# RAILWAY RRB : MODEL PAPER 1 

## General Awareness

1. What is the venue of 73rd Annual Golden Globe Awards ceremony?
a) Beverly Hills, California, United States
b) Canada, Beverly Hills, Unites States
c) California, Canada, Beverly Hills
d) India, Beverly Hills, California
e) None of The Above
2. Who is the Governor of Jammu \& Kashmir?
a) Mufit Mohammad Syed
b) K. L. Lohtia
c) N. N. Vohra
d) Upendar Sinha
e) None of The Above
3. Who won Brisbane International Tennis Championship 2016?
a) Sania Mirza
b) Martina Hingis
c) Maria Sharapova
d) Both (a) and (b)
e) None of The Above
4. Who is brand ambassador of UC Browser now?
a) Akshay Kumar
b) Yuvraj Singh
c) Ajay Jadega
d) Salman Khan
e) None of The Above
5. $\qquad$ is the president of Craotia:
a) Kolinda Grabar - Kitarovic
b) Trudeau
c) Xi Jinping
d) Shinjo Abey
e) None of The Above
6. What is the capital of Canda?
a) Lisbon
b) Canberra
c) Ottawa
d) Abu Dhabi
e) None of The Above
7. What is the purpose of River Information System Scheme recently launched?
a) Safe and Accurate Inland Waterway Navigation
b) Safe and Clean Drinking Water for Rural as well as Urban Areas
c) To Conserve the Water
d) Optimum Utilization of Water for Irrigation
e) None of The Above
8. Who publishes Global Economic Prospect Report?
a) UN
b) World Bank
c) World HR
d) World Economists
e) None of The Above
9. Which Indian former Cricketer inducted into ICC Hall of Fame in 2015?
a) Sachin Tendulkar
b) Sunil Gavaskar
c) Anil Kumble
d) Ajit Agarkar
e) None of The Above
10. What is the name of joint military exercise of India \& France?
a) Shakti 2016
b) Akash 2016
c) Saahas 2016
d) Hosla 2016
e) None of The Above
11. Who won Best Actor Screen Award?
a) Shah Rukh Khan \& Ajay Devgan
b) Akshay Kumar \& Salman Khan
c) Varun Dhawan \& Arjun Kapoor
d) Ranveer Singh \& Amitabh Bachchan
e) None of The Above
12. Who has been conferred with the Central Banker of The Year Award (Global and Asia Pacific) for year 2016?
a) Raghuram Rajan
b) Upendar Kumar Sinha
c) D. Subbarao
d) Bimal Jalan
e) None of The Above
13. The currency of Canada is:
a) Dollar
b) Pound
c) Euro
d) Dinar
e) None of The Above
14. Which country has won the top UNESCO prize 'Award of Excellence' 2015?
a) USA
b) Japan
c) Sri Lanka
d) India
e) None of these
15. The NASA's spacecraft which discovered the presence of neon on the moon's atmosphere is $\qquad$ ?
a) LADEE
b) LADER
c) LADAA
d) LADSR
e) None of these
16. Union government recently launched a telemedicine initiative under the name?
a) AYUSH
b) e-Swasthya
c) Sehat
d) Tele Medicine
e) None of these
17. World Water Day is Observed on $\qquad$ .
a) 1 st December
b) 24th March
c) 5th September
d) 22nd March
e) None of these
18. Name the largest lake in India $\qquad$ .
a) Chandra Taal
b) Wular Lake
c) Dal Lake
d) Pandoh Lake
e) None of these
19. The "Buchi Babu Memorial Trophy" is associated with which sports?
a) Badminton
b) Cricket
c) Hockey
d) Tennis
e) None of these
20. India's first multi social payment app 'Ping Pay' launched by $\qquad$ ?
a) Union Bank
b) Corporation Bank
c) SBI
d) ICICI
e) Axis Bank

