

# R.R.B.

PREVIOUS  
PAPER

## Assistant Loco Pilot KOLKATA Based on Memory

1. **Manometer is used to measure-**  
1) Pressure          2) Gravity          3) Humidity          4) Volume
2. **Calorie is the unit of-**  
1) Temperature      2) Heat              3) Power              4) Energy
3. **A stratight rod partially immersed in water seems bent. Its reason is-**  
1) Refraction  
2) Reflection  
3) Different temperature of water levels  
4) High pressure of water at the bottom
4. **Which law states that a liquid inside a closed system exerts equal pressure in all directions?**  
1) Boyle's law                                      2) Pascal's law  
3) Graham's law                                    4) Gay - Lussac's law
5. **An electro-magnet is made of-**  
1) Soft iron          2) Copper          3) Hard Steel          4) Zinc
6. **Only two elements are in liquid state at room temperature. They are**  
1) Bromine, Iodine                                      2) Hafnium, Mercury  
3) Bromine, Mercury                                    4) None of these
7. **A stone was dropped freely in a river flowing down a bridge. The stone takes 2 seconds in touching the water surface. The height of the bridge is-**  
1) 9.8 m              2) 19.6 m              3) 39.2 m              4) Data inadequate
8. **1 micron is equal to-**  
1) 0.1 mm              2) 0.01 mm              3) 0.001 mm              4) 0.0001 mm

9. The most abundant gas found in earth's atmosphere is-
- 1) Oxygen
  - 2) Carbon dioxide
  - 3) Hydrogen
  - 4) None of these
10. The Chemical formula of Caustic Soda is-
- 1)  $\text{Na(OH)}_2$
  - 2)  $\text{Na}_2\text{CO}_3$
  - 3)  $\text{NaOH}$
  - 4)  $\text{NaCl}$
11. Air cooler will be most effective in-
- 1) Kolkata
  - 2) Guwahati
  - 3) Puri
  - 4) New Delhi
12. A certain distance was covered at a certain speed. If half of the distance is covered in twice time, the ratio between new speed and original speed is-
- 1) 1 : 2
  - 2) 1 : 4
  - 3) 2 : 1
  - 4) 4 : 1
13. The number of electrons in  $\text{Na}^+$  is-
- 1) 11
  - 2) 10
  - 3) 12
  - 4) 13
14. The most electro negative element in the following is-
- 1) F
  - 2)  $\text{Cl}$
  - 3) Br
  - 4) I
15. Rh factor is related to-
- 1) Blood Transfusion
  - 2) Atmospheric Pressure
  - 3) Blood Pressure
  - 4) Space
16. A force of 50N acts on a body and moves the body on a straight path to a distance of 4 metres. Find the work done if the force acts at an angle of 60 with horizontal.
- 1) 100J
  - 2) 300J
  - 3) 10J
  - 4) 200J
17. The length of pendulum is reduced to one fourth. Its time period will be-
- 1) Twice
  - 2) Eight times
  - 3) Half
  - 4) None of these
18. An element which changes the rate of a chemical reaction but does not undergo any change in itself, is called-
- 1) Electrolyte
  - 2) Catalyst
  - 3) Lubricant
  - 4) Litmus
19. At constant temperature the volume of a given mass of a gas is inversely proportional to the pressure. It is known as-
- 1) Charles' Law
  - 2) Boyle's Law
  - 3) Avogadro's Law
  - 4) Dalton's Law
20. The resistance of an electric circuit/ implement is measured by-
- 1) Meggar
  - 2) Ammeter
  - 3) Ohm-meter
  - 4) None of these

21. Solenoid is a-

- |                                 |                |
|---------------------------------|----------------|
| 1) Shaft                        | 2) Hollow tube |
| 3) Tube on which wire is coiled | 4) Cell        |

22. At a uniform acceleration which of the motion equations is correct-

- |                               |                 |
|-------------------------------|-----------------|
| 1) $v = u - at$               | 2) $v = u + at$ |
| 3) $s = ut - \frac{1}{2}at^2$ | 4) $u = v + at$ |

23. A body starts from rest at an acceleration of  $2\text{m/sec}^2$ . The distance covered by the body in 2 seconds is-

- |        |        |        |        |
|--------|--------|--------|--------|
| 1) 2 m | 2) 8 m | 3) 4 m | 4) 1 m |
|--------|--------|--------|--------|

