

# RRB Assistant Loco Pilot and Technician

## Model Paper - I

### General knowledge, Reasoning, Arithmetic

1. **A lunar eclipse occurs when?**
  - a. The moon comes between the sun and the earth.
  - b. The earth comes between the Sun and the moon.
  - c. The Sun comes between the earth and the moon.
  - d. None.
  
2. **Who introduced famous 20 point input-output programme?**
  - a. Rajiv Gandhi
  - b. Indira Gandhi
  - c. P.V.Narasimha Rao
  - d. None
  
3. **The Nanvakkal is famous in?**
  - a. Sericulture
  - b. Piggory
  - c. Poultry
  - d. None
  
4. **How many bones are in the adult human skeleton?**
  - a. 205
  - b. 206
  - c. 207
  - d. 212
  
5. **The Agricultural University is it?**
  - a. Coimbatore
  - b. Salem
  - c. Sivaganga
  - d. None
  
6. **In Tamil Nadu Bird Sanctuary is situated at?**
  - a. Mudumalai
  - b. Vedanthangal
  - c. Mundanthurai
  - d. None



16. If the side of a square is increased by 25% then how much percent does its area get increased?

- a. 125                      b. 156.25                      c. 50                      d. 56.25

17. If the circumference of a circle is 44 meters, then its area in  $m^2$

- a. 145                      b. 154                      c. 308                      d. 462

18. The height of a cylinder is 14cm and its curved surface area is 264  $sq.cm$ . The Volume of the cylinder is

- a.  $308\text{ cm}^2$                       b.  $396\text{ cm}^3$                       c.  $1848\text{ m}^3$                       d.  $1232\text{ cm}^3$

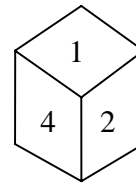
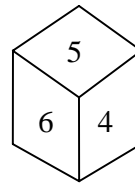
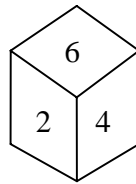
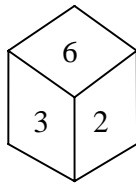
19. How many times are the hands of a clock at right angles in a day?

- a. 24                      b. 48                      c. 22                      d. 44

20. Which letter will be the sixth to the right of the eleventh letter from the right end of the English alphabet?

- a. K                      b. V                      c. J                      d. U

21. What number is opposite "3"?



- a. 1                      b. 2 below                      c. 5                      d. 4

22.  $COOK - BAT = 21$ , then  $CANE - HAD = ?$

- a. 9                      b. 11                      c. 10                      d. 15

**23. Pointing out to a person a man said to a woman. "His mother is the only daughter of your father". How as the woman related to the person?**

- a. Aunt                      b. Brother                      c. Cousin                      d. Mother

**Direction (24-27):** Read the following information and Answer the questions.

Five persons namely P, Q, X, Y and Z are sitting in a park. 'P' is the mother of 'X' who is wife of 'Z'. 'Y' is brother of 'P' and 'Q' is the husband of 'P'.

**24. How is P related to Z?**

- a. Mother                      b. Aunt  
c. Mother-in-law                      d. None

**25. How is Y related to Q?**

- a. Brother                      b. Brother-in-law  
c. Cousin                      d. Uncle

**26. How is X related to Q?**

- a. Daughter                      b. Niece                      c. Aunt                      d. Mother

**27. How is Q related to Z?**

- a. Brother-in-law                      b. Father  
c. Father-in-law                      d. None

**28. In 12 hours the hands of the clock will coincide and at 90° for how many times?**

- a. 22                      b. 11                      c. 32                      d. 33

29. 15, 30, 60, 105, \_\_\_\_\_?  
a. 160                      b. 175                      c. 150                      d. 165
30. Find out wrong Number?  
16, 23, 26, 64, 100, 144  
a. 36                      b. 16                      c. 25                      d. 144

### TECHNICAL APTITUDE

31. Who invented the law of gravitational force?  
a. Einstein                      b. C.V. Raman                      c. Newton                      d. None
32. Energy generated by turbine blade is?  
a. P.E.                      b. P.E. + K.E                      c. K.E                      d. None
33. What is the purpose of tempering for hardened steel?  
a. To harden the steel                      b. To soften the steel  
c. To change the structure                      d. To strengthen the steel
34. Leg vice is used for \_\_\_\_\_ operations?  
a. Smithy                      b. Forging                      c. Casting                      d. Welding
35. Rainbow has elliptical shape due to?  
a. Reflection                      b. Refraction                      c. Rare Fraction                      d. None
36. When bullet is fired, which law is applied to rifle?  
a. Newton's 111rd law                      b. Law of conservation  
c. 156 law of thermodynamics                      d. All of the above

**37. A motorist moving in a straight direction he contains \_\_\_\_\_ energy?**

- a. Potential only
- b. Kinetic + Potential Energy
- c. Kinetic energy only
- d. None

**38. Sound travel is faster in?**

- a. Air
- b. Vacuum
- c. Cast Steel
- d. Aluminum

**39. Pilot tube is used to measure?**

- a. Velocity of a gas
- b. Pressure of fluid
- c. Quantify of flow
- d. Velocity of fluid in open Channels

