Question	The distance between two cities A and B is 330 km. A train starts from A at 8a.m. and travels towards B at 60 km/ hr. Another train starts from B at 9 a.m. and travels towards A at 75 km/hr. At what time do they meet?	
Type	multiple_choice	
Option	1:00 AM	incorrect
Option	11:30 AM	incorrect
Option	12:00 AM	incorrect
Option	11:00 AM	correct
Solution	Distance by train started from A in one hour = 60km remaining distance = 330 - 60 = 270km time = distance / speedA + speedB, time = 270/135 time = 2 hours that means they both reach at 11:00 AM (9am+2hours)	
Marks	1	0

Question	The speed of train A is x km/ hr crosses 120 m platform in 16 seconds and the speed of train B is 108 km/hr it crosses the same platform in 40/3 seconds. If the length of the train A and B are the same, find the value of x.	
Type	multiple_choice	
Option	75	incorrect
Option	90	correct
Option	95	incorrect
Option	85	incorrect

Solution	Length of the both trains =y m (y+120)/(x * (5/18)) =16 (y +120) = 5x18 * 16 (y +120) = 40x/9 X= (y +120)x*9/40 Again, (y +120) [(108 * 5/18) = 40/3 (y + 120)/30 = 40/3 (Y +120) = 400 y = 280m x = (280 +120) x 9/40 = 90kmph	
Marks	1	0

Question	A boat goes 20 km upstream and 30km downstream in 2 hours 32 miutes. If speed of stream is 5 km/h, what is speed of boat in still water in km/h?	
Type	multiple_choice	
Option	16	incorrect
Option	15	incorrect
Option	25	incorrect
Option	20	correct
Solution	Let the speed of boat be x A/Q 20/(x - 5) + 30/(x + 5) = 2 (32/60) 20/(x - 5) + 30/(x + 5) = 38/15 According to the fourth option put x = 20 20/15 + 30/25 = 38/15 (200 + 180)/150 = 38/15 38/15 = 38/15 LHS=RHS So, answer is 20	

Marks	1	0

Question	Find the time taken by a boatman to travel a distance of 150 km down-stream where downstream speed of boatman is 250 percent of upstream speed of boatman. Speed of stream is 15 km/hr.	
Type	multiple_choice	
Option	3	correct
Option	4	incorrect
Option	7	incorrect
Option	6	incorrect
Solution	Let the speed of boat=b d=b+s (down) u=b-s (up) Also, d = 250% of u = 2.5 d/u=5/2 b+15/b-15 = 5/2 b = 35km/h d=35+15=50km/h Time taken by the boatman to travel a distance of 150 km downstream = 150/50 = 3 hours	
Marks	1	0

Question	In a certain examination, the number of passes and failures are in the ratio 3: 2. If 12 more students had passed, then the ratio of passes to failures would have been 21: 10. The number of students who have passed the examination is ?	
Type	multiple_choice	
Option	2000	inorrect
Option	1750	incorrect
Option	2040	correct
Option	2090	incorrect

Solution	Let the number of passes be 3x and that of failures be 2x in the exam. A/Q 3x+12/2x =21/10 30x+120= 42x 12x=120 x=10 Number of students who have passed the exam = 3x=3*10=30 Ans.	
Marks	1	0

Question	Geeta runs 5/2 times as fast as Babita. In a race, if Geeta gives a lead of 40 m to Babita, find the distance from the starting point where both of them will meet (correct up to two decimal places).	
Type	multiple_choice	
Option	66.78	incorrect
Option	70	incorrect
Option	67.67	incorrect
Option	66.67	correct
Solution	Let the speed of Babita be 2x Speed of Geeta = (5/2) * 2x = 5x Let the distance covered by Geeta be y meters Distance covered by Babita = (y - 40) meters As time is constant, distance is directly proportional to speed 2x/5x = y-40/y 2y=5y-200 y=200/3 = 66.67m	
Marks	1	0

Question	A, B and C run simultaneously, starting from a point, around a circular track of length 1200 m, at respective speeds of 2 m/s, 4 m/s and 6 m/s. A and B run in the same direction, while C runs in the opposite direction to the other two. After how much time will they meet for the first time?
Type	multiple_choice

Option	10	correct
Option	30	incorrect
Option	40	incorrect
Option	50	incorrect
Solution	Relative speed of A and B=(4-2)=2m/s Relative speed of B and C= (6 + 4) =10 m/s Relative speed of A and C= (6 + 2) =8 m/s Time taken by A and B = 1200/2 = 600 sec Time taken by B and C = 1200/10 = 120 sec Time taken by A and C =1200/8 = 150 sec A, B and C will meet at = L.C.M {600,120, 150} = 600 sec = 600/60 = 10 min	
Marks	1	0

