

## 2007 MBA - TIME AND DISTANCE QUESTION PAPER

TIME – 3HOUR

MARK – 100

Time and distance

Question 1 of 25

A and B start together from the same point on a walking match round a circular course. After half, an hour A has walked three complete circuits and B four and a half. Assuming that each walks with uniform speed, find when B overtakes A.

1. 15 minutes
2. 18 minutes
3. 22 minutes
4. 20 minutes

Mark for revision | Unmark

Question 2 of 25

Two boys begin together to write a booklet containing 8190 lines. The first boy starts with the first line, writing at the rate of 200 line an hour; and the second boy starts with the last line, then writes 8189th line and so on, proceeding backward at the rate of 150 lines an hour. At what line will they meet from the start?

1. 4680
2. 4700
3. 4750
4. 4800
5. 4870

Mark for revision | Unmark

Question 3 of 25

A man rides at the rate of 11 kms an hour but stops 5 minutes to change horses at the end of every 7th km.

How long will he take to cover a distance of 94 kms?

1. 9.62 hrs
2. 10.38 hrs
3. 9.5 hrs
4. 9 hrs
5. 8hrs

Mark for revision | Unmark

Question 4 of 25

Shaurya and Arjit take a straight route to the same terminal point and travel with constant speeds. At the initial moment, the positions of the two and the terminal point form an equilateral triangle. When Arjit covered a distance of 80 km, the triangle becomes right-angled. When Arjit was at a distance of 120 km from the terminal point, the Shaurya arrived at the point. Find the distance between them at the initial moment assuming that there are integral distance throughout the movements described.

1. 300 km
2. 240 km
3. 200 km
4. 225 km

Mark for revision | Unmark

Question 5 of 25

A train after traveling for a certain distance develops a snag and decreases its speed to half its original speed and reaches its destination 45 minutes late. Had the snag occurred 30 km further on, it would have reached its destination 15 minutes earlier. What is the speed of the train?

1. 90 kmph
2. 100 kmph

3. 105 kmph

4. 120 kmph

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Question 6 of 25

A goods train 158 metres long, and traveling at the average speed of 32 km/hr leaves Delhi at 6 a.m. Another mall train 130 metres long and traveling at the average speed of 80 km/hr leaves Delhi at 12 noon and follows the goods train. At what time and at what distance from Delhi will the mall train completely cross the goods train?

1. 4 hr, 318 km

2. 4 hr, 319 km

3. 4.2 hr, 322 km

4. None of these

Mark for revision | Unmark

Question 7 of 25

Excluding stoppages, the speed of a bus is 45 kmph and including stoppages, it is 36 kmph. For how many minutes does the bus stop per hour?

1. 10

2. 12

3. \$15

4. 14

5. 16

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Question 8 of 25

In a flat race, A beats B by 15 metres and C by 29 metres. When B and C run over the course together, B

wins by 15 metres. The length of the course is

1. 150 metres
2. 275 metres
3. 225 metres
4. 300 metres

Mark for revision | Unmark

Question 9 of 25

A railway passenger counts the telegraph posts on the line as he passes them. If they are 50 metres apart and the train is going at 48 km per hour, how many posts will he cross per minute?

1. 16
2. 20
3. \$24
4. 10
5. 18

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Question 10 of 25

J is 1 times as fast as K. If J gives K a start of 150 starts, how far must be the winning post so that race ends in a dead heat?

1. 100 metres
2. 440 metres
3. 550 metres

4. 200 metres

Mark for revision | Unmark

Question 11 of 25

Two trains start at the same time from Aligarh and Delhi and proceed towards each other at 36 kmph and 42 kmph respectively. When they meet, it is found that one train has travelled 48 km more than the other. The distance between the two stations (in km) is

1. 624

2. 636

3. 544

4. 460

5. 625

Mark for revision | Unmark

Question 12 of 25

A man on a platform notices that a train going in one direction takes 10 seconds to pass him & a train of same length going in the other direction takes 15 seconds to pass him. What is the time taken by the two trains to pass one another if the length of the trains is 200 m each?

1. 8 sec

2. 9 sec

3. 11 sec

4. 12 sec

5. 15 sec

Mark for revision | Unmark

Question 13 of 25

A and B run a 2 km race. A gives B a start of 100 m and still beats him by 20 seconds. If A runs at 20 km per hour, find B's rate in kilometres per hour.

1. 17

2. 18

3. 19

4. 19.5

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Question 14 of 25

A river flows at 1.5 kmph and a boatman who can row at 2.5 kmph on still water, takes 7 hours to go a certain distance up the stream and return again to the starting point. Find the total distance covered by the boatman.