## Arithmetic Ability

21. A shopkeeper gives two successive discounts on an article marked Rs. 450. The first discount given is $10 \%$, if the customer pays Rs. 344.25 for the article, then second discount is:
a) $12 \%$
b) $11 \%$
c) $15 \%$
d) $10 \%$
e) None of The Above
22. Akshay purchased a horse and a carriage for Rs. 1800. He sold the horse at a profit of $20 \%$ and the carriage at a profit of $30 \%$. His total profit was $25 \frac{5}{6} \%$. The cost price of the horse is:
a) Rs. 1050
b) Rs. 1200
c) Rs. 750
d) Rs. 975
e) Rs. 1125
23. A man buys some mangoes @ 9 for a rupee and an equal number @ 7 for a rupee. After that, he sells them @ 8 for a rupee. His gain or loss percent is:
a) 0
b) $3^{1} 8 \%$ Gain
c) $3^{1} 8 \%$ Loss
d) $1^{9} 16 \%$ Loss
e) $2516 \%$ Gain
24. Two fill pipes A and B can fill a tank in 30 and 20 hours respectively. Pipe B alone is kept open for half the time and both pipes are kept open for the remaining time. In how many hours, the tank will be completely full.
a) 25 h
b) 15 h
c) 40 h
d) 28 h
e) 35 h
25. Three taps A, B and C can fill a tank in 12,15 and 20 h respectively. If A is open all the time and B and C are open for one hour each alternatively, the tank will be filled in:
a) 6 h
b) 7 h
c) 5 h
d) 9 h
e) None of The Above

## Railway RRB : Model paper 1

26. If 8 men or 17 boys can do a piece of work in 26 days, how many days will it take for 4 men and 24 boys to complete a piece of work $50 \times 0.9$ time great?
a) 680 days
b) 612 days
c) 68 days 80 days
d) 50 days
e) None of The Above
27. The square root of $(7+3 \sqrt{5})(7 \quad 3 \sqrt{5})$ is
a) $\sqrt{5}$
b) 2
c) 4
d) $3 \sqrt{5}$
e) None of these
28. $\sqrt{0.0169 \times ?}=1.3$
a) 10
b) 100
c) 1000
d) 10000
e) None of these
29. $\sqrt{81}+\sqrt{0.81}=10.09-\mathrm{x}$
a) 0.019
b) 0.19
c) 0.9
d) 0.109
e) None of these
30. What is the smallest number by which 3600 be divided to make it a perfect cube?
a) 450
b) 445
c) 440
d) 430
e) None of these
31. The average age of 8 men is increased by 2 years when two of them whose ages are 21 years and 23 years are replaced by two new men. The average age of the two new men is :
a) 22 years
b) 24 years
c) 28 years
d) 30 years
e) None of these
32. 10 years ago, the average age of a family of 4 members was 24 years. Two children having been born (with age difference of 2 years), the present average age of the family is the same. The present age of the youngest child is :
a) 1 year
b) 2 years
c) 3 years
d) 5 years
e) None of these
33. The average age of 30 students of a class is 30 years. When the average age of class teacher is also included, the average age of the whole class increases by 1 year. The age of the class teacher is :
a) 31 years
b) 60 years
c) 61 years
d) 65 years
e) None of these
34. The ratio of the ages of a man and his wife is $4: 3$. After 4 years, this ratio will be $9: 7$. If at the time of marriage, the ratio was $5: 3$, then how many years ago were they married?
a) 8 years
b) 10 years
c) 12 years
d) 15 years
e) None of these
35. Pooja, Shipra and Monika are three sisters. Pooja and Shipra are twins. The ratio of sum of the ages of Pooja and Shpra is same as that of Monika alone. Three years earlier theratio of age of Pooja and Monika was $2: 7$. What will be the age of Shipra 3 years hence?
a) 21 years
b) 16 years
c) 8 years
d) 12 years
e) None of these
36. At present, the ratio between the ages of Arun and Deepak is $4: 3$. After 6 years, Arun's age will be 26 years. What is the age of Deepak at present?
a) 12 years
b) 15 years
c) $19 \frac{1}{2}$ years
d) 21 years
e) None of these
37. The ratio between the school ages of Neelam and Shaan is $5: 6$ respectively. If the ratio between the one-third age of Neelam and half of Shaan's age is 5 $: 9$, then what is the school age of Shaan?
a) 25 years
b) 30 years
c) 36 years
d) Data inadequate
e) None of these
38. At a game of billiards, A can give $B 15$ points in 60 and A can give $C 20$ points in 60 . How many points can $B$ give $C$ in a game of 90 ?
a) 30 points
b) 20 points
c) 10 points
d) 12 points
e) None of these
39. A can run 22.5 m while $B$ runs 25 m . In a kilometer race $B$ beats $A$ by :
a) 100 m
b) $111 \frac{1}{9} \mathrm{~m}$
c) 25 m
d) 50 m
e) None of these
40. A, B and C are three contestants in a km race. If A can give B a start of 40 m and $A$ can give $C$ a start of 64 m, how many metre's start can $B$ give $C$ ?
a) 30 m
b) 25 m
c) 40 m
d) 35 m
e) None of these
41. A runs $1 \frac{2}{3}$ times as fast as B. If A gives $B$ a start of 80 m , how far must the winning post be so that $A$ and $B$ might reach it at the same time?
a) 200 m
b) 300 m
c) 270 m
d) 160 m
e) None of these
42. In a 100 m race, A beats B by 10 m and C by 13 m . In a race of 180 m , B will beat C by :
a) 5.4 m
b) 4.5 m
c) 5 m
d) 6 m
e) None of these
43. 45 men can complete a work in 16 days. Six days after they started working. 30 more men joined them. How many days will they now take to complete the remaining work?
a) 18 days
b) 12 days
c) 9 days
d) 6 days
e) None of these
44. Two pipes A and B can fill a cistern in 15 hours and 10 hours respectively. A tap C can empty the full cistern in 30 hours. All the three taps were open for 2 hours, when it was remembered that the emptying tap had been left open. It was then closed. How many hours more would it take for the cistern to be filled?
a) 30 min .
b) 1.2 hours
c) 24 min .
d) 35 min .
e) None of these
45. A tyre has two punctures. The first puncture alone would have made the tyre flat in 9 minutes and the second alone would have done it in 6 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make it flat?
a) $1 \frac{1}{2}$
b) $3 \frac{1}{2}$
c) $3 \frac{3}{5}$
d) $4 \frac{1}{4}$
e) None of these

