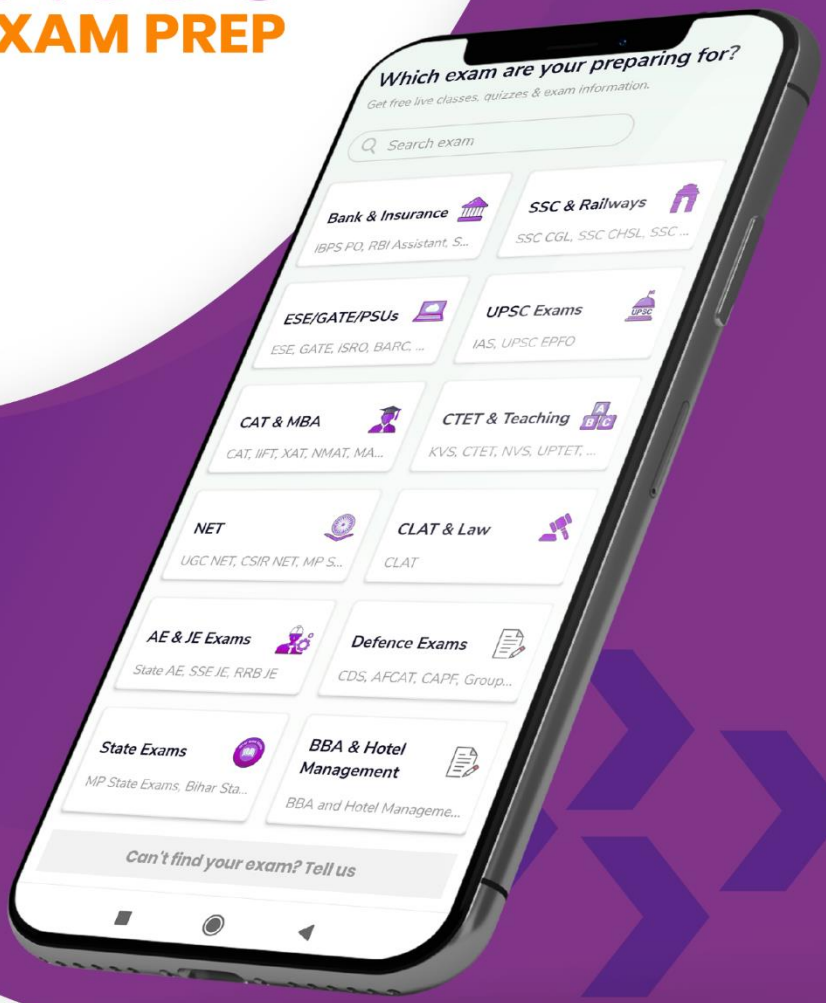
BYJU'S EXAM PREP



IBPS PO Pre 2017

Quant Question Paper with Solution

(DOWNLOAD PDF)

https://byjusexamprep.com

GET IT ON Google Play

Direction: What should come in place of the question mark '?' in the following number series?
1. 17, 98, 26, 89, 35, ?
A. 80
B. 75
C. 67
D. 53
E. None of these

Direction: What should come in place of the question mark '?' in the following number series?
2. 2, 17, 89, 359, 1079, ?
A. 2137
B. 2121
C. 2377
D. 2159
E. None of these

Direction: What will come in place of the question mark (?) in the following number series?
3. 3, 5, 15, 45, 113, ?
A. 250
B. 243
C. 247
D. 261
E. None of these

Direction: What will come in place of the question mark (?) in the following number series?
4. 7, 4.5, 5.5, 12, 49, ?
A. 393
B. 396
C. 354
D. 367
E. None of these

Direction: What will come in place of the question mark (?) in the following number series?
5. 3240, 540, 108, 27, ?, 4.5
A. 7
B. 10
C. 9
D. 8
E. None of these

Direction: What should come in place of question mark (?) in the following question? (You do not have to calculate the exact value.)
6. (√80.997 - √25.001)
× (√120.98 + √16.02) = ?
A. 20
B. 30
C. 40
D. 50
E. 60

Direction: What will come in the place of question mark (?) in the following question (You do not have to calculate the exact value)?

