന്നാലെ ഒന്നായി നടക്കുന്ന കാര്യങ്ങളാണെങ്കിലും അവയെല്ലാം ഒരേ ക്യാൻവാസിന്റെയോ ചുമരിന്റെയോ സ്ഥലവിസ്തൃതിയിൽ ഉൾക്കൊള്ളിക്കുമ്പോൾ കാലത്തെ സ്ഥലമാക്കി പരിണമിപ്പിക്കുന്ന പ്രക്രിയ കാണാൻ കഴിയും. സാഹിത്യഗ്രന്ഥങ്ങളും സമാന്തരാഖ്യാനങ്ങൾ അവതരിപ്പിക്കുന്നതുവഴി കാലത്തിന്റെ ഏകദിശാപ്രവാഹത്തെ നിയന്ത്രിക്കാൻ ശ്രമിക്കാറുണ്ട്. ഭൂമിശാസ്ത്രപഠനങ്ങളും ഭൂപടങ്ങളും സ്ഥലത്തെ ആധാരമാക്കുന്ന ആഖ്യാനവിശേഷങ്ങളാണ്. അങ്ങനെ നോക്കുമ്പോൾ ആഖ്യാനത്തിന്റെ വിപുലമായ അർത്ഥത്തിൽ അതു കഥാകഥനത്തിന്റെ മാത്രം പരിധിയിൽ ഒതുങ്ങുന്നില്ല. എന്നാൽ ആഖ്യാനത്തിന്റെ പരിമിതാർത്ഥത്തിൽ അത് കഥാഖ്യാനമായി ചുരുങ്ങുന്നു.

1. ചുമർച്ചിത്രങ്ങളിൽ കാലത്തിന്റെ പ്രവാഹം അവതരിപ്പിക്കാൻ പറ്റുന്നത്?

- |                               |                        |
|-------------------------------|------------------------|
| 1) സമയത്തിൽ കൂടി              | 2) സ്ഥലവിന്യാസത്തിലൂടെ |
| 3) വ്യത്യസ്ത കാര്യങ്ങളിൽ കൂടി | 4) ഔചിത്യമനുസരിച്ച്    |
| 5) ഇതൊന്നുമല്ല                |                        |

2. ഭൂമിശാസ്ത്രപഠനങ്ങളും ഭൂപടങ്ങളും ..... ആധാരമാക്കുന്ന ആഖ്യാന വിശേഷങ്ങളാണ്.

- |                   |          |
|-------------------|----------|
| 1) കാലം           | 2) ഭാവി  |
| 3) ഭൂതം           | 4) സ്ഥലം |
| 5) സാഹിത്യഗ്രന്ഥം |          |

3. ആഖ്യാനത്തിന്റെ പരിമിതാർത്ഥത്തിൽ ചുരുങ്ങുന്നത് എന്താണ്?

- |              |                 |
|--------------|-----------------|
| 1) ചിത്രങ്ങൾ | 2) കഥാഖ്യാനം    |
| 3) ഭൂപടങ്ങൾ  | 4) കഥാകഥനം      |
|              | 5) ഭൂമിശാസ്ത്രം |

4. ഒരു ചിത്രത്തിലൂടെ കാണാൻ കഴിയുന്നത് എന്ത് പ്രകീയയാണ്
- 1) കാലത്തെ സ്ഥലമാക്കി പരിണമിപ്പിക്കുന്നു    2) ക്ലോക്കുപയോഗിക്കുന്നു
- 3) സ്ഥലകാലഭേദമില്ല    4) സൂര്യനെ വരയ്ക്കുന്നു    5) ഇവയെല്ലാം
- 5 സാഹിത്യ ഗ്രന്ഥങ്ങൾ കാലത്തിന്റെ ഏകദിശാ പ്രവാഹത്തെ നിയന്ത്രിക്കുന്നത്.....
- 1) ചിത്രം വരയ്ക്കുക വഴി    2) ചിത്രശേഖരങ്ങളിലൂടെ
- 3) സമാന്തരാഖ്യാനങ്ങൾ വഴി    4) ഇവയൊന്നുമല്ല    5) ഇവയെല്ലാം

