BASIC CONCEPTS – 2

Time and Work

1)15 men can type 3240 pages in 6 days working 2 hours per day. How many men would be required to type 5400 pages working 4 hours per day for 3 days?

1) 10 2) 16 3) 12 4) 25 5) None of these

2)If 5 workers collect 60 kg wheat in 3 days, how many kilogram of wheat will 8 workers collect in 5 days?

1) 80 kg 2) 100 kg 3) 120 kg 4) 160 kg5) None of these

3)50 people consume 350 kg of rice in 30 days. In how many days will 35 people consume 50 kg of rice?

1) 2 days 2) 3days 3) 56 days 4) 7 days 5) None of these

4) 4 men work 12 hours daily to complete a work in 9 days. If 16 men work 2 hours a day, in

how many days will the work be completed?

1) 4.5 days 2) 18 days 3) 13.5 days 4) 27 days 5) None of these

5) 15 labours complete a work in 10 days working 6 hours per day, If 18 labours are employed on that work and the work is to be completed in 5 days, then how many hours per day should the work be continued?
1)10 2) 12 3) 15 4) 9 5) None of these

6) A, B and C can finish a piece of work in 10, 15 and 30 days respectively. How many days will be required if A, B and C work together to finish the given work?

1) 5 2) 6 3) 7 4) 8 5) None of these

7).Govind alone can complete a work in 20 days. Jagdish alone completes it in 30 days. How many days will be required if both of them work together?

1) 12 days 2) 24 days 3) 25 days 4)10 days 5) None of these

8). Gopal can complete a work in 8 hours and Jai can complete it in 5 hours. How much time will be required if both of them work together?

1) 6.5 hours 2) 2 1/13 hours 3) 3 1/13 hours 4) 4 1/13 hours 5) None of these

9).A, B and C can finish a piece of work in 8, 12 and 24 days respectively. In how many

days can they finish the work if all of them work together?

1) 10 days 2) 8 days 3) 6 days 4) 4 days 5) None of these

10) A and B can do a piece of work in 40 days while C & A can do it in 60 days. If B is twice

as good as C then C alone will do the work in _____ days.

(1) 120 days (2) 40 days (3) 50 days (4) 24 days

11) A is thrice as good a workman as B and B is twice as good a workman as C. If they all finish a piece of work in 12 days, then C alone will finish it in _____days.

(1) 18 days (2) 108 days (3) 3 days (4) 154 days

12) A can do a work in 15 days & B the same work in 12 days. B started the work and was joined by A, 5 days before the end of work. The work lasted for ____ days.

(1) 8 days (2) 12 days (3) 13 days (4) 24 days

13) A can do a piece of work in 40 days and B can do the same in 30 days. A started alone but left the work after 10 days, then B worked at it for 10 days. C finished the remaining work in 10 days. How long will C alone take to do?

(1) 24 days (2) 30 days (3) 44 days (4) 17 days

14) 5 men or 6 women or 10 boys can do a work in 15 days. How long will it take to complete the work by a group of 5 men, 6 women and 10 boys.

(1) 5 days (2) 6 days (3) 10 days (4) 45 days

15) A can do a piece of work in 90 days, B in 40 days and C in 12 days. They work for a day each in turn, i.e. first day A does it alone, second day B does it alone and third day C does it alone. After that the cycle is repeated till work is completed. They get Rs: 240 for this job. If the wages are divided in proportion to the work each had done. Find the amount A will get?

(1) 14 (2) 24 (3) 34 (4) 36

16) Three men with 5 boys can do a piece of work in 2 days and 4 men and 16 boys can complete the job in one day. How much time will it take for one boy together with a woman who can work twice as fast as the boy to complete a job that is thre e times as time consuming?

(1) 24 days (2) 28 days (3) 32 days (4) 36 days

17) A and B together can do apiece of work in twelve days which B and C together can do in 16 days. After A has been working at it for five days and B for seven days, C finishes it in 13 days. In how many days C alone will do the work?

(1) 16 days (2) 24 days (3) 36 days (4) 48 days

18) Twelve men complete a work in 9 days. After they have worked for 6 days, 6 more men join them. How many days will they take to complete the remaining work?

(1) 2 days (2) 3 days (3) 4 days (4) 5 days

19) 10 men cut 15 trees in 2 hours. If 2 men leave the job, how many trees will be cut in 3

hours?

1. 15 trees 2.16 trees 3.20 trees 4.18 trees

20) A can do a piece of work in 16 days. How many days will he take to complete 2 works of the same type?

1. 6 days 2.10 days 3.32 days 4.12 days

21) A and B can do a piece of work in 10 days, B and C in 15 days and C and A in 20 days. They all work at it for 6 days, and then A leaves, and B and C go on together for 4 days more. If B then leaves, how long will C take to complete the work?

1. 20 days 2.25 days 3.10 days 4.15 days

22) A and B can do a piece of work in 3½ days, A and C in 4 days, B and C in 5 days. In what time could they do it, all working together?

1. $3\frac{75}{104}$ **2.** $2\frac{74}{103}$ **3.** $3\frac{74}{103}$ **4.** $2\frac{47}{103}$

PIPES AND CISTERNS

1)Pipes A and B can fill a cistern in 10 and 12 hours respectively and pipe C can emptyit in 6 hours. If all the three are opened simultaneously, then how much time is required for the tank to be full?

1) 20 hours 2) 60 hours 3) 80 hours 4) 40 hours 5) None of these

2) A cistern can be filled by two taps in 20 min and 30 min respectively and can be emptied by a third tap in 48 min. If they are all turned on at once, when will the cistern be half full?

1.16 min 2) 8 min 3) 10 min 4) 12 min 5) None of these

) A water tub can be filled by two taps in 8 min. One tap is closed after 3 min; the other tap fills the remaining tub in 15 min. How much time will the faster tap take to fill the tub?

1.10 min 2) 11 min 3) 12 min 4) 15 min 5) None of these

4). Three pipes A, B and C can fill a cistern in 15, 20 and 30 min respectively. They were all turned on at the same time but after 5 min the first two pipes were turned off. In what time will the cistern be full?

1) 7.5 min 2) 5 min 3) 13 min 4) 12.5 min 5) None of these

5) A tank, which could be