**40. Air conditioning means?**

- a. To control the condition of air
- b. To control the movement of air
- c. To maintain pleasingness
- d. All of the above

**41. In motor vehicles which type of mirror used?**

- a. Concave
- b. Convex
- c. Both a and b
- d. Plane

**42. Why coolant is used in lathes?**

- a. To increase the cutting action
- b. To decrease heat loss
- c. To remove chips
- d. All of the above

**43. In simple indexing the crank movement is given by?**

- a.  $24/N$
- b.  $24/N + N/40$
- c.  $40/N$
- d.  $40/N = n_1/N_1 \pm n_2/N_2$

- 44. Usually shafts are made with?**
- a. Cast iron
  - b. H.S.S.
  - c. M. S
  - d. All of the above
- 45. Angle plates are used in conjunction with a \_\_\_\_\_ when holding surface of the work piece should be kept horizontal?**
- a. Chuck
  - b. Face plate
  - c. Mandrel
  - d. Rests
- 46. Number of taps used for making a complete thread in the hole is?**
- a. Single tap only
  - b. Two taps
  - c. Three taps
  - d. None
- 47. Cutting edges of the reamers are called?**
- a. Lands
  - b. Flutes
  - c. Heal
  - d. All of the above
- 48. Slip gauges are sometimes used for accurate setting of the?**
- a. Tail stock
  - b. Carriage
  - c. Tool part
  - d. All of the above
- 49. Thermal stress in a bar is directly proportional to?**
- a. Its cross sectional area
  - b. It's Volume
  - c. Change in temperature
  - d. None
- 50. Which type of radiation is liberating form the sun?**
- a. Fission
  - b. Fusion
  - c. Both A and B
  - d. None

**51. Bar is measurement for?**

- a. Velocity
- b. Temperature
- c. Pressure
- d. All of the above

**52. Mechanical efficiency means?**

- a. Input/ Output
- b. n stage/ n blade
- c. Work done/Output
- d. Output/Input

**53. By combustion of fuel in cylinder chemical energy converted into?**

- a. Mechanical energy
- b. Thermal Energy
- c. Potential energy
- d. Kinetic energy

**54. Which type of refrigerant is used in refrigerator?**

- a. Ammonia
- b. Water
- c. Freon
- d. None

**55. 20kgf.m. = \_\_\_\_\_ joules?**

- a. 4
- b. 2
- c. 3
- d. None

**56. Ladies voice is large than men's, why?**

- a. Low pitch
- b. Low amplitude
- c. High pitch
- d. High amplitude

**57. For medium heads which type of turbine is suitable?**

- a. Kaplan turbine
- b. Impulse turbine
- d. Francis turbine
- d. None

**58. Jockey pulley is used to?**

- a. Increase the angle of contact
- b. Decrease the angle of contact
- c. a and b
- d. None





- 67. Example for semisolid lubricant is?**
- a. Graphite powder      b. Greases      c. Mineral oil      d. All
- 68. For the same compression ratio the thermal efficiency of Otto, diesel and dual combustion cycle will be in the order?**
- a. Otto, Dual, Diesel      b. Otto, Diesel, Dual  
c. A and b      d. None
- 69. Cable should be connected with appliances so that?**
- a. It has complete contact with other metallic part.  
b. It has partial contact with other metallic part.  
c. It doesn't have any contact with other metallic part.  
d. It has contact with more than one metallic part.
- 70. The solder used for soldering battery cable is made of?**
- a. Tin and lead      b. Copper and tin  
c. Lead and aluminum      d. Copper and Zinc
- 71. While soldering wire on a terminal solder should solidify rapidly?**
- a. To avoid cracking of terminals.  
b. To avoid melting of terminals.  
c. To avoid displacement of components being soldered.  
d. To avoid over heating of other components.
- 72. Correct sequence of current flow in simple electric circuit is?**
- a. Load, switch, battery      b. Battery, switch load  
c. Load, battery, switch      d. Switch, load, battery

- 73. In an open circuit the resistance is?**
- a. Very high
  - b. Very low
  - c. Infinite
  - d. No resistance
- 74. In a closed electrical circuit the current is?**
- a. Inversely proportional to voltage.
  - b. Directly proportional to resistance.
  - c. Inversely proportional to voltage and directly.
  - d. Directly proportional to voltage and inversely proportional to resistance.
- 75. A cell is device consisting of?**
- a. One electrode
  - b. Two electrodes
  - c. Three electrodes
  - d. Four electrodes
- 76. Vent holes are provided in wet cells?**
- a. To pour electrode.
  - b. To allow gases to escape during charging only.
  - c. To allow gases to escape during charging and discharging.
  - d. To allow gases to escape during discharging only.
- 77. Identify the secondary cell from the following?**
- a. Silver-oxide cell
  - b. Carbon-zinc cell
  - c. Lead acid cell
  - d. Lithium cell
- 78. Lead acid battery is?**
- a. An electro-mechanical device
  - b. An electrochemical device
  - c. An electrical device
  - d. A chemical device

