

**Memory Based
Paper of
RBI Grade B
Prelims
2017**

Quantitative

Memory Based Quantitative Paper for RBI Grade B Prelims 2017

1. A can complete a project in 20 days and B can complete the same project in 30 days. If A and B start working on the project together and A quits 10 days before the project is completed, in how many days will the project be completed?

- (a) A. 18 days
- (b) B. 27 days
- (c) C. 26.67 days
- (d) D. 16 days
- (e) E. 12 days

2. A runs 25% faster than B and is able to allow B a lead of 7 m to end a race in dead heat. What is the length of the race?

- (a) A. 10 m
- (b) B. 25 m
- (c) C. 45 m
- (d) D. 15 m
- (e) E. 35 m

3. A train travelling at 100 km/h overtakes a motorbike travelling at 64 km/h in 40 sec. What is the length of the train in meters?

- (a) 1777 m
- (b) 1822 m
- (c) 400 m
- (d) 1111 m
- (e) 600 m

Directions (4-8) Given below is a table depicting the total maximum marks for each of the five subjects and the number of students in a class who passed and failed in 5 subjects. All the students gave all the exams. Some of the data is missing in the given table

Subject	Total	Passed	Failed
English	100		6
Maths		40	10

Science	100	72	
Social Studies	120		16
Computer		56	

4. What is the highest marks that a student can score in all the 5 subjects together? Maximum Marks in Social studies is 120 and English is 200. Use the values of previous questions.

- (a) 720
- (b) 740
- (c) 760
- (d) 780
- (e) 790

5. By what percentage approximately is the number of students who passed in English is lower than the number of students who passed in Social studies.

- (a) 5
- (b) 8
- (c) 12
- (d) 10
- (e) 13

6. Find the average marks obtained by students who passed in computer. The total marks of computer is 60% more than the total marks of Science. Average marks obtained by students who passed in computer is 20 more than the average marks obtained by students who failed. The total number of students in Computer and the maximum marks in Science are both 100. The sum of marks of all the students in Computer is 80% of the highest marks they could score.

- (a) 122
- (b) 140
- (c) 136.80
- (d) 125
- (e) None of these

7. Find the total marks of Mathematics if the pass marks was 35% and the person who just passed scored 70.
- 160
 - 100
 - 200
 - 240
 - None of these
8. Find the difference between the number of failures in Science and number of passed in English.
- 60
 - 75
 - 66
 - 90
 - 76
9. A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of the water current respectively?
- 2 : 1
 - 3 : 2
 - 8 : 3
 - 3 : 5
 - 8 : 2
10. A, B and C jointly thought of engaging themselves in a business venture. It was agreed that A would invest 6,500/- for 6 months, B, 8,400/- for 5 months and C, 10,000/- for 3 months. A wants to be the working member for which, he was to receive 5% of the profits. The profit earned was 7,400/-. What is the share of B in the profit?
- 1,900/-
 - 2,660/-
 - 2,800/-
 - 2,840/-
 - 2,900/-
11. How much time will it take for an amount of 900/- to yield 81/- as interest at 4.5% per annum of simple interest?
- 2 years
 - 3 years
 - 1 years
 - 4 years
 - 5 years
12. Mr. Thomas invested an amount of 13,900/- divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be 3,508/- what was the amount invested in Scheme B?
- 6,400/-
 - 7,200/-
 - 6,500/-
 - 7,500/-
 - 7,000/-
13. A bag contains 2 red 3 green and 2 blue balls. Two balls are drawn at random. What is the probability that none of the balls drawn is blue?
- $\frac{10}{21}$
 - $\frac{11}{21}$
 - $\frac{2}{7}$
 - $\frac{5}{7}$
 - $\frac{3}{7}$
14. A can contains a mixture of two liquids A and B is the ratio 7 : 5. When 9 liters of mixture is drawn off and the can is filled with B, the ratio of A and B becomes 7 : 9. How many liters of liquid A was contained by the can initially?
- 10
 - 20
 - 21
 - 25
 - 29
15. The difference between the area of circular field and the area of a square field is 168 sq m. Side of the square field is equal to the diameter of the circular field. What is the cost of fencing the square field at the rate of 20 per metre? (in)
- 2,480/-
 - 2,420/-
 - 2,520/-
 - 2,240/-
 - 2,380/-

16. **Directions** (In the given questions, two quantities are given, one as Quantity I and another as Quantity II. You have to determine relationship between two quantities and choose the appropriate option.

- A. If quantity I \geq quantity II
- B. If quantity I $>$ quantity II
- C. If quantity I $<$ quantity II
- D. If quantity I = quantity II or the relationship cannot be established from the information that is given
- E. If quantity I \leq quantity II

The boat takes total time of 4 hours to travel 14 km upstream and 36 km downstream together. The boat takes total time of 5 hours to travel 20 km upstream and 24 km downstream together?

Quantity :

- (i) Speed of the boat in still water (in km/h).
- (ii) 16 km/h

17. **M is an integer selected at random from the set.**

(7, 14, 25, 27, 33, 29 and 30)

Quantity :

- (i) Probability that the average of 12, 9 and M is at least 17.
- (ii) $\frac{1}{3}$

18. $\left(\frac{x^2}{5}\right) + x + \left(\frac{4}{5}\right) = 0$

$$3y^2 + 4y + 1 = 0$$

Quantity :

- (i) x
- (ii) y

19. **$mn \neq 0$**

Quantity :

- (i) $m = n$
- (ii) $\frac{m}{n}$

20. **A and B can together finish a piece of work in 20 days. If B starts working and after 15 days is replaced by A, A can finish the remaining work in 24 days.**

Quantity :

- (i) Number of days taken by B alone to finish the same piece of work.