## General Intelligence

46. $\qquad$ is country as well as continent.
a) Australia
b) Antartica
c) Africa
d) All of The Above
e) None of The Above
47. Water boils at:
a) $300^{\circ}$ Fahrenheit
b) $212^{\circ}$ Fahrenheit $\left(100^{\circ}\right.$ Celsius $)$
c) $400^{\circ}$ Fahrenheit
d) $225^{\circ}$ Fahrenheit
e) None of The Above
48. Which among the following is closely related to Glass?
a) Coal
b) Sand
c) Diamond
d) Gold
e) None of The Above
49. The longest living organism on earth would be a:
a) Blue Whale
b) Tree
c) Fungi
d) Land
e) None of The Above
50. The symbol ' $\&$ ' is also known as:
a) Treble Clef
b) Semi - Colon
c) Ampersand
d) Sybersand
e) None of The Above
51. Choose the correct order of these four planets in our solar system:
a) Earth, Mars, Saturn, Jupiter
b) Earth, Mars, Jupiter, Saturn
c) Mars, Earth, Jupiter Saturn
d) Earth, Jupiter, Saturn, Mars
e) None of The Above
52. " The Oscars" is a nickname for which entertainment awards show?
a) Primetime Emmy Awards
b) The Academy Awards
c) The Golden Globes
d) Grammy Awards
e) None of The Above
53. 4 is square root of:
a) 2
b) 40
c) 16
d) 20
e) None of The Above

Direction (54-58): In the following questions, select the related letters/ word/ number from the given alternatives.
54. Length : Meter : : Power : ?
a) Calories
b) Degree
c) Watt
d) Kilogram
e) None of The Above
55. Square : Cube : : Circle : ?
a) Ellipse
b) Parabola
c) Cone
d) Sphere
e) None of The Above
56. Paper : Tree : : Glass : ?
a) Window
b) Sand
c) Stone
d) Mirror
e) None of The Above
57. ACFJ : ZXUQ : : EGIN : ?
a) VUSQ
b) VRPM
c) VTRM
d) VMRT
e) None of The Above
58. 10: $90:$ : 9 :?
a) 69
b) 72
c) 89
d) 97
e) None of The Above
59. Among the biotic components of the ecosystem, the producer system is?
a) Sea
b) Rivers
c) Green Plants
d) Animals
e) None of The Above
60. Which of the following group of gases contribute to the 'Green House Effect'?
a) Carbon Monoxide and Sulphur Dioxide
b) Ammonia and Ozone
c) Carbon Dioxide and Methane
d) Nitrogen and Hydrogen
e) None of The Above
61. Which one of the following air pollution can affect blood system leading to death?
a) Cadmium
b) Asbestos Dust
c) Carbon Monoxide
d) Lead
e) None of The Above
62. Plants receive their nutrients mainly from?
a) Atmosphere
b) Chlorophyll
c) Light
d) Soil
e) None of The Above
63. Bamboo is classified as:
a) Bush
b) Tree
c) Grass
d) Weed
e) None of The Above
64. The richest source of Vitamin D is:
a) Cheese
b) Milk
c) Spinach
d) Cod Liver oil
e) None of The Above
65. Scientific name of Cow is:
a) Bos Taurus
b) Canis Lupus Familiaris
c) Bison Bison
d) Capra Aegagrus Hircus
e) None of The Above
66. Most highly intelligent mammals are:
a) Elephants
b) Whales
c) Kangaroos
d) Dolphins
e) None of The Above
67. Milk is poor source of:
a) Calcium
b) Iron
c) Copper
d) Sodium
e) None of The Above
68. Normal Human Blood is:
a) Neutral
b) Acidic
c) Alkaline
d) All of The Above
e) None of The Above
69. Study of heart is known as:
a) Ecology
b) Dermatology
c) Cardiology
d) Demography
e) None of The Above
70. The real name of "The Queen of Jhansi - Rani Lakshmi Bai" was:
a) Chandarlekha
b) Divyakala
c) Samriddhi Bai
d) Manikarnika
e) None of The Above