7. 53.01 - 345.02 ÷ 22.99 = 2 ×(?)
A. 14
B. 19
C. 24
D. 54
E. 64

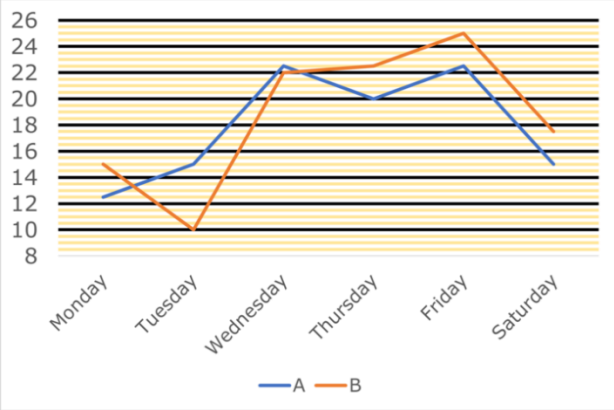
Direction: What approximate value should come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)
8. (184.002 – 29.8 ÷ 5.023) × 29.997 = ?
A. 5140
B. 5240
C. 5340
D. 5440
E. 5540

Direction: What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)
9. $\sqrt{3099.985 \div 62.001 + 14.001} = ?$
A. 8
B. 13
C. 18
D. 23
E. 28

Direction: What should come in place of question mark (?) in the following question? (You do not have to calculate the exact value.)
10. (111.93 × 5) ÷ 14.02 = 11.002 + ?
A. 11
B. 10
C. 29
D. 34
E. 40

Direction: What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)
11. 24.97% of 84.01 ÷ 6.995 = ?
A. 3
B. 6
C. 9
D. 12
E. 15

Direction: Study the following graph carefully and answer the questions that follow.
The line-graph given below shows the number of books sold(in hundreds) by two shops A and B on 6 days of a week.



12. What is the average number of books(approximately) sold by shop B during all the given days together?
A. 1193
B. 1867
C. 1534
D. 2246
E. 2048

13.The number of books sold by shop B on Friday is what percent of the total number of books sold by both shop A and B together on all the given days together?
A. 21%
B. 8%
C. 11%
D. 19%
E. 15%

14.What is the respective ratio of the number of books sold by shop A on Thursday to the number of books sold by shop B on Monday?
A. 11 : 12
B. 7 : 5
C. 3 : 4
D. 8 : 3
E. None of these

15. What is the respective ratio of the total number of books sold on Friday to the total number of books sold on Thursday?
A. 14 : 13
B. 13 : 14
C. 17 : 19
D. 19 : 17
E. None of these

16.The total books sold by shop B on all the given days excluding Wednesday is what percent of the total number of books sold on Thursday, Friday and Saturday together by the same shop?
A. 168.25%
B. 167%
C. 177%
D. 138.5%
E. 137%

Direction: Read the following table carefully and answer the questions that follow:
The data of the total students in a class along with the data of those who do not take part in any activities is given. There are only

two activities in the class and the ratio of students taking part in these 2 activities is also given below.

Classes	Total Students	Students not participating in any activity	Ratio of students taking part in Group Singing : Quiz
VII	280	210	5:2
VIII	310	220	4:1
IX	185	95	3:2
X	220	160	7:3

17. What is the approximate average number of students who take part in the activities from classes VII, VIII and X?
A. 78
B. 73
C. 83
D. 87
E. 92

18.What is the ratio of the students who participated in group singing from VIII class to those who participated in the quiz from IX class?
A. 2:3
B. 3:1
C. 1:3
D. 2:1
E. None of these