24. The c.g.s. unit of density is-

- |                     |                     |                   |                     |
|---------------------|---------------------|-------------------|---------------------|
| 1) $\text{gm/cm}^3$ | 2) $\text{gm/cm}^2$ | 3) $\text{gm/cm}$ | 4) $\text{kg/cm}^3$ |
|---------------------|---------------------|-------------------|---------------------|

25. When a body is partially or fully immersed in a liquid it experiences a loss in its weight that is equal to the weight of liquid displaced by its immersed part. This principle is of-

- |          |           |               |               |
|----------|-----------|---------------|---------------|
| 1) Boyle | 2) Pascal | 3) Terricelli | 4) Archimedes |
|----------|-----------|---------------|---------------|

26. The unit of force in cgs unit is-

- |           |         |                     |      |
|-----------|---------|---------------------|------|
| 1) Newton | 2) Dyne | 3) $\text{ms}^{-2}$ | 4) K |
|-----------|---------|---------------------|------|

27. Humidity in the atmosphere is measured by-

- |               |               |              |              |
|---------------|---------------|--------------|--------------|
| 1) Hydrometer | 2) Hygrometer | 3) Manometer | 4) Pyrometer |
|---------------|---------------|--------------|--------------|

28. Density of pure water at  $4^\circ\text{C}$  is-

- |                          |                          |                           |                           |
|--------------------------|--------------------------|---------------------------|---------------------------|
| 1) $100 \text{ kg./m}^2$ | 2) $1000 \text{ kg/m}^3$ | 3) $1000 \text{ gm/cm}^3$ | 4) $1000 \text{ gm/cm}^2$ |
|--------------------------|--------------------------|---------------------------|---------------------------|

29. Momentum, mass and velocity are related as-

- |             |   |                            |
|-------------|---|----------------------------|
| 1) Momentum | = | mass/velocity              |
| 2) Momentum | = | mass $\times$ velocity     |
| 3) Velocity | = | mass $\times$ momentum     |
| 4) Mass     | = | momentum $\times$ velocity |

30. 1 second is ..... part of a mean solar day.

- |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|
| 1) $\frac{1}{84600}$ | 2) $\frac{1}{85000}$ | 3) $\frac{1}{86400}$ | 4) $\frac{1}{80000}$ |
|----------------------|----------------------|----------------------|----------------------|

31. The unit of Young's Modulus of Elasticity in MKS system is-

- |                     |                    |             |                          |
|---------------------|--------------------|-------------|--------------------------|
| 1) $\text{Nm}^{-2}$ | 2) $\text{N/cm}^2$ | 3) Dynes/cm | 4) Dynes/cm <sup>2</sup> |
|---------------------|--------------------|-------------|--------------------------|

**32. The property of a metal which reduces its strength when it is subjected to reversal of stress is called-**

- 1) Fatigue                      2) Creep                      3) Resilience                      4) Elasticity

**33. Melting point of cast iron (in °C) is in the range of-**

- 1) 1150-1300                      2) 1800-1900                      3) 1450-1600                      4) 600-700

**34. The buckling loads depend upon-**

- 1) slenderness ratio                      2) cross-sectional area  
3) modulus of elasticity                      4) All of the above

**35. 'Anvil' is used in the work of-**

- 1) Forging                      2) Welding                      3) Fitting                      4) Machining

**36. In an electrical circuit resistance is 55 Ohms and current 4 amperes. What is voltage?**

- 1) 220V                      2) 13.75V                      3) 0                      4) 110V

**37. Bell metal contains Cu and ....**

- 1) Al                      2) Sn                      3) Zn                      4) Ni

**38. To produce flat surfaces by a reciprocating type of machine tool is called-**

- 1) Lathe                      2) Shaper                      3) Drill                      4) Milling

**39. Which is the most elastic material?**

- 1) Rubber                      2) Timber                      3) Plastic                      4) Steel

**40. Which of the following has the highest Poisson's ratio?**

- 1) Steel                      2) Copper                      3) Aluminium                      4) Rubber

**41. D.C. Generator works on the basis of-**

- 1) Faraday's law of e.m.induction                      2) Ohm's law  
3) Lenz's law                      4) Newton's law

**42. When  $x = 2$ , the value of  $\left(0.5 - \frac{1}{x}\right) = ?$**

- 1) 1.5                      2) -1.5                      3) 0.5                      4) 0

**43. What number has to be added to the terms of 3 : 5 to make the ratio 5 : 6?**

- 1) 13                      2) 7                      3) 12                      4) 6

**44. Find the value of  $\left\{8 - 2 \times \frac{8 - 2}{8 + 2} \times 5\right\}$**

- 1) 3                      2) 2                      3) 6                      4) 4