Question	A 1200 m long train crosses a tree in 120 sec, how much time will it take to pass a platform 700 m long?	
Type	multiple_choice	
Option	125	incorrect
Option	150	incorrect
Option	190	correct
Option	140	incorrect
Solution	Speed = 1200/120 = 10 m/sec Total distance = 1200 + 700 = 1900 m Time = distance/speed = 1900/10 = 190 sec Ans	
Marks	1	0

Question	A thief was spotted by a policeman from a distance of 225 metres. When the policeman started the chase, the thief also started running. If the speed of the thief was 11 km/h and that of the policeman was 13 km/h, how far would the thief have run, before the policeman caught up with him ?
Type	multiple_choice

Option	1237.5	correct
Option	2237.5	incorrect
Option	2006.5	incorrect
Option	6500	incorrect
Solution	Relative speed = (13 - 11) = 2 km/h To convert km/h into m/s we have to multiply it by 5/18. 2x 5/18 = 5/9 m/s. Time = 225/(5/9) = 405 sec The distance thief had run before he was caught by the policeman = 11x 5/18x 405 = 1237.5 m	
Marks	1	0

Question	If A:B:C = 4:5:6, then what is the ratio of (1/A) : (1/B): (1/C)?	
Type	multiple_choice	
Option	15:7:9	incorrect
Option	24:17:20	incorrect
Option	16:8:9	incorrect
Option	15:12:10	correct
Solution	LCM of (4,5,6)=60 A/Q (1/A): (1B): (1/C) = {60 4}: {60/5} : (60 /6}. To get simplest form.. (1/A): (1/B): (1/C)=15:12:10 Ans.	
Marks	1	0

Question	T1 train from Gujarat to Mumbai departs at 7 a.m. and arrives at 12 p.m. T2 is a second train that departs Mumbai at 7 a.m. and arrives in Ahmed-abad at 1 p.m. When did the two trains come into contact?	
Type	multiple_choice	
Option	9.43 am.	correct

Option	10 am	incorrect
Option	9.30 am	incorrect
Option	11 am	incorrect
Solution	Let x to be the distance between two stations. Mumbai is reached in 5 hours by train T1. Gujarat is reached in 6 hours by train T2. Both trains' relative speeds will be summed = x/5 + x/ 6 = 11x/30 Time taken = x/11x/30 = 30/11 or (30 X 60)/11 = 2.43 hours, resulting in 7 + 2.43 = 9.43 am.	
Marks	1	0

Question	The price of two articles are in the ratio of 3 : 2 respectively. The price of first article is increased by 40% and the price of second article is decreased by x%. If the new ratio of the price of the two articles is 7 : 3 respectively, then what is the value of x?	
Type	multiple_choice	
Option	30	incorrect
Option	20	incorrect
Option	15	incorrect
Option	10	correct
Solution	Let the cost price of two articles is = 300y & 200y When the price of first article is increased by 40% price of first article = 300y * 1.4 = 420y When the price of second article is decreased by x% Price of second article = 200y*(1 - (x/100)) A/Q {(420y)/ 200y(1-x/100)} = 7/3 180/200=1-x/100 x=10 Ans.	
Marks	1	0

Question	Excluding stoppages, the speed of a bus is 54 km/hr and including stoppages it is 45 km/hr. For how many minutes does the bus stop per hour?	
Type	multiple_choice	
Option	10	correct
Option	14	incorrect
Option	12	incorrect
Option	8	incorrect
Solution	Required time for the stoppage per hour =Difference of speeds/Speed without stoppage = (54-45)/54 hour = 1/6 hour = 10 min Ans	
Marks	1	0

Question	If Mohan goes to his office from his house at a speed of 16 km/hr, he reaches the office 5 minutes late. If he goes at a speed of 20 km/hr, he reaches 10 minutes earlier than the office time. The distance of his office from his house is ?	
Type	multiple_choice	
Option	18	incorrect
Option	24	incorrect
Option	21	incorrect
Option	20	correct
Solution	Distance is same so speed and time are in inverse. Speed => 16:20 Time => 20:16 5:4 Time diff = 1unit = (5+10)min=15min=15/60Hours A/Q Distance = 16*5 unit = 80*15/60 = 20 Km	
Marks	1	0

Question	Two persons ride towards each other from two places 55km apart, one riding at 12 km/h and the other at 10 km/h. When will they be 11 km apart?	
Type	multiple_choice	
Option	2	correct
Option	3	incorrect
Option	2.5	incorrect
Option	1	incorrect
Solution	Relative speed of both persons =12 +10 = 22 km/h Now, distance between both of them =55- 11 = 44 km/h Time, when distance is 11 km between both of them Total distance /Relative Speed = 44/22= 2Hours ans	
Marks	1	0