19.What is the difference between the number of students who take part in quiz from VII & VIII classes together and total students who take part in any activity from Class IX?
A. 52
B. 56
C. 59
D. 63
E. 66

20.The number of students who take part in quiz from VII class is what approximately percent of the total number of students who take part in group singing from VIII and X class together?
A. 19%
B. 17%
C. 22%
D. 23%
E. 24%

21.What is total number of students who take part in quiz from all the classes together?
A. 69
B. 78
C. 87
D. 82
E. 92

22. The total number of students who do not take part in any of the activities from class IX is what percent of the total number of students who took part in any of the activities from class VII, VIII & IX?
A. 48
B. 35
C. 38
D. 49
E. None of these

23.The ratio of the speed of Two trains is 5:8. Sum of their length is 660. The ratio of time taken to cross an Electric Pole by train A and B is 4:3. What is the difference between the length of two trains?
A. 50 m
B. 40 m
C. 60 m
D. 45 m
E. None of these

24.At present, the sum of the ages of four people, A, B, C, and D, is 76. After 7 years, the ratio will be 7:6:5:8. Find out the present age of C?
A. 12
B. 11
C. 17
D. 13
E. None of these

25.There are four consecutive even integers. Sum of the reciprocals of the first two number is (11/60). Find the reciprocal of third largest number of the series.
A. 1/12
B. 2/14
C. 1/14
D. 2/13
E. None of these

26.There is a three digit number. The digit at the tenth place is 3. If the place of hundreds and units are interchanged with each other symmetrically about the tens position, then the new number obtained is 396 more than the original three digit number. The sum of the digits at unit & hundredth place is 14. Find out the original number.
A. 513
B. 539
C. 439
D. 613
E. 543

27.Marked price of an article is 1600 Rs. more than the cost price. When the same article is sold at a discount of Rs. 500 then the percent profit earned is 25%. For earning a profit of 30%, the article should be sold at what price?

A. 5740
B. 5720
C. 5620
D. 5730
E. None of these

28.A takes 24 day in completing a work alone. Time taken by A in completing 1/3rd of the work is equal to the time taken by B in completing half of the work. How many days will be taken in completing the work if both A & B start working together?
A. 21/3 days
B. 48 days
C. 40 days
D. 48/5 days
E. None of these

29.A train left from station A for station B at 4 pm at an average speed of 80 kmph. At 8 pm, another train also had left from station A for station B on a parallel track at an average speed of 120 kmph. How far from station A is the other train expected to overtake the first train?
A. 900 km
B. 940 km
C. 960 km
D. 980 km
E. 920 km

30.In a business, A invested 1200 rs. more than B. B invested his amount for 15 months while A invested for 4 months more than that of B. If total profit was 1240 rs. in which the profit of B is 280 Rs. less than that if A. then what was the invested amount of A?
A. 6000
B. 7000
C. 5000
D. 8000
E. 6500

31.A bucket contains a mixture of two liquids A and B in the proportion 7 : 5 . If 9 litres of the mixture is replaced by 9 litres of liquid B, then the ratio of the two liquid becomes 7 : 9. How much of the liquid A was there in the bucket?
A. 21 litres
B. 15 litres
C. 23 litres
D. 18 litres
E. 25 litres

32.The difference between simple interest and compound interest at the rate of 12% on the same amount for 3 years is Rs. 112.32. What is the principal amount if the interest is compounded annually?
A. Rs. 25000
B. Rs. 2500

C. Rs. 50000
D. Rs. 5000
E. Rs. 2000

33.The ratio of the volume of a cone to that of a cylinder if cylinder radius is reduced to 1/4 times and its height increased to 8 times of that of the cone, is -
A. 3 : 2
B. 2 : 3
C. 5 : 7
D. 7 : 5
E. None of the above

34.The speed of a boat when travelling downstream is 32 km/h, whereas when travelling upstream it is 28 km/h. What is the speed of the boat in still water?
A. 27 km/h
B. 29 km/h
C. 31 km/h
D. Cannot be determined
E. None of the above

35.A shopkeeper mixed two verities of rice at Rs. 40/kg and Rs. 60/kg in the ratio 3: 2 and sold the mixture at 10% profit. Find the price per kg at which he sold the mixture?
A. Rs. 56
B. Rs. 58.8
C. Rs. 54
D. Rs. 52.8
E. None of these

ANSWERS

1. Ans. A.
The pattern of the series is:
17 + 81 = 98
98 – 72 = 26
26 + 63 = 89
89 – 54 = 35
35 + 45 = 80
Hence, the missing number is 80.