- (ii) Number of days taken by A alone to finish the same piece of work.

Directions (21-25): Study the given information carefully and answer the given questions.

The revenue of a given railway zone was collected through Online Ticket Sales, Offline Ticket Sales, Freight, Fines-during 3 Financial Years (FY 2013-14, FY 2014-15, FY 2015-16)

FY 2013-14 : Total revenue collected was 3500 crore.

Fines (X crore) comprised $7\frac{6}{7}\%$ of the total revenue and revenue from online ticket rates was 'X + 300' crore. Revenue from freight was 12% more than that from offline ticket sales.

FY 2014-15 : Revenue from online ticket sales increased by Rs. 25 crore over FY 2013-14. Revenue from offline ticket sales was 40% of the total revenue in FY 2014-15. Revenue from Freight and Fines was in the respective ratio of 5 : 1.

FY 2015-16 : Revenue from fines in FY 2013-14 was

$\frac{11}{16}$ th of that in FY 2015-16. Revenue from online ticket sales increased by 50% over that in FY 2014-15 and that from offline ticket sales was the average of that in FY 2013-14 and 2014-15. 1116

Revenue from freight has been and will continue to increase steadily by Rs. 250 crore every financial year.

21. **Revenue from fines comprised two sources-vendors and passengers. Fines from passengers (Rs. Y crore) remained constant in FY 2013-14 and FY 2014-15. If the fine from vendors in FY 2013-14 was 55% of that in FY 2014-15, what was the value of Y?**

- (a) 180
- (b) 200
- (c) 218
- (d) 208
- (e) 220

22. **If the rail profit in FY 2014-15 was 12.5% of the total expense, what was the total expense for FY 2014-15? (in Rs. crore)**

- (a) 2900
- (b) 2400
- (c) 3200
- (d) 3000
- (e) 3822

23. In FY 2017-18, if the revenue from fines increases by 20% over FY 2015-16, what would be the ratio between the revenues from fines and freight in FY 2017-18?

- (a) 2 : 3
- (b) 1 : 5
- (c) 2 : 5
- (d) 3 : 4
- (e) 4 : 5

24. If the average revenue from online ticket sales in FY 2014-15, FY 2015-16 and FY 2016-17 was RS. 1150 crore. By what percent did the revenue from online ticket sales increased in FY 2016-17 as compared to that in 2014-15?

- (a) 250
- (b) 150
- (c) 300
- (d) 225
- (e) 230

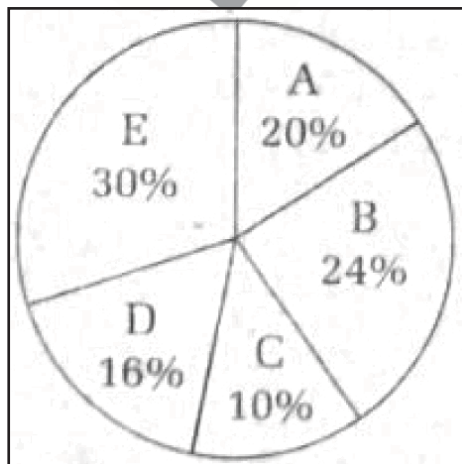
25. If the average cost of a railway ticket was RS. 300 in FY 2014-15 how many passengers travelled by railways in FY 2014-15?

- (in crore)
- (a) 4.8
 - (b) 6.4
 - (c) 6.2
 - (d) 5.4
 - (e) 7.73

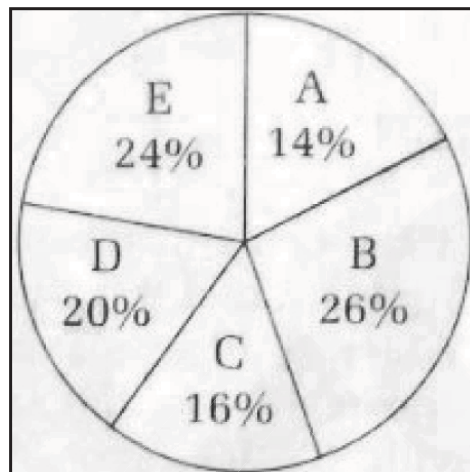
Directions (26-30): Refer to the pie charts to answer the given questions.

Data regarding villages – A, B, C, D and E- in a district – in 2015

Total village population = 18000



Total number of illiterates = 40% of Total Village Population



Total village population = Number of literates + Number of Illiterates

26. In 2017, the population of village C remained the same as that in 2015, but the number of literates increased by 'X'. As a result the total number of literates become 70% more than that of illiterates. What is the value of 'X'?

- (a) 620
- (b) 440
- (c) 680
- (d) 485
- (e) 430

27. The difference between the number of illiterates in village D and E is approximately what percent of that of literates in village D and E?

- (a) 30
- (a) 20
- (b) 35
- (c) 13
- (d) 15

28. In Village D, the male to female ratio among the illiterates is 5 : 3 respectively. Out of the illiterates. If 'X' females and 1.25 X' males work as farmers and the ratio between males and females who do not work as farmers is 5 : 2 respectively, what is the value of 'X' ?

- (a) 240
- (b) 300
- (c) 360
- (d) 380
- (e) 280

29. The average number of illiterates in Village D, F and G is 1910. 40% and 30% of the population of villages F and G respectively are illiterate. If the ratio of the population of Village F and G is 4 : 5 respectively, what is the total population of Villages F and G together ?

- (a) 10000
- (b) 12000
- (c) 12456
- (d) 13000
- (e) 14000

30. In Village A, if the respective ratio between number of males and females is 17 : 13 and there are 1000 illiterate males in village A, what is the number of male literates in village A ?

- (a) 480
- (b) 540
- (c) 940
- (d) 1040
- (e) 1140

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