TIME & WORK, PIPES & CISTERNS

1. A pipe can fill a tank in 6 hours and another pipe can empty the tank in 12 hours. If both the pipes are opened at the same time, the tank can be filled in
   a) 10 b) 12 c) 14 d) 16

2. A can-do work in 15 days and B in 10 days. If they work on it together for 4 days, then the fraction of the work that is left is
   a) ½ b) 1/3 c) 1/6 d) 2/3

3. 20 men can do a job in 10 days, working 8 hours a day. If women are 33.33% more efficient than men, how many women will it take to finish the same job in 10 days working 6 hours a day?
   a) 10 b) 16 c) 12 d) 20 e) 15

4. Rahul can finish one-fifth of his homework in one hour. Neha can finish three-seventh of her homework in one hour thirty minutes and Riya can finish three fourth of her homework in three hours thirty minutes. If all of them start their homework at 12.00 p.m. and can go to play as soon as they all finish their homework, when can they start to play, if they take a break at 3.30 p.m. for thirty minutes?
   a) 5.00 p.m b) 5.30 p.m c) 4.40 p.m d) 6.30 p.m

5. There are 5 pipes working in tandem which can fill a tank of 1.800 litre capacity in 40 minutes. Out of these 5 pipes, 3 are used to fill liquid in the tank. Each of these 3 pipes can individually fill the tank at the rate of 30 litre/min, 45 litre/min and 15 litre/min respectively. The other two pipes are used to empty the tank- one of which can empty it at the rate of 30 litre/min. What is the rate (litre/min) at which the other pipe alone can empty the tank, considering that the tank is full?
   a) 15 b) 30 c) 45 d) 6

6. 4 men can repair a road in 7 hours. How many men are required to repair the road in 2 hours?
   a) 7 b) 14 c) 17 d) 10

7. A larger rubber cushion can be filled with air pump in 10 minutes, another pump can fill the same cushion in 12 minutes. If both the pumps operate together, how long will it take to fill the cushion?
   a) $6\,{}^{5}/_{11}$ minutes b) $5{}^{6}/_{11}$ minutes c) $4{}^{5}/_{11}$ minutes d) $5{}^{5}/_{11}$ minutes

8. An air conditioner can cool he hall in 40 minutes while another takes 45 minutes to cool under similar conditions. If both air conditioners are switched on at same instance, then how long will it take to cool the room?
   a) About 22 minutes b) About 20 minutes c) About 30 minutes d) About 25 minutes

9. A cistern can be filled by two pipes A and B in 10 and 15 hours respectively and is then emptied by a tap in 8 hours. If all the taps are opened, the cistern will be fill in:
   a) 21 hours b) 22 hours c) 24 hours d) None of these

10. In a poultry farm, 50 hens give 200 eggs in 2 days. In how many days will 20 hens give 400 eggs?
    a) 15 b) 10 c) 5 d) 8