2. Ans. D.
17 = 2 x **6** + *5*
89 = 17 x **5** + *4*
359 = 89 x **4** + *3*
1079 = 359 x **3** + *2*
? = 1079 x **2** + *1*, i.e. ? = 2159

3. Ans. B.
$5 = 3 + (1^3 + 1)$
$15 = 5 + (2^3 + 2)$
$45 = 15 + (3^3 + 3)$
$113 = 45 + (4^3 + 4)$
$? = 113 + (5^3 + 5)$, i.e. ? = 243

4. Ans. A.
4.5 = 7 x 0.5 + 1
5.5 = 4.5 x 1 + 1
12 = 5.5 x 2 + 1
49 = 12 x 4 + 1
? = 49 x 8 + 1, i.e. ? = 393

5. Ans. C.
540 = 3240/6
108 = 540/5
27 = 108/4
? = 27/3, i.e. ? = 9
4.5 = 9/2

6. Ans. E.
Approximating the values:
$(\sqrt{81} - \sqrt{25}) \times (\sqrt{121} + \sqrt{16}) = ?$
(9 - 5) × (11 + 4) = ?
4 × 15 = ?
? = 60

7. Ans. B.
53 - 345 ÷ 23 = 2 ×(?)
53 - 15 = 2 ×(?)
38 = 2 ×(?)
? = 19

8. Ans. C.
(184 - 6) × 30 = ?
178 × 30 = ?
? = 5340

9. Ans. A.
By approximation, we get:
$? = \sqrt{3100 \div 62 + 14}$
$= \sqrt{50 + 14}$
$= \sqrt{64}$
= 8

10. Ans. C.
By approximation, we get:
112 × 5 ÷ 14 = 11 + ?
⇒ 112 × 5 ÷ 14 = 11 + ?
⇒ 560 ÷ 14 = 11 + ?
⇒ 40 = 11 + ?
⇒ ? = 40 – 11 = 29

11. Ans. A.
25% of 84 ÷ 7 = ?
[(25 × 84)/100]÷ 7 = ?
21÷ 7 = ?

? = 3

12. Ans. B.

Required average = $\frac{(15+10+22+22.5+25+17.5)}{6} \times 100 = \frac{11200}{6} = 1866.66 \approx 1867$

13. Ans. C.

Books sold by Shop A on all days = (12.5 + 15 + 22.5 + 20 + 22.5 + 15) × 100 = 10750

Books sold by Shop B on all days = (15 + 10+ 22 + 22.5 + 25 + 17.5) × 100 = 11200

Total number of books sold by both Shop A and B on all the days together = 11200 + 10750 = 21950

Number of books sold by Shop B on Friday= 25 × 100 = 2500

Required percentage = $\frac{2500}{21950} \times 100 = 11.38\% \approx 11\%$

14. Ans. E.

Number of books sold by Shop A on Thursday = 20 × 100 = 2000

number of books sold by Shop B on Monday = 15 × 100 = 1500

Required ratio = 2000 : 1500 = 4 : 3

15. Ans. D.

Total number of books sold on Friday = (22.5 + 25) × 100 = 4750

Total number of books sold on Thursday = (20 + 22.5) × 100 = 4250

Required ratio = 4750 : 4250 = 19 : 17

16. Ans. D.

The total books sold by Shop B on all days excluding Wednesday = (15 + 10 + 22.5 + 25 + 17.5) × 100 = 9000