## Reasoning

71. A and $B$ both are walking away from point ' $X$ '. A walked $3 m$ and $B$ walked 4 m from it, then A walk 4 m North of X and B walked 5 m of South of A. What is the distance between them now?
a) 9.5 m
b) 9 m
c) 16 m
d) 11.40 m
e) None of The Above
72. John's house is 100 m North of his uncle's office. His uncle's house is located 200 m West of his (uncle's) office. Kabir is the friend of John and he stays 100 m East of John's house. The office of Kabir is located 100m South of his house. Then, how far is his uncle's house from Kabir's office?
a) 200 m
b) 300 m
c) 400 m
d) 500 m
e) None of The Above
73. Seema walks 30 m North. Then, she turns right and walks 30 m then she turns right and walks 55 m . Then, she turns left and walks 20 m . Then, she again turn left and walks 25 m . How many meters away is she from her original position?
a) 45 m
b) 50 m
c) 66 m
d) 55 m
e) None of The Above
74. K M 5, 1 P 8, G S 11, E V 14,
a) C Y 17
b) B Y 17
c) B X 17
d) C Z 17
e) None of The Above
75. 2 B ,

8E,
14H,
22L
a) 4 C
b) 4 D
c) 6 E
d) 9 F
e) None of The Above

## Directions (Q. 76-81) Read the following information carefully and answer the questions that follow.

Seven friends A, B, C, D, E, F and G are sitting around a circular table facing either the centre or outside. Each one of them belongs to a different department viz. Finance, Marketing Sales, HR, Corporate Finance, Investment Banking and Operations but not necessarily in the same order.

C sits third to the right of G. G faces the centre. Only one person sits between C and the person working in the HR department immediate neighbours of C face outside. Only one person sits between F and D. Both F and D face the centre. D does not work in the HR department. A works in Investment Banking Department. A faces the centre. Two people sit between the persons who work in Investment Banking and Marketing Departments. The person who works in Corporate Finance sits to the immediate left of E. C faces same direction as E. The person who works in corporate finance sits to the immediate left of the person who works for Operations Department.
76. For which of the following departments does B work?
a) Finance
b) Marketing
c) HR
d) Corporate Finance
e) Operations
77. What is position of $B$ with respect to the person who works for Sales Department?
a) Immediate right
b) Third to the left
c) Second to the right
d) Second to the left
e) Fourth to the right
78. Who sits to the immediate right of E ?
a) The person who works for Marketing Department
b) C
c) $B$
d) The person who works for HR Department
e) A
79. Who amongst the following sits exactly between C and the person who works for HR Department?
a) B
b) The person who works for Marketing Department
c) The person who works for Operations Department
d)D
e) G
80. Who amongst the following sit between the persons who work for Marketing and Investment Banking departments when counted for the left hand side of the person working for Marketing Department?
a) F and G
b) E and C
c) $C$ and $B$
d) F and D
e) B and D
81. How many people sit between the person who workds for Operations Department and A, when counted from the right hand side of A?
a) One
b) Two
c) Three
d) Four
e) None of these

Directions (82-86) - Study the following information carefully to answer the question that follow.
Six couples have been invited to a dinner party. They are Nitika, Geetika, Lajwanti, Rekha, Savitri, Chameli and Faizal, Harbhajan, Akshay, Tirlochan, Ranveer, Aamir. They are seated on a circular table facing each other.
(i) Geetika refuses to sit next to Aamir.
(ii) Lajwanti wants to be between Akshay and Harbhajan.
(iii) Chameli refuses to sit next to Faizal.
(iv) Nitika is seated on Aamir's right hand side.
(v) Faizal and Tirlochan are seated exactly opposite to each other.
(vi) Ranveer and Savitri are seated to the left of Chameli.
(vii) Akshay and Rekha want to enjoy the company of Lajwanti and Tirlochan respectively and are seated closest to them.
(viii) The seating arrangement is such that minimum one woman is always between two men.