45. The sum of three consecutive numbers is 18; find the sum of the next three consecutive numbers?

- 1) 24                      2) 30                      3) 27                      4) 35

46.  $\log_5 125 = x$ ;  $x = ?$

- 1) 25                      2) 3                      3) 2                      4) 5

47. Find the value of  $x$  in  $(2^2) \frac{1}{3} \left( 2x + \frac{1}{2} \right) = 2^{-5}$

- 1) -4                      2) +4                      3) -2                      4) +2

48. A two digit number is 7 times the sum of its two digits. The number that is formed by reversing its digits is 18 less than the original number. What is the number?

- 1) 52                      2) 42                      3) 62                      4) 27

49. A sum of money becomes Rs. 20,925 in 2 years and Rs. 24,412.50 in 5 years. Find the rate of interest and the sum of money

- 1) 8%, Rs.17,560                      2) 6.25%, Rs.18,600  
3) 7%, Rs.18,000                      4) 6.75%, Rs.17,775

50. Find the sum fraction which becomes  $\frac{1}{2}$  when denominator is increased by 4; the same fraction becomes  $\frac{1}{8}$  when the numerator is reduced by 5.

- 1)  $\frac{3}{5}$                       2)  $\frac{5}{8}$                       3)  $\frac{6}{8}$                       4)  $\frac{8}{12}$

51. Lux is the unit of

- 1) magnetic flux                      2) frequency  
3) sound intensity                      4) level of illumination

52. MISTAKE = 9765412, NAKED = 84123 then STAIN = ?

- 1) 65478                      2) 98175                      3) 89483                      4) 68194

53. GAMBLE = ICODNG; FLOWER = ?

- 1) GMPXFS                      2) HNQYGT                      3) GMPVDS                      4) None of these

54. Ram started from his house and walked 2km North, then 3 km west and finally 6 km south. How far is he from his house?

- 1) 5 km                      2) 11 km                      3) 4 km                      4) 7 km

55. Arrange the following words in the order they appear in an English dictionary?

1. Literature                      2. Little                      3. Liberty                      4. Library

- 1) 4, 3, 2, 1                      2) 3, 4, 1, 2                      3) 2, 1, 3, 4                      4) 4, 3, 1, 2

56. Insert the missing numbers-

2	6	?	?
54	18	81	27

- 1) 3 and 9                      2) 5 and 18                      3) 6 and 12                      4) 3 and 21

57. Which tool is used for chipping?

1. Chisel                      2. Drill                      3. Pliers                      4. Hammer

58. "PICO" means-

- 1)  $10^{-15}$                       2)  $10^{-9}$                       3)  $10^{-12}$                       4)  $10^{-6}$

59. 1 nanometre = ?

- 1)  $10^{-7}$  m                      2)  $10^{-8}$  m                      3)  $10^{-9}$  m                      4)  $10^{-6}$  m

60. The relation between wave velocity (V), frequency (f) and wave - length ( $\lambda$ ) is-

- 1)  $V = f\lambda$                       2)  $\lambda = Vf$                       3)  $f = \frac{\lambda}{V}$                       4)  $f = \lambda V$

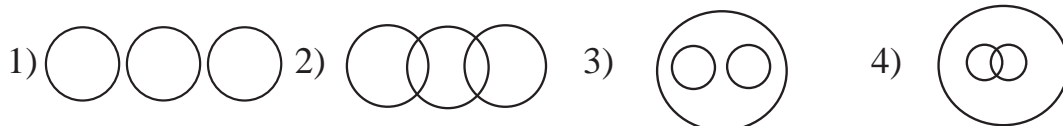
61. 100K = ?

- 1)  $170^{\circ}\text{C}$                       2)  $-173^{\circ}\text{C}$                       3)  $-273^{\circ}\text{C}$                       4)  $273^{\circ}\text{C}$

62. At 1.45 PM, the hour hand will be in the direction-

1. North - west                      2. South - east                      3. West                      4. North - east

63. House, bedroom and bathroom are best represented by which venn diagram?



64. If the 26<sup>th</sup> August in a month is Friday, then the number of Tuesdays in that month will be-

- 1) 4                      2) 5                      3) 6                      4) None of these

65. If the diameter of a sphere is 6 meters, its hemisphere will have a volume of-

- 1)  $36\pi$                       2)  $72\pi$                       3)  $18\pi$                       4) None of these