Total number of books sold on Thursday, Friday and Saturday together by shop B = (22.5 + 25 + 17.5) × 100 6500

Required % = $\frac{9000}{6500} \times 100 = 138.46\% \approx 138.5\%$

17. Ans. B.

as given data who didn't take part in any activity & total students,

Students who take part in activities from class

VII = (280-210) = 70

VIII = (310-220) = 90

X = (220 - 160) = 60

Average = (70+90+60)/3 = 73.33, i.e. approximately 73

18. Ans. D.

Students who participate in group singing from class VIII = (310-220)* 4/5 = 72

Students who participate in quiz from IX class = (185-95)*2/5 = 36

Required Ratio = 72:36, i.e. 2:1

19. Ans. A.

Number of students who take part in quiz from VII & VIII classes together = (70*2/7) + 90*1/5 = 20 + 18 = 38

total students who take part in any activity from Class IX = 185-95 = 90
Required Difference = 90 - 38 = 52
20. Ans. B.
Students who take part in group singing from VIII and X together = (90*4/5) + (60*7/10) = 72 + 42 = 114
Students who take part in quiz from VII = 70*2/7 = 20
Required percent = 20/114*100 = 17.54%, i.e. approximately 17%
21. Ans. E.
Total students who take part in quiz from all the classes together = (70*2/7) + (90*1/5) + (90*2/5) + (60*3/10)
= 20 + 18 + 36 + 18 = 92
22. Ans. C.
Total students who take part in any activity from class VII, VIII & IX = 70 + 90 + 90 = 250
Total students who do not take part in any activity from class IX = 95
Required % = 95/250 * 100 = 38
23. Ans. C.
Given that length of first train + length of second train = 660
Speed of first train : Speed of second train = 5:8 = 5x : 8x
Time taken to cross the poll by two trains = 4:3 = 4y:3y
Now ,
(5x*4y) + (8x*3y) = 660
44xy = 660
xy = 15
$L_1 - L_2$ = 24xy -20xy = 4xy = **60 m**
24. Ans. D.
Currently : A+B+C+D = 76
According to ques , after 7 years A+B+C+D = 7x+6x+5x+8x = 76+7*4
26x = 76 + 28
X = 104/26
x = 4
C's present age = 5x – 7 =
20 – 7
= 13
25. Ans. C.
Let 4 consecutive even numbers are x, x+ 2, x+ 4, x+ 6
According to the question -
1/x + 1/x+2 = 11/60
x+2+x/ x(x+2) = 11/60
2(x+1)/x^2 + 2x = 11/60
120x + 120 = 11x ² + 22x
11x ² - 98x – 120 = 0
So ,
X = -24/22 , 10
X = -12/11 , 10
So, the numbers will be 10,12,14,16.
Hence,
Third largest number = 14
Reciprocal of third number = 1/14
26. Ans. B.
Let digit = xyz
Given y = 3
According to the question =

(100z+10y+x) - (100x+10y+z) = 396x
99z-99x = 396
Z-x = 4
Also ,
Z+ x = 14
Solving (i) & (ii)
Z = 9 , x= 5
The original number is 539
27. Ans. B.
According to the question ,
Marked Price = 1600 + Cost price - (i)
MP – 500 = 125/100 * CP - (ii)
MP = 5/4 CP + 500 - (ii)
4MP = 5CP + 2000 -(ii)
Solving (i) and (ii)
Cost Price = 4400
Now , the selling price
= (130/100) * 4400
= 5720
28. Ans. D.
Time taken by A to complete a work alone - 24 days
Time taken by A in completing 1/3 of work = 24*1/3= 8 Days
8 day = time taken by B in completing 1/2 of work
B alone can complete the work = 16 days
The required time in completing the work if both A & B start working together?
16*24 / 40
= 48/5 Days