## 82. Which of the following statements is correct:

a) Lajwanti is on Tirlochan's right
b) Aamir is on Chameli's right
c) Geetika is on Hari's right
d) Geetika is on Faizal's left
83. If looked in an anti-clockwise manner, who are seated between Tirlochan and Faizal:
a) Savitri, Ranveer, Chameli, Aamir and Nitika
b) Savitri, Ranveer, Rekha, Akshay and Lajwanti
c) Savitri, Ranveer, Geetika, Harbhajan and Lajwanti
d) Savitir, Ranveer, Lajwanti, Akshay and Harbhajan

## 84. Which of the following close neighboring arrangements is correct:

a) Aamir, Chameli and Ranveer
b) Tirlochan, Ranveer and Aamir
c) Nitika, Faizal and Lajwanti
d) Harbhajan, Geetika and Akshay

## 85. Who sits between Geetika and Lajwanti:

a) Faizal
b) Akshay
c) Tirlochan
d) Ranveer
e) None of The Above
86. Who sits to the second left of Nitika:
a) Savitri
b) Ranveer
c) Chameli
d) Tirlochan
e) None of The Above
87. In a class among the passed students Neeta is $22^{\text {nd }}$ from the top and Kalyan, who is 5 ranks below Neeta is $34^{\text {th }}$ from the bottom. All the students from the class appeared for an examination. If the ratio of the students, who passed in the examination to those who failed is $4: 1$ for the class, how many students were there in the class?
a) 90
b) 60
c) 75
d) Data Inadequate
e) None of The Above
88. Seema correctly remembers that she took leave after $21^{\text {st }}$ October and before $27^{\text {th }}$ October. Her colleague Rita took leave on $23^{\text {rd }}$ October but Seema was present on that day. If $24^{\text {th }}$ October was a public holiday and $26^{\text {th }}$ October was Sunday, on which day in October did Seema take leave?
a) $22^{\text {nd }}$ October
b) $25^{\text {th }}$ October
c) $22^{\text {nd }}$ or $25^{\text {th }}$ October
d) Data Inadequate
e) None of The Above
89. Directions Examine the following statements
I. Rama scored more than Rani
II. Rani scored less than Ratna
III. Ratna scored more than Rama
IV. Padma scored more than Rama but less than Ratna

Who Scored the highest?
a) Rama
b) Padma
c) Rani
d) Ratna
e) None of The Above

## Directions (Q. 90 -94) Study the given information carefully and answer the given questiions.

Eight people - A, B, C, D, E, F, G and H are sitting around a circular table facing the centre, not necessarily in the same order. Three people are sitting between A and D. B is sitting second to the right of A. C is to the immediate right of F. D is not an immediate neighbour of either F or E . H is not an immediate neighbour of B .
90. What is E's position with respect to G?
a) Third to the left
b) Second to the right
c) Third to the right
d) Second to the left
e) None of these
91. Four of the following are based on ab ove arrangement and so form a group. Which one does not belong to the group?
a) GE
b) DC
c) AF
d) AB
e) CE
92. Who is sitting third to the right of the one who is sitting to the immediate right of H ?
a) A
b) B
c) E
d) C
e) G
93. Which of the following is true regarding the given arrangement?
a) E is second to the left of C
b) $B$ is an immediate neighbour of $G$
c) H is an immediate neighbour of A
d) $D$ is not an immediate neighbour of H
e) None of these
94. How many people are sitting between H and A when counted from the right side of H ?
a) Three
b) None
c) More than three
d) One
e) Two

Directions ( Q .95 -100) In each of the questions below are given four statements followed by four conclusions number I, II, III and IV. You have to take the given statements to be true even if they seem to be of variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.
95. Statements: Some robots are machines.

Some computers are both robots and machines.
Some animals are machines.
Some toys are animals.

Conclusions: I. Some toys are robots.
II. Some toys are machines.
III. Some animals are computers.
IV. Some robots are not toys.
a) None follows
b) Only II and III follow
c) Only I and III follow
d) Only III follows
e) Only either I or IV follows
96. Statements: All suns are stars.

