D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS)
APTITUDE TEST

PIPES AND CISTERNS- Test 21

1. A tank has a leak which would empty the completely filled tank in 10 hours. If the tank is full of water and a tap is opened which admits 4 litres of water per minute in the tank, the leak takes 15 hours to empty the tank. How many litres of water does the tank hold?

a) 2400 b) 4500
c) 1200 d) 7200

2. B is 5/4 times as efficient as A. If A can fill the 3/5 of the tank in 15 min, what fraction of the capacity of the tank would remain incomplete if B can fill the tank independently for 10 min only?

a) 2/3 b) 1/3
c) 1/4 d) 1/2

3. Pipe A and Pipe B can fill a tank in 10 hours and 15 hours respectively while Pipe C can empty the full tank in 18 hours. If pipe A is opened at 7 am, Pipe B opened at 8:30 am and Pipe C at 10 am, then after 10 am, how much more time will be taken by all three pipes together to fill the tank?

a) 7 hour 18 min b) 8 hour 36 min
c) 6 hour 42 min d) 5 hour 24 min

4. Two pipes A and B can fill a tank in 20 hours and 25 hours respectively, while a third pipe C can empty 70% of the tank in 21 hours. All three pipes are opened in the beginning. After 12 hours C is closed. Find the time in which the tank will be full?

a) 13 2/3 hours b) 11 7/8 hours
c) 16 ¾ hours d) 15 5/9 hours

5. A cistern can be filled by a tap in 4 hours while it can be emptied by another tap in 9 hours. If both the taps are opened simultaneously, then after how much time cistern will get filled ?

a) 7 hours b) 7.1 hours
c) 7.2 hours d) 7.3 hours

6. Pipe A can fill a tank in 5 hours, pipe B in 10 hours and pipe C in 30 hours. If all the pipes are open, in how many hours will the tank be filled ?

a) 2.5 hours b) 2 hours
c) 3.5 hours d) 3 hours

7. buckets of water fill a tank when the capacity of each tank is 13.5 liters. How many buckets will be needed to fill the same tank, if the capacity of each bucket is 9 liters?

a) 8 b) 15
c) 16 d) 18

8. A cistern normally takes 10 hours to be filled by a tap but because of one open outlet pipe, it takes 5 hours more. In how many hours will the outlet pipe will empty a full cistern?

a) 20 hours b) 24 hours

c) 30 hours d) None of these

9. Two pipes A and B can fill a tank in 12 and 24 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?

a) 9 min b) 8 min
c) 6 min d) 4 min

10. A tank is filled in 5 hours by three pipes A, B and C. The pipe C is twice as fast as B and B is twice as fast as A. How much time will pipe A alone take to fill the tank?

a) 20 hours b) 25 hours
c) 35 hours d) Cannot be determined

11. 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 hours b) 12 hours
c) 14 hours d) 16 hours

12. Three pipes A, B and C can fill a cistern in 8 minutes,12 minutes and 16 minutes respectively. What is the time taken by three pipes to fill the cistern when they are opened together?

a) 3.7 minutes b) 4 minutes
c) 4.5 minutes d) A. 5 minutes

13. Two pipes can fill a tank in 6 hours and 8 hours respectively. A third pipe can empty the same tank in 12 hours. If all the pipes start working together, how long it will take to fill the tank?

a) 4 hours b) 4.5 hours
c) 4.8 hours d) 5.2 hours

14. A tank can be filled in 10 hours. After a leak in its bottom, it takes 12 hours to fill the tank. Find the time taken by the leak to empty the full tank?

a) 45 hours b) 60 hours
c) 50 hours d) 55 hours

15. Two pipes can fill a tank in 10 and 14 minutes respectively. A third pipe can empty the tank at the rate of10 liters/minute. If all the pipes working together can fill the empty tank in 8 minutes,what is the capacity of the tank?

a) 210 liters b) 215.4 liters
c) 220 liters d) 225.4 liters

16. A cistern can be filled by an inlet in 6 hours and can be emptied by an outlet in 8 hours. If the inlet and outlet are opened together, in what time the cistern can be filled?

a) 24 hours b) 26 hours
c) 20 hours d) 18 hours

17. 20 buckets can fill a tank when the capacity of each bucket is 12 liters. If the capacity of each bucket is 10 liters, find the number of buckets required to fill the tank.

a) 30 buckets b) 34 buckets
c) 24 buckets d) 27 buckets

18. Two pipes working together can fill a fish tank in 12 minutes. If one pipe fills the fish tank 10 minutes faster than the second pipe, in what time the

second pipe alone can fill the fish tank?

a) 20 minutes b) 25 minutes
c) 30 minutes d) 35 minutes

19. 25 outlets working 6 hours a day, can empty a reservoir in 10 days. If only 15 outlets are operational and work for 4 hours a day, in how many days the reservoir can be emptied?

a) 20 days b) 18 days
c) 22 days d) 25 days

20. Pipe A can fill a tank in 12 minutes whereas pipe A along with pipe B can fill the same tank in 8 minutes. In what time pipe B alone can fill the tank?

a) 24 minutes b) 20 minutes
c) 25 minutes d) 22 minutes

21. A can fill a tank in 8 hours, B can fill the same in 12 hours, and C can fill the tank in 24 hours. If they are open at 2 am, 3 am, and 4am respectively, then at what time the tank will be completely fill?

a) 5:00 am b) 6:00 am
c) 6:40 am d) 7:20 am

22. Two pipes A and B individually can fill a tank in 15 hours, and 12 hours respectively, and C can empty the full tank in 4 hour. If all three pipes are open at 8, 9, and 11 am respectively. At what time tank will be completely empty?

a) 2:40 pm b) 1:00 pm
c) 12:00 pm d) 1:35 pm

23. A tank has two pipes. The first pipe can fill it in 45 minutes and the second can empty it in 1 hour. In what time will the empty tank be filled if the pipes be opened one at a time in alternate minutes?

a) 2 hrs 55 min b) 3 hrs 40 min
c) 4 hrs 48 min d) 5 hrs 53 min

24. A cylindrical tank of diameter 25 cm is full of water. If 11 litres of water is drawn off, the water level in the tank will drop by (use π =22/7).

a) 10 ½ cm b) 12 6/7 cm
c) 14 cm d) 22 2/5 cm

25. Two pipes can separately fill a tank in 20 hrs and 30 hrs respectively. Both the pipes are opened to fill the tank but when the tank is 1/3 full, a leak develops in the tank through which 1/3 of the water supplied by both the pipes per hour leak out. What is the total time to fill the tank?

a) 12 hrs. b) 14 hrs.
c) 18 hrs. d) 16 hrs.