29. Ans. C.
Distance covered by 1st train in 4 hours = 80 × 4 = 320 km

Relative speed of 2nd train = 120 – 80 = 40 km/hr

It will overtake other train in $\frac{320}{40}$
= 8 hours
Distance between overtaking point and station A = 8 × 120 = 960 km
30. Ans. A.
Let B's investment = x rs.
∴ A's investment =(x + 1200) rs.
Ratio of the profits of A and B = (x+1200)*(15+4):x*15
= {19(x+1200)}:15x
Now,let the total profit of A =y
∴ total profit of B = (y-280)
But total profit = 1240
⇒y+(y-280)=1240
⇒2y=1520
⇒y= 760
∴profit of A = 760rs.
Profit of B = 760-280=480 rs.
Ratio of profits= 760:480 = 19:12
According to the question,

$$\frac{19(x+1200)}{15x} = \frac{19}{12}$$

$$\Rightarrow 12x+14400=15x$$

⇒3x = 14400
⇒x = 4800 rs.
⇒investment of A = 4800+1200
= 6000 rs.

31. Ans. A.
Suppose the two liquids A and B are 7x litres and 5x litres respectively
Now, when 9 litres of mixture are taken out,

$$A remains\ 7x-9\left(\frac{7}{7+5}\right)=7x-\frac{9\times7}{12}=\left(7x-\frac{21}{4}\right)litres$$

$$At\ remains\ 5x-9\left(\frac{5}{7+5}\right)=5x-\frac{9\times5}{12}=\left(5x-\frac{15}{4}\right)litres$$

Now, when 9 liters of liquid B are added

$$\left(7x-\frac{21}{4}\right):\left(5x-\frac{15}{4}\right)=7:9$$

$$or\ \frac{7x-\frac{21}{4}}{5x-\frac{15}{4}+9}=\frac{7}{9}$$

$$or,\ 63x-\frac{189}{4}=35x-\frac{105}{4}+63$$

$$28x=\frac{189}{4}-\frac{105}{4}+63=21+63=84$$

$$x=\frac{84}{28}=3$$

$$\therefore 7x=7\times3=21litres$$

32. Ans. B.
Let the principal amount be Rs. x.
Calculating SI:
SI for 1 year at 12% rate is Rs (12/100)x. For 3 years, it will be Rs (36/100)x ------ (1)
Calculating CI:
For 1st year, interest = (12/100)x
For 2nd year, interest = (12/100)x + (12/100)x + (144/10000)x
For 3rd year, interest = (12/100)x + (12/100)x + (12/100)x + (144/10000)x + (144/10000)x + (1728/1000000)x ------ (2)
Subtracting equation 2 from 1 and solving further,
312 × 144 × x/1000000 = 112.32
⇒ x = Rs 2500
Alternative way: Using the formula for difference between CI and SI for 3 years, $\frac{PR^2}{100^2}\left(3+\frac{R}{100}\right)$
We can also use the above formula to find the value of P.
33. Ans. B.
Let radius of the base and height of the cone be 'r' & 'h' respectively.
Then volume of cone = πr²h/3
For cylinder, radius is reduced by 4 times = r/4
And, height is increased by 8 folds = 8h
Volume of cylinder = πR²H = π(r/4)²(8h) = (16/8)πr²h = πr²h/2
Ratio of volume of cone to volume of cylinder = (πr²h/3) : (πr²h/2)
Or, Ratio = 2 : 3.
34. Ans. E.
Suppose the speed of boat in still water is *x* km/h and speed of stream is *y* km/h
Speed of boat in downstream = (*x* + *y*) km/h
∴ x + y = 32 …(i)

Speed of boat in upstream = (x – y) km/h

$\therefore$ x – y = 28 …(ii)

Add. Eqs. (i) and (ii), we get

2x = 60

x = 30 km/h

35. Ans. D.

Let quantities bought are 3x and 2x respectively.

CP of mixture = {(40*3x+60*2x)/2x+3x} = 48

Hence, SP of the mixture = 1.1 ×48 =52.8