All moons are stars.
Some planets are suns.
Some stars are gases.
Conclusions: I. Some starts are planets.
II. Some suns are gases.
III. No moon is a planet.
IV. Some gases are moons.
a) None follows
b) Only I follows
c) Only I and II follows
d) Only III and IV follow
e) Only I and III follow
97. Statements: All books are diaries.

Some diaries are pens.
Some pens are drawers.
All drawers are chairs.
Conclusions: I. Some drawers are diaries.
II. Some chairs are pens.
III. Some pens are books.
IV. Some diaries are books.
a) None follows
b) Only II follows
c) Only II and III follow
d) Only II and IV follow
e) All follow
98. Statements: Some buildings are rivers.

Some mountains are both buildings and rivers.
Some roads are buildings.
All roads are trucks.
Conclusions: I. Some mountains are roads.
II.Some buildings are trucks.
III.Some rivers are roads.
IV. Some trucks are rivers.
a) None follows
b) Only I follows
c) Only II follows
d) Only III follows
e) All follow
99. Statements: All tables are round.

Some hills are round.
Some rivers are hills.
All rivers are conical.
Conclusions: I. Some rivers are round.
II. Some hills are conical.
III. Some rivers are both hills and round.
IV. Some tables are conical.
a) None follows
b) Only II follows
c) Only I and III follow
d) Only II and III follow
e) All follow
100. Statements: All sharks are fishes.

Some fishes are birds.
All birds are trees.
All trees are insects.
Conclusions: I. Some insects are sharks.
II. Some sharks are trees.
III. All insects are birds.
IV. Some birds are sharks.
a) None follows
b) Only II follows
c) Only I and IV follow
d) Only II and III follow
e) All follow

## Solution

1. Option A
2. Option C
3. Option D
4. Option B
5. Option A
6. Option C
7. Option A
8. Option B
9. Option C
10. Option A
11. Option D
12. Option A
13. Option A
14. Option D
15. Option A
16. Option C
17. Option D
18. Option B
19. Option B
20. Option E
21. Option C

Let $\mathrm{x} \%$ is second discount, then $45 \times 450 \times 90 / 100 \times(100-\mathrm{x} / 100)=344.25$
$=405(100-\mathrm{x} / 100)=344.25=100-\mathrm{x}=85$
$\mathrm{x}=15$

## 22. Option C

Here, the rule of allegation is to be used

$$
\frac{\text { Horse }}{\text { Carriage }}=\frac{25 / 6}{35 / 6}=\frac{5}{7}
$$



Cost of Horse $=\frac{4 \frac{1}{6}}{4 \frac{1}{6}+5 \frac{5}{6}} \times 1800=\frac{5}{12} \times 1800=$ Rs. 750

## 23. Option E

LCM of $7,8,9=504$, Assume he buys 504 mangoes
$\mathrm{CP}=\frac{252}{9}+\frac{252}{7}=28+36=64$
$\mathrm{SP}=504 / 8=63$
Percentage $(\%)$ Gain $=\frac{64-63}{64} \times 100=25 / 16 \%$

## 24. Option B

$B$ is open for total time, say $x$ hrs. and $A$ is kept open for $x / 2$ hrs.
$=(\mathrm{x} / 2 \times 30)+\mathrm{x} / 20=$ total work $=1$
$\mathrm{x}=15$

## 25. Option B

Filling by $(\mathrm{A}+\mathrm{B})$ in $1^{\text {st }} \mathrm{hr} 1 / 12+1 / 15=3 / 20$, filling by $(\mathrm{A}+\mathrm{C})$ in $2^{\text {nd }} \mathrm{hr} .=1 / 12+$ $1 / 20=2 / 15$

Filling done in first $2 \mathrm{hr} 3 / 20+2 / 15=17 / 60$ in first $6 \mathrm{hr}=17 / 60 \times 3=15 / 60$, Rest filling $=1-51 / 60=2 / 15$

Now in $7^{\text {th }} \mathrm{hr}$, filling is done by $(\mathrm{A}+\mathrm{B})$ in $\frac{3 / 20}{3 / 20}=1$ hour
Total time $=7$ hour

## 26. Option B

Use the formula as given below:
4 men +24 boys can do it in $\frac{26}{\frac{4}{8}+\frac{17}{24}}$ days
For $50 \times 0.9$ times great, they can do in $\frac{26 \times 34}{65} \times \frac{9}{10} \times 50=612$ days

## 27. Option B

$$
7+3 \sqrt{5}(7 \quad 3 \sqrt{5})=(7)^{2} \quad(3 \sqrt{5})^{2}=\sqrt{49 \quad 45}=\sqrt{4}=2
$$