Question	The speed of a boat in still water is 6km/hr and the speed of the stream is 1.5 km/h. A man rows to a place at a distance of 22.5 km and comes back to the starting point. The total time taken by him is ?	
Type	multiple_choice	
Option	10	incorrect
Option	11	incorrect
Option	9	incorrect
Option	8	correct
Solution	Speed of boat in still water = 6 km/h Speed of stream = 1.5 km/h Speed downstream = (6+1.5)km/h = 7.5 km/h Speed upstream = (6 - 1.5)km/h = 4.5 km/h Distance =22.5km Td=22.5/7.5 and Tu = 22.5/4.5 Total time taken =Td + Tu = 22.5/7.5 + 22.5/4.5 = 3+5 = 8 hours ans	
Marks	1	0

Question	A gun is fired at a distance of 1.34 km from Geeta. She hears the sound after 4 s. The speed at which sound travels is ?	
Type	multiple_choice	
Option	355	correct
Option	750	incorrect
Option	420	incorrect
Option	300	incorrect
Solution	Sound covers 1.34 x 1000m distance in 4s. Speed of the sound = 1.34*1000/4 = 335 m/s Ans	
Marks	1	0

Question	If I walk at 5km/h, I miss a train by 7 min. However, if I walk at 6 km/h I reach the station 5 min before the departure of the train. The distance between my house and the station is in KM?	
Type	multiple_choice	
Option	6	correct
Option	5	incorrect
Option	9	incorrect
Option	7	incorrect
Solution	Distance is same so speed and time are in inverse. Speed => 5:6 Time => 6:5 Time diff = 1unit = (7+5)min=12min=12/60Hours A/Q Distance = 6*5 unit = 30*12/60 = 6 Km	
Marks	1	0

Question	A man can row upstream at 12 km/hr and downstream at 18 km/ hr. The man's rowing speed in still water is ?	
Type	multiple_choice	
Option	27	incorrect
Option	15	correct
Option	18	incorrect
Option	22	incorrect
Solution	The speed of boat in still water = 1/2* (12 + 18) km/hr = 15 km/hr	
Marks	1	0

Question	Abus travels 150 Km in 3 hours and then travel next 2 hours at 60 Km/hr. Then the average speed of the bus will be in km/h
Type	multiple_choice

Option	52	incorrect
Option	54	correct
Option	65	incorrect
Option	50	incorrect
Solution	Total distance covered by the bus = (150 km + 2 x 60) km = (150 +120) km =270 km Average speed = Total distance/Total time taken = 270/5 = 54 km/h ans	
Marks	1	0

Question	Due to inclement weather, an air plane reduced its speed by 300 km/ hr, and reached the destination of 1200 km late by 2hrs. Then the schedule duration of the flight was.	
Type	multiple_choice	
Option	4	incorrect
Option	2	correct
Option	3	incorrect
Option	2.5	incorrect
Solution	Let the original speed of aeroplane be x kmph. A/q, (1200/x—300) - (1200/x) = 2 1200(x-x+300/x(x-300)) = 2 x(x-300) = 1200*300/2 x(x-300) = 600*300 Comparing x= 600 km/h Now, Actual Time = 1200/600= 2 hours Ans	
Marks	1	0

Question	A boat takes half time in moving a certain distance downstream than upstream. The ratio of the speed of the boat in still water and that of the current is ?
Type	multiple_choice

Option	3:7	incorrect
Option	3:1	correct
Option	1:3	incorrect
Option	2:5	incorrect
Solution	Let the speed of the boat in still water be x km/h. Speed of current be y km/h. Rate downstream = (x +y) km/h Rate upstream = (x - y) km/h Distance = Speed x Time A/q (x-y)*2t=(x+y)*t 2x - 2y =x +y x=3y x:y=3:1 Ans	
Marks	1	0

Question	A man is walking at a speed of 10 km/h. After every 1km, he takes a rest for 5 minutes. How much time will he take to cover a distance of 5 km?	
Type	multiple_choice	
Option	70min	incorrect
Option	50min	correct
Option	40min	incorrect
Option	60 min	incorrect
Solution	Time taken by person to cover 5 km = 5/10 = 1/2hour = 30 minutes. After every 1km, he takes a rest for 5 minutes. Hence, that person will take rest for four times. Required time = (30 + 4 x 5) minutes = 50 minutes. Ans	
Marks	1	0