### QUANTITATIVE APTITUDE

- Q.1.** At 10 paise each, how many paise will 6 lemons cost ?  
 (1) 6                      (2) 10                      (3) 60                      (4) 61                      (5) 610
- Q.2.** Which of the following can be exact multiple of 4 ?  
 (1) 27114    (2) 58204    (3) 48402    (4) 32286    (5) Other than those given as options
- Q.3-6.** 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.3.**  $42 + 73 + 137 = ?$   
 (1) 352                      (2) 252                      (3) 242                      (4) 142                      (5) Other than those given as options
- Q.4.**  $20 \times \frac{1}{2} = ?$   
 (1) 4                      (2) 5                      (3) 12                      (4) 20                      (5) Other than those given as options
- Q.5.**  $0.7 \times 0.5 = ?$   
 (1) 35                      (2) 0.35                      (3) 0.0035                      (4) 0.035                      (5) Other than those given as options
- Q.6.**  $15 : 25 :: 6 : ?$   
 (1) 9                      (2) 10                      (3) 30                      (4) 15                      (5) Other than those given as options

- Q.7-9.** Directions : Given below is a table showing percentages out of a total of 700 employees ranking six attributes that help promotion. Rank I is the highest. Study the table carefully and answer questions that follow :

	Percentage of Employees giving Different Ranks					
Attribute	I	II	III	IV	V	VI
Seniority	32	17	22	19	5	5
Perseverance	14	19	17	9	27	14
Efficiency	15	19	21	14	14	17
Intelligence	10	14	10	14	17	35
Honesty	24	17	7	9	27	16
Sociability	5	14	23	35	10	13

- Q.7.** Which attribute for promotion has received the highest rank ?  
 (1) Perseverance (2) Seniority (3) Honesty (4) Sociability (5) Efficiency
- Q.8.** How many employees gave rank III to intelligence?  
 (1) 119 (2) 98 (3) 77 (4) 70 (5) 10
- Q.9.** Which attribute is considered the least important for Promotion ?  
 (1) Honesty (2) Intelligence (3) Perseverance (4) Efficiency (5) Sociability

### REASONING

- Q.1.** In a certain code language, '1, 2, 3' means 'bright little boy'; '1, 4, 5' means 'tall big boy' and '6, 3, 7' means 'beautiful little flower'. Which numeral in that language means 'bright' ?  
 (1) 1 (2) 6 (3) 3 (4) 4 (5) Other than those given as options
- Q.2.** Four of the following five are alike in a certain way and so form a group. Which is the one that does not belong to the group ?  
 (1) Helicopter (2) Aircraft (3) Steamer (4) Auto-mobile (5) Chariot
- Q.3.** In the series given below count each 5 which is not immediately preceded by 3 but is immediately followed by 7. How many such 5's are there ?  
 1 5 7 3 5 7 4 7 3 7 2 5 6 5 8 5 7 4 5 6 5 5 7 1 5 7 7 5 5  
 (1) 1 (2) 2 (3) 3 (4) 4 (5) 5
- Q.4.** The town of Paranda is located on Green lake. The town of Akram is West of Paranda. Tokhada is East of Akram but West of Paranda. Kakran is East of Bopri but West of Tokhada and Akram. If they are all in the same district, which town is the farthest West ?  
 (1) Paranda (2) Kakran (3) Akram (4) Tokhada (5) Bopri
- Q.5.** STAMMERING is related to SPEECH in the same way as DEAFNESS is related to which of the following ?  
 (1) EAR (2) HEARING (3) DUMB (4) SILENCE (5) TALK
- Q.6.** Madhav ranks seventeenth in a class of thirty-one. What is his rank from the last ?  
 (1) 13 (2) 14 (3) 15 (4) 16 (5) 17
- Q.7.** Sapling is related to Tree as ----  
 (1) Horse is related to Mare (2) River is related to Brook (3) Bud is related to Flower  
 (4) Student is related to Teacher (5) Tree is related to Furniture
- Q.8.** Which letter should be in place of the question mark in the following series ?  
 G H J M ? V  
 (1) T (2) S (3) R (4) U (5) Q

### GENERAL ENGLISH

**Directions :** Read each sentence given below 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'.

(Ignore errors of punctuations, if any)

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

- Q.2.** To the Hindus / the Ganga is / holier than / any other river. No error  
(1) (2) (3) (4) (5)
- Q.3.** Of all the teachers / in our school / our class teacher / were very strict. No error  
(1) (2) (3) (4) (5)
- Q.4-5.** Pick out from the words given below each sentence the word which would complete the sentence correctly and meaningfully.
- Q.4.** Continuous unemployment has induced in the people a kind of \_\_\_\_\_ which is most depressing.  
(1) laziness (2) encouragement (3) satisfaction (4) anger (5) awakening
- Q.5.** He wants me to look \_\_\_\_\_ his garden during his absence.  
(1) at (2) over (3) after (4) into (5) from

**Directions :** In each of the following questions select from amongst the five alternatives, the word **nearest in meaning** of the word given in capitals.