## 28. Option B

Let $\sqrt{0.0169 \times \mathrm{x}}=1.3$
Then, $0.0169 \mathrm{x}=(1.3)^{2}=1.69$

$$
x=\frac{1.69}{0.0169}=100
$$

## 29. Option B

$=>\sqrt{81}+\sqrt{0.81}=10.09-\mathrm{x}$
$=>9+0.9=10.09-\mathrm{x}$
$\Rightarrow>x=10.09-9.9=0.19$

## 30. Option A

$3600=2^{3} \times 5^{2} \times 3^{2} \times 2$
To make it a perfect cube it must be divided by
$5^{2} \times 3^{2} \times 2=450$

## 31. Option D

Total age increased $\quad=(8 \times 2)$ years $=16$ years
Sum of ages of two new men $=(21+23+16)$ years $=60$ years
So average age of two new men $=\left[\frac{60}{2}\right]$ years $=30$ years

## 32. Option C

Total age of 4 members, 10 years ago $=(24 \times 4)=96$ years
Total age of 4 members now $\quad=(96+10 \times 4)$ years $=136$ years

Total age of 6 members now

$$
=(24 \times 6)=144 \text { years }
$$

$$
=(144-136)=8 \text { years }
$$

Sum of the ages of 2 children $\quad=(144-136)=8$ years

Let the age of the younger child be x years.
Then, age of the elder child $=(x+2)$ years
So, $\quad x+x+2=8$
$2 x=6$
$\mathrm{x}=3$
So, age of younger child $=3$ years

## 33.Option C

$31 \times 31-30 \times 30=61$ years

## 34. Option C

Let the present ages of the man and his wife be $4 x$ and $3 x$ years respectively.

$$
\begin{aligned}
& \text { Then, } \frac{4 x+4}{3 x+4}=\frac{9}{7} \\
& 7(4 x+4)=9(3 x+4) \\
& x=8
\end{aligned}
$$

So, their present ages are 32 years and 24 years respectively.
Suppose they were married z years ago.
Then, $\frac{32 \quad \mathrm{z}}{24 \quad \mathrm{z}}=\frac{5}{3}$
$3(32-z)=5(24-z)$

$$
\begin{aligned}
& 2 \mathrm{z}=24 \\
& \mathrm{z}=12
\end{aligned}
$$

## 35. Option C

Since Pooja and Shipra are twins so their ages be same. Let their ages be x and age of Monika be $y$, then,

$$
\begin{equation*}
x+x=y \tag{i}
\end{equation*}
$$

and $\frac{x \quad 3}{y}=\frac{2}{7}$

$$
7 x-2 y=15
$$

Now, from equation (i),

$$
\begin{aligned}
& 7 x-4 x=15 \\
& x=5
\end{aligned}
$$

So, the age of Shipra 3 years hence will be $5+3=8$ years

## 36. Option B

Let the present ages of Arun and Deepak be $x$ years and $3 x$ years respectively. Then, $\quad 4 x+6=26$

$$
\begin{aligned}
& 4 x=20 \\
& x=5
\end{aligned}
$$

So, Deepak's age $=3 \mathrm{x}=15$ years

## 37. Option D

Let the school ages of Neelam and Shaan be $5 x$ and $6 x$ years respectively. Then,

$$
\frac{\frac{1}{3} \times 5 \mathrm{x}}{\frac{1}{2} \times 6 \mathrm{x}}=\frac{5}{9} \quad\left[\frac{1}{3} \times 9 \times 5 x\right]=\left[\frac{5}{2} \times 6 x\right] 15=15
$$

Thus, Shaan's age cannot be determined.

## 38. Option C

$$
\begin{aligned}
& A: B=60: 45 \text { and } A: C=60: 40 \\
& \quad \text { So, } \frac{B}{C}=\left[\frac{B}{A} \times \frac{A}{C}\right]=\left[\frac{45}{60} \times \frac{60}{40}\right]=\frac{45}{40}=\frac{90}{80}=90: 80
\end{aligned}
$$

So, B can give C 10 points in a game of 90 .