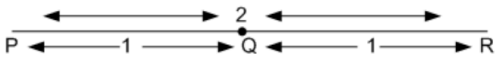
Question	If a distance of 50m is covered in 1 minute, that 90m in 2 minutes and 130m in 3 minutes find the distance covered in 15 min.	
Type	multiple_choice	
Option	500m	incorrect
Option	610m	correct
Option	620m	incorrect
Option	540m	incorrect
Solution	Distance covered in first minute = 50 m Distance covered till 2 minutes = 90 m Thus, distance covered in 2nd min =90- 50 = 40m Distance covered till 3 minutes = 130 m Thus, distance covered in 3rd minute = 130-90 =40 m Seeing this pattern, it can be induced that after 2 minute, he will cover 40 m distance every minute. So, Total distance covered in 15 min = 50 + 40 x 14 = 50 + 560 = 610 metre.	
Marks	1	0

Question	A man starts from a place P and reaches the place Q in 7 hours. He travels 1/4 of the distance at 10 km/hour and the remaining distance at 12 km/hour. The distance between P and Q is ?	
Type	multiple_choice	
Option	90 km	incorrect
Option	80 km	correct
Option	75 km	incorrect
Option	85km	incorrect

Solution	Let the total distance be 4x km. A/Q X/10 + 3x/12 = 7 X/10 + x/4 = 7 2x+5x/20 = 7 x= 20 So, Total distance travelled = 4x =4 x 20 = 80 km. Ans.	
Marks	1	0

Question	A car can finish a certain journey in 10 hours at the speed of 42 km/h. In order to cover the same distance in 7 hours, the speed of the car (km/h) must be increased by ?	
Type	multiple_choice	
Option	15Km/h	incorrect
Option	18 km/h	correct
Option	19 km/h	incorrect
Option	10 km/h	incorrect
Solution	Distance covered by car = Speed x Time = 42 x 10 = 420 km. New time = 7 hours Required speed = 420/7 = 60 km/h Thus, Required increase in speed = (60 - 42) km/h = 18 km/h	
Marks	1	0

Question	On ariver, Q is the midpoint between two points P and R on the same bank of the river. A boat can go from P to Q and back in 12 hours, and from P to R in 16 hours 40 minutes. How long would it take to go from R to P?	
Type	multiple_choice	
Option	500m	incorrect
Option	610m	correct

Option	620m	incorrect
Option	540m	incorrect
Solution	 Let x kmph be the speed of boat in still water and y kmph be the speed of current and Let the distance between P and R be 2 km. ∴ PQ = 1 Km, QR = 1 Km. According to the question, $\frac{1}{x+y} + \frac{1}{x-y} = 12$ ...(i) & $\frac{2}{x-y} = 16\frac{2}{3}$ ...(ii) Multiplying Eq.(i) by 2 both side $\Rightarrow \frac{2}{x+y} + \frac{2}{x-y} = 24$ $\Rightarrow \frac{2}{x+y} = 24 - \frac{50}{3} = \frac{22}{3}$ hrs Required time taken $= 7\frac{1}{3}$ hours	
Marks	1	0

Question	Sound travels 330 m in a second. When the sound follows the flash of lightning after 10 sec, the thunder cloud will be at a distance of ?	
Type	multiple_choice	
Option	3300m	correct
Option	6100m	incorrect
Option	6000m	incorrect
Option	5400m	incorrect
Solution	Speed of sound = Distance/Time = 330m/1sec = 330 m/s Time = 10 sec Distance = Speed x Time =>330x10=3300m Ans	
Marks	1	0

Question	Walking 6/7 of his usual speed, a man is 24 min too late. The usual time taken by him to cover that distance is ?	
Type	multiple_choice	
Option	150min	incorrect
Option	168min	correct
Option	162min	incorrect
Option	154min	incorrect
Solution	Distance is same so speed and time are in inverse. Speed => 6:7 Time => 7:6 Time diff = 1unit = 24min A/Q Usual time = 7 unit = 7*24min = 168 min	
Marks	1	0

Question	A car moving in the morning fog passes a man walking at 4km/h in the same direction. The man can see the car for 3 min and visibility is upto a distance of 130 m. The speed of the car is:	
Type	multiple_choice	
Option	6km/hr	incorrect
Option	6(3/5) km/hr	correct
Option	7(3/5) km/hr	incorrect
Option	7km/hr	incorrect

Solution	Let the speed of the car = x km/hr., Speed of man = 4 km/hr Relative speed = (x-4) km/hr ======>moving in same direction Distance =(130/1000) km Time =3 min = (3/60) h. Now, Time = Distance/Speed 3 /60 = 130/1000 *1/ (x—4) x =6(3/5) km/hr	
Marks	1	0