1. 10 kms

2. 12 kms

3. 9 kms

4. 15 kms

Mark for revision | Unmark

Question 15 of 25

If a man walks to work and rides back home the entire trip takes an hour and a half. When he rides both ways, it takes him 30 minutes only. How long would he take if he walks both ways?

1. 1.5 hours

2. 2 hours

3. 2.5 hours

4. 3 hours

5. 3.5 hours

Mark for revision | Unmark

Question 16 of 25

Find the approximate time taken by two trains, one 180 metres long and the other 270 metres long, to cross each other, if they are running at speeds of 46 km/hr and 54 km/hr respectively. [Consider both possible cases of motion].

1. 202s, 16s

2. 60s, 10s

3. 109s, 17s

4. 100 s, 25 s

5. 225s, 25s

Mark for revision | Unmark

Question 17 of 25

A can beat B by 44 metres in a 1760 meter race, while in a 1320 metres race, B can beat C by 30 metres. By what distance (in meters) will A beat C in an 880 meter race?

1. 38

2. 41.5

3. 45

4. 54.5

Mark for revision | Unmark

Question 18 of 25

A train starts from X towards Y, which is at a distance of 55 km, at a speed of 40 km per hour. After running a certain distance, it increases its speed to 50 km per hour and reaches Y in 1 hour 15 minutes after leaving X. After what time did the train change its speed?

1. 30 min.

2. 38 min.

3. 45 min.

4. 52 min.

Mark for revision | Unmark

Question 19 of 25

A train travelling at the rate of 18.5 miles an hour started at 7 am on a journey of 148 miles. A second train started from the same station and arrived 15 minutes after the first one. If the ratio of the speed of the second train to that of the first is 8 : 5, when did the second train start?

1. 10 am

2. 10 : 15 am

3. 11 am

4. 9 : 30 am

Mark for revision | Unmark

Question 20 of 25

Rahim sets out to cross a forest. On the first day, he completes  $\frac{1}{10}$ th of the journey. On the second day, he covers  $\frac{2}{3}$ rd of the distance travelled the first day. He continues in this manner, alternating the days in which he travels  $\frac{1}{10}$ th of the distance still to be covered, with days on which he travels  $\frac{2}{3}$  of the total distance already covered. At the end of seventh day, he finds that  $22\frac{1}{2}$  km more will see the end of his journey. How wide is the forest?

1.  $66\frac{2}{3}$  km

2. 100 km

3. 120 km

4. 150 km



Mark for revision | Unmark

Question 21 of 25

A dog at point A goes in pursuit of a fox 30 metres away. The dog takes a leap of 2 m against 1m long leaps of the fox. If the dog makes two leaps to the fox's three, at what distance from A will the dog catch up with the fox?

1. 100 m
2. 110 m
3. 105 m
4. 120 m

Mark for revision | Unmark

Question 22 of 25

Manish, who reaches the station at a particular time, and his wife drives to the station to meet him. One day he reaches earlier and he sets out on foot from the station to meet his wife on the way, and he reached home 24 min. earlier than the usual time. The car's speed is 4 times Manish's speed on foot. How much time earlier than the usual time would he have reached home, if his wife forewarned of his plan, had met him at the station?

1. 60 mins
2. 48 mins
3. 36 mins
4. None of these

Mark for revision | Unmark

Question 23 of 25

Two men are running in the same direction along a circle. They meet for the first time at a point diametrically opposite the starting point when the faster one is in his fifth round. Find the ratio of their speeds.

1. 4 : 5

2. 7 : 9

3. 6 : 5

4. None of these

Mark for revision | Unmark

Question 24 of 25

Kapil Dev and Bishan Singh Bedi started running at 8 am with a speed of 40 km/hr and 18 km/h respectively for Pragati Maidan from the India gate. Bedi completes the whole distance with a uniform speed. After 1 ½ hr, Kapil dev was stuck in traffic and reduced his speed. In next 30 minutes he could cover only 15 km and covered the remaining distance with a speed equal in magnitude to the total time taken by Bedi in hours to cover the entire journey and reached Pragati Maidan at the same time. At what time did both of them reached Pragati Maidan?

1. 1 am

2. 1 pm

3. 11 pm

4. Data insufficient

Mark for revision | Unmark

Question 25 of 25

Tommy runs 3 times as fast as Jonny. Also Tommy gives Jonny a lead of 77 metre. Both of them reach at the same time. Find the length of the track.

1. 155 m

2. 105 m

3. \$175 m

4. None of these