## 39. Option A

When B runs 25 m , A runs $\frac{45}{2} \mathrm{~m}$
When B runs $1000 \mathrm{~m}, \mathrm{~A}$ runs $\left[\frac{45}{2} \times \frac{1}{25} \times 1000\right] \mathrm{m}=900 \mathrm{~m}$
So, B beats A by 100 m

## 40. Option B

While A covers 1000 m , B covers (1000-40) $\mathrm{m}=960 \mathrm{~m}$ and C covers (1000-64) m or 936 m

When B covers $960 \mathrm{~m}, \mathrm{C}$ covers 936 m

When B covers $1000 \mathrm{~m}, \mathrm{C}$ covers $\left[\frac{936}{960} \times 1000\right] \mathrm{m}=975 \mathrm{~m}$

So, B can give C a start of (1000-975) or 25 m

## 41. Option A

Ratio of the speeds of A and $\mathrm{B}=\frac{5}{3}: 1=5: 3$
Thus, in a race of 5 m , A gains 2 m over B.
2 m are gained by A in a race of 5 m .
80 m will be gained A in a race of $\left[\frac{5}{2} \times 80\right] \mathrm{m}=200 \mathrm{~m}$
So, winning post is 200 m away from the starting point.

## 42. Option D

$\mathrm{A}: \mathrm{B}=100: 90$ and $\mathrm{A}: \mathrm{C}=100: 87$

$$
\frac{B}{C}=\frac{B}{A} \times \frac{A}{C}=\frac{90}{100} \times \frac{100}{87}=\frac{30}{29}
$$

When B runs $30 \mathrm{~m}, \mathrm{C}$ runs 29 m
When B runs $180 \mathrm{~m}, \mathrm{C}$ runs $\left[\frac{29}{30} \times 180\right] \mathrm{m}=174 \mathrm{~m}$
So, B beats C by (180-174) $\mathrm{m}=6 \mathrm{~m}$

## 43. Option E

$(45 \times 16)$ men can complete the work in 1 day.
So, 1 man's 1day's work $\quad=\frac{1}{720}$
45 men's 6 day's work $\quad=\left[\frac{1}{16} \times 6\right]=\frac{3}{8}$
Remaining work $=\left[1-\frac{3}{8}\right]=\frac{5}{8}$

## 44. Option C

Time taken by pipes A and B to fill the whole tank $=\frac{100}{16.66}=6$ hours
Capacity filled in 2 hours by pipes A, B and C $=2 \times 13.33=26.66 \%$ Remaining capacity $=73.33 \%$
This remaining capacity can be filled by A and $\mathrm{B}=\frac{73.33}{16.66}=4 \frac{2}{5}$
So, the total time required

$$
=2+4 \frac{2}{5}=6 \text { hours } 24 \text { minutes }
$$

Thus, in this case 24 minutes extra are required.

## 45. Option C

1 minute's work of both the punctures $=\left[\frac{1}{9}+\frac{1}{6}\right]=\frac{5}{18}$
So, both the punctures will make the tyre flat in $\frac{18}{5}=3 \frac{3}{5} \mathrm{~min}$.
46. Option A
47. Option B
48. Option B
49. Option B
50. Option C
51. Option B
52. Option B
53. Option C
54. Option C
55. Option D
56. Option B
57. Option B
58. Option B
59. Option C
60. Option C
61. Option C
62. Option D
63. Option C
64. Option D
65. Option A
66. Option D
67. Option B
68. Option C
69. Option C
70. Option D
71. Option D

72. Option B


## 73. Option B



## 74. Option A


75. Option A

76. Option A
77. Option D
78. Option D
79. Option B
80. Option C
81. Option A

Solution (82-86)


## 82. Option B

83.Option A
84.Option A
85.Option B
86.Option C

## 87.Option C

From among those who passed Neeta is $22^{\text {nd }}$ from the top and Kalyan is $22+5=$ $27^{\text {th }}$ from the top and $34^{\text {th }}$ from the bottom. Therefore, total number of students who passed the examination $=27+34-1=60$

Therefore, total number of students in the class
$=60 / 4 \times 5=75$

## 88. Option C

| According to | Leave Date |
| :--- | :--- |
| Seema | $22,23,24,25,26$ |

But Seema was present on $23^{\text {rd }}$. Also, it was holiday on $24^{\text {th }}$ October.
$26^{\text {th }}$ October was Sunday. Hence, possible date may be either $22^{\text {nd }}$ or $25^{\text {th }}$ October.

## 89. Option D

According to the Question
Rama > Rani
Rani < Ratna
Ratna > Rama and Ratna > Padma > Rama
On arranging the above data, we get
Ratna > Padma > Rama > Rani
So, Ratna scored the highest.

> 90. Option D
> 91. Option B
> 92. Option C
> 93. Option B
> 94. Option C
> 95.Option E
> 96.Option B
> 97.Option D
> 98.Option C
> 99.Option B
> 100. Option A