- Q.6.** CENTENARY  
(1) a guard (2) a hundred years (3) a very old man (4) hundred runs (5) hundredth anniversary
- Q.7.** TRIUMPH  
(1) conquer (2) smash (3) earn (4) brave (5) capture

**Directions :** In each of the following questions, select from amongst the five alternatives, the word **most opposite** in meaning of the word given in capitals.

- Q.8.** LIVELY  
(1) simple (2) weak (3) dull (4) angry (5) moron
- Q.9.** INADVERTENT  
(1) adequate (2) available (3) sluggish (4) negligent (5) intentional

## PROFESSIONAL KNOWLEDGE

Questions will be based on indicative syllabus given below :

**Fitter** - Machines, Machine accessories, Workshop Practice, Workshop Calculation, Measuring Tools/Hand Tools/Cutting Tools, Power transmission, Limits and Fits, Lubricants, fasteners and fastening methods, heat treatment, Safety Precautions, Engineering Drawing.

**Electrical** - Measuring & Testing Instruments, Electrical Hand Tools, various safety measures involved in industry, Fundamentals of Electricity, Cells and batteries, DC machines, AC machines, Transformer, Earthing, Overhead Transmission, Introduction to Basic Electronics, Electrical Wiring and Wiring systems, House wiring, Circuit Signs and Symbols, Workshop calculation, Conductors and Insulators.

**Electronics** - Basic Electronic Components, Component testing, Measuring & Testing equipment, Diodes, Field Effect Transistor, Thyristors, Amplifiers, Oscillators, Basic Logic Gates, Number System, Motors and Generators, Circuit Signs and Symbols, Basic knowledge of communication system and computer architecture.

### **Civil-**

- Have knowledge to prevent the structure with DPC. Draw different floors, various types of arches and lintels, different types of door and windows including knowledge of carpentry joints, different types of roof with all details with general principals of constructions.
- Draw and design staircases. Draw plan, section, and elevation of residential buildings (single and double) with help of sketches, and line diagrams following principle of planning.
- Plotting of longitudinal and cross section of a road from given reduced levels, calculation of earth work and other materials of road, plotting of blocks and drawing of contour maps from given data. Preparing/ drawing details of types of road, C.S. of railway tracks, culverts and bridges.

**(A) Details of the On-line Examination Pattern**

- (1) The examination would be conducted on-line i.e. on a computer.
- (2) All tests 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 most appropriate answer and ‘mouse click’ that alternative which he/ she feels is appropriate/ 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.



You have answered the question but marked it for review.

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) Sections will be displayed on the top bar of the screen. Questions in a section can be viewed by clicking on the section name. The section you will view will be highlighted.

- (15) After clicking the **Save & Next** button on the last question for a section, you will automatically be taken to the first question of the next section.
- (16) You can move the mouse cursor over the section names to view the status of the questions for that section.
- (17) You can shuffle between sections and questions anytime during the examination as per your convenience.
- (18) 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 Kochi Metro Rail Limited.
- (19) 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.
- (20) After the expiry of 90 minutes, 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.
- (21) **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.**

**B] General Instructions:**

- (1) Please note date, time and venue address of the examination given in the call letter.
- (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 call letter) on the day of the examination. Late comers will not be allowed.
- (3) The call letter 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 as uploaded).
- (4) You must scrupulously follow the instructions of the Test Administrator and Kochi Metro Rail Limited 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 call letter 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 the call-letter alongwith photocopy of photo identity proof duly stapled together to the invigilator. Currently valid photo identity proof may be PAN Card/Passport/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 with a photograph/ Employee ID/Bar Council Identity card with photograph. **Please Note - Ration Card and E-adhar Card will NOT be accepted as valid ID proof for this project.** Please note that your name as appearing on the call letter (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 Call Letter 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) 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. The Kochi Metro Rail Limited may take further action against such candidates as deemed fit by it.
- (8) 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.
- (9) 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.
- (10) If the examination is held in more than one session, 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.
- (11) Please note that a candidate is allowed to appear only once in the online examination. Multiple appearance in online examination will result in cancellation of candidature. In case more than one call letter has been generated, candidates are advised to appear only once on the date and at the time mentioned on the respective call letter. All other call letters are to be surrendered.
- (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 recruitment process of the Kochi Metro Rail Limited 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) Call letter with photo affixed thereon and photo ID card in **Original** and photocopy as mentioned in point 6 above.
- (ii) One Ball point pen.

**WISH YOU GOOD LUCK**