



# Kerala Public Enterprises (Selection and Recruitment) Board

Opposite KELTRON, Vellayambalam, Thiruvananthapuram

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**Version: A**

**Name of Examination: Junior Operator Trainee**

**Date: 26/07/2026**

**Written examination for:**

Junior Operator Trainee, Kerala Minerals and Metals Limited -TP Unit

## **PROVISIONAL ANSWER KEY**

| Sl No |   | Answer                                                             |
|-------|---|--------------------------------------------------------------------|
| 1     | B | Fuel, Oxygen, Heat                                                 |
| 2     | B | Fraction of molecules with energies in excess of activation energy |
| 3     | C | CO <sub>2</sub> extinguisher                                       |
| 4     | A | Acetic acid                                                        |
| 5     | A | 1981                                                               |
| 6     | D | Underground burial in concrete containers                          |
| 7     | A | increase                                                           |
| 8     | D | Stabilise wastewater flow and concentration                        |
| 9     | A | Film diffusion                                                     |
| 10    | D | 3                                                                  |
| 11    | C | Nitroacetic acid                                                   |
| 12    | A | V <sub>2</sub> O <sub>5</sub>                                      |
| 13    | C | Reversible adiabatic process                                       |
| 14    | A | Emissivity                                                         |
| 15    | C | 5°C                                                                |
| 16    | B | 300kJ                                                              |
| 17    | B | No heat interaction between the system and surroundings            |
| 18    | D | Paper industry                                                     |
| 19    | B | Colour                                                             |
| 20    | D | Same OD, thicker wall for Sch 60                                   |

|    |   |                                                                       |
|----|---|-----------------------------------------------------------------------|
| 21 | A | The reactants are fed in stoichiometric proportions                   |
| 22 | D | 0.35                                                                  |
| 23 | B | 42 g of nitrogen                                                      |
| 24 | A | 2                                                                     |
| 25 | D | An open system exchanges both energy and matter with its surroundings |
| 26 | B | $12.55 \times 0.2$                                                    |
| 27 | B | $^{16}\text{O}$                                                       |
| 28 | C | Silver cyanide                                                        |
| 29 | C | Different forms of mechanical energy                                  |
| 30 | B | $s < p < d < f$                                                       |
| 31 | D | It increases the rate of forward reaction only                        |
| 32 | D | Buffer solution                                                       |
| 33 | A | Sulphuric acid                                                        |
| 34 | B | Hermann Mauguin symbol                                                |
| 35 | A | $20\text{-}30^{\circ}\text{C}$                                        |
| 36 | A | Propane and butane                                                    |
| 37 | B | $\text{P}_2\text{O}_5$ Content                                        |
| 38 | C | Bomb calorimeter                                                      |
| 39 | D | Highly polluted with biodegradable organic chemicals                  |
| 40 | D | Stern Volmer                                                          |
| 41 | A | Induced draft                                                         |
| 42 | A | Rotameter                                                             |
| 43 | A | infinity                                                              |
| 44 | A | Use of supercritical $\text{CO}_2$                                    |
| 45 | A | McLeod gauge                                                          |
| 46 | D | Xenon                                                                 |
| 47 | C | Dry powder for metals                                                 |
| 48 | D | Zn                                                                    |
| 49 | B | $1/2$                                                                 |
| 50 | B | $\text{Be}^-$                                                         |
| 51 | B | Use foam                                                              |

|    |   |                                                    |
|----|---|----------------------------------------------------|
| 52 | A | Uniform temperature                                |
| 53 | B | Prandtl number                                     |
| 54 | D | Absolute entropy of perfect crystalline substances |
| 55 | C | Vitamin B <sub>12</sub>                            |
| 56 | D | None of these                                      |
| 57 | A | 1-Bromo-1-methylcyclohexane                        |
| 58 | B | Heterogeneous system                               |
| 59 | A | Gasoline                                           |
| 60 | D | Pm                                                 |
| 61 | D | Dynamic viscosity                                  |
| 62 | A | Knocking tendency                                  |
| 63 | D | None of these                                      |
| 64 | A | Witting                                            |
| 65 | B | Dry saturated                                      |
| 66 | D | All of these                                       |
| 67 | B | 24 kg                                              |
| 68 | D | Emulsifier                                         |
| 69 | B | Entropy                                            |
| 70 | B | Gauche                                             |
| 71 | B | $\text{CH}_2=\text{C}(\text{CH}_3)_2$              |
| 72 | B | Volatile matter, moisture, ash and fixed carbon    |
| 73 | B | Micelles                                           |
| 74 | A | 0.17                                               |
| 75 | B | Mannich reaction                                   |
| 76 | B | Glucose                                            |
| 77 | A | 1                                                  |
| 78 | A | square planar                                      |
| 79 | A | No axial mixing                                    |
| 80 | D | Photochemical smog                                 |
| 81 | A | $\text{SN}^1$ reaction                             |
| 82 | C | Aerobic composting                                 |

|     |   |                                  |
|-----|---|----------------------------------|
| 83  | C | Sucrose                          |
| 84  | B | 15.625                           |
| 85  | D | Donnan membrane equilibrium      |
| 86  | D | 600KJ                            |
| 87  | A | Conduction                       |
| 88  | D | None of these                    |
| 89  | D | All of these                     |
| 90  | A | $\text{m}^2/\text{S}$            |
| 91  | D | Cu(I)                            |
| 92  | C | Yield                            |
| 93  | B | Inertial force to viscous forces |
| 94  | C | $\text{O}_2$                     |
| 95  | C | Covalent bonding                 |
| 96  | A | 46% N by weight                  |
| 97  | D | geometrical isomerism            |
| 98  | B | UV-light                         |
| 99  | C | -1.8 KJ                          |
| 100 | D | $\text{NO}^-$                    |

**NB:** - Complaints regarding the Provisional Answer Key should be submitted by candidates to the e-mail (kpesrb@gmail.com) of the Board within a period of 4 days from the date of publication of this Provisional Answer Key (both days included) ie. By 11.59 PM on 30/07/2026. Final Answer Key will be published in the official website of KPESRB.

Shine A Haq  
Secretary