- 79. While discharging the battery converts?**
- a. Mechanical energy into electrical energy.
  - b. Electrical energy into chemical energy.
  - c. Chemical energy into mechanical energy.
  - d. Chemical energy into electrical energy.
- 80. The level of the electrolyte in each cell above plates should be?**
- a. 1/8" to 1/4"
  - b. 1/4" to 3/8"
  - c. 3/8" to 9/16"
  - d. 7/8" to 1"
- 81. The electrolyte used in lead acid battery is?**
- a. Nitric acid
  - b. Citric acid
  - c. Sulfuric acid
  - d. Hydrochloric acid
- 82. The number of turns in primary winding are?**
- a. 100-200 turns
  - b. 200 – 300 turns
  - c. 200-400 turns
  - d. 400-500 turns
- 83. The distributor rotates simultaneously along with the?**
- a. Water pump
  - b. Oil pump
  - c. Fuel pump
  - d. Vacuum pump
- 84. The spark plug is fitted on?**
- a. Cylinder
  - b. Cylinder Head
  - c. Crank case
  - d. Rocker cover
- 85. Distributer shaft is supported by?**
- a. Ball bearing
  - b. Shell bearing
  - c. Brush bearing
  - d. Needle bearing

**86. Distributor cap is made of?**

- a. Bakelite                      b. Fiber                      c. Plastic                      d. P.V.C.

**87. The centrifugal advance mechanism advances the timing when fly weights?**

- a. Fly outward                      b. Contract inward  
c. Remain constant                      d. Move upward

**88. The dynamo used in automobiles is of?**

- a. Single pole                      b. Two pole                      c. Three pole                      d. Five pole

**89. Dynamo brushes are made of?**

- a. Copper                      b. Brass                      c. Carbon                      d. Aluminium

**90. In charging system the regulator acts as?**

- a. An automatic control                      b. An electronic control  
c. Manual control                      d. A semi automatic control

**91. When the dynamo voltage is more than the battery voltage, the voltage flows to the \_\_\_\_\_?**

- a. Field winding                      b. Shunt winding  
c. Series winding                      d. Armature winding

**92. The oil pumps are generally driven by?**

- a. Camshaft                      b. Rocker shaft  
c. Crank shaft                      d. Damper pulley



## KEY

1)	<b>b</b>	21)	<b>d</b>	41)	<b>b</b>	61)	<b>a</b>	81)	<b>c</b>
2)	<b>b</b>	22)	<b>c</b>	42)	<b>a</b>	62)	<b>a</b>	82)	<b>b</b>
3)	<b>c</b>	23)	<b>d</b>	43)	<b>c</b>	63)	<b>c</b>	83)	<b>b</b>
4)	<b>b</b>	24)	<b>c</b>	44)	<b>c</b>	64)	<b>a</b>	84)	<b>b</b>
5)	<b>a</b>	25)	<b>b</b>	45)	<b>b</b>	65)	<b>d</b>	85)	<b>c</b>
6)	<b>b</b>	26)	<b>a</b>	46)	<b>a</b>	66)	<b>b</b>	86)	<b>a</b>
7)	<b>a</b>	27)	<b>c</b>	47)	<b>b</b>	67)	<b>b</b>	87)	<b>a</b>
8)	<b>d</b>	28)	<b>a</b>	48)	<b>a</b>	68)	<b>a</b>	88)	<b>b</b>
9)	<b>a</b>	29)	<b>d</b>	49)	<b>c</b>	69)	<b>c</b>	89)	<b>c</b>
10)	<b>d</b>	30)	<b>c</b>	50)	<b>b</b>	70)	<b>a</b>	90)	<b>a</b>
11)	<b>b</b>	31)	<b>c</b>	51)	<b>c</b>	71)	<b>c</b>	91)	<b>b</b>
12)	<b>a</b>	32)	<b>c</b>	52)	<b>d</b>	72)	<b>b</b>	92)	<b>a</b>
13)	<b>b</b>	33)	<b>b</b>	53)	<b>b</b>	73)	<b>c</b>	93)	<b>c</b>
14)	<b>a</b>	34)	<b>a</b>	54)	<b>c</b>	74)	<b>d</b>	94)	<b>b</b>
15)	<b>b</b>	35)	<b>a</b>	55)	<b>b</b>	75)	<b>b</b>	95)	<b>a</b>
16)	<b>b</b>	36)	<b>a</b>	56)	<b>c</b>	76)	<b>c</b>	96)	<b>b</b>
17)	<b>b</b>	37)	<b>c</b>	57)	<b>c</b>	77)	<b>c</b>	97)	<b>b</b>
18)	<b>b</b>	38)	<b>c</b>	58)	<b>a</b>	78)	<b>b</b>	98)	<b>a</b>
19)	<b>d</b>	39)	<b>d</b>	59)	<b>c</b>	79)	<b>d</b>	99)	<b>c</b>
20)	<b>b</b>	40)	<b>d</b>	60)	<b>c</b>	80)	<b>b</b>	100)	<b>a</b>