66. What part of an hour elases from 4.56PM to 5.32 PM?

- 1)  $\frac{1}{4}$                       2)  $\frac{3}{4}$                       3)  $\frac{3}{5}$                       4)  $\frac{1}{2}$

67. "Newton's Disk" when rotated rapidly appears

- 1) Yellow                      2) White                      3) Black                      4) Green

68. Red Hematite is the ore of

1) Copper                      2) Zinc                      3) Aluminium                      4) Iron

**69. Specific Latent heat of vapourization of water is-**

1) 540 calories/ gm                      2) 80 calories/ gm  
3) 540 k.calories/ gm<sup>2</sup>                      4) 80 k.calories/ gm<sup>2</sup>

**70. What percent of CO<sup>2</sup> by volume constitutes the atmosphere?**

1) 1%                      2) 0.03%                      3. 0.1%                      4) 2%

**71. Which Gupta ruler was crowned with the title of Vikramaditya?**

1) Chandragupta-I                      2) Chandragupta-II  
3) Skundgupta                      4) Samudragupta

**72. The father of Rabindrabhanath Tagore was-**

1) Ratindranath                      2) Dwarkanath  
3) Avanindranath                      4) Devendranath

**73. Which of the following filmstars was lovingly called “Dadamuni”?**

1) Sanjeev Kumar                      2) Asit sen  
3) Ashok Kumar                      4) Kishore Kumar

**74. The unit to measure the speed of ships is-**

1) mile                      2) kmph                      3) knot                      4) mph

**75. National Defence Academy is situated in-**

1) Dehradun                      2) New Delhi  
3) Kharagwasala                      4) Nasik

**76. Dhanpat Rai is popularly known as-**

1. Nirala                      2. Hari Audh                      3. Bachchan                      4. Premchand

**77. The Khajuraho temples are situated in-**

1) Madya pradesh                      2) Uttar Pradesh  
3) Rajasthan                      4) Bihar

**78. The famous “Gateway of India” is situated in**

1) Mumbai                      2) Agra                      3) New Delhi                      4) Kolkata

**79. Which has pink colour ?**

1) India Gate                      2) Victoria Memorial  
3) Hawa Mahal                      4) Lotus Temple

**80. Hinyana and Mahayana are two sects of**

- 1) Sikhism                      2) Hinduism                      3) Buddhism                      4) Jainism
- 81. Status of Liberty is situated in-**  
1) Spain                      2) UK                      3) US                      4) Italy
- 82. Who is called Bharatendu?**  
1) Rabindranath                      2) Premchand  
3) Hrishchandra                      4) Bachchan
- 83. Euro is the currency of**  
1) Germany                      2) New Zealand                      3) Canada                      4) Mexico
- 84. NaCl is the chemical formula of-**  
1) Urea                      2) Salt                      3) Baking soda                      4) Lime
- 85. Seismology is the scientific study of**  
1) Earthquake                      2) Weather conditions  
3) Volcanoes                      4) Rocks
- 86. Who was the last viceroy of India?**  
1) C.Rajgopalachari                      2) Lord Wavell  
3) Lord Canning                      4) Mountbatten
- 87. Haldiya oil refinery is situated in-**  
1) Bihar                      2) Jharkand                      3) Orissa                      4) W.Bengal
- 88. Which of the following cities is also called Prayag?**  
1) Lucknow                      2) Allahabad                      3) Patna                      4) Nasik

## ANSWERS

1-1; 2-2; 3-1; 4-2; 5-1; 6-3; 7-2; 8-3; 9-1; 10-3; 11-4; 12-2; 13-2; 14-1; 15-1; 16-1; 17-3; 18-2; 19-2; 20-3; 21-3; 22-2; 23-3; 24-1; 25-4; 26-2; 27-2; 28-2; 29-2; 30-3; 31- 1; 32-1; 33-3; 34-4; 35-2; 36-2; 37-2; 38-1; 39-4; 40-1; 41-1; 42-4; 43-2; 44-2; 45-3; 46-2; 47-1; 48-2; 49-2; 50-3; 51-4; 52-1; 53-2; 54-1; 55-2; 56-1; 57-1; 58-3; 59-3; 60-1; 61-2; 62-4; 63-3; 64-2; 65-3; 66-3; 67-2; 68-4; 69-1; 70-2; 71-2; 72-4; 73-3; 74-3; 75-3; 76-4; 77-1; 78-1; 79-3; 80-3; 81-3; 82-3; 83-1; 84-2; 85-1; 86-1; 87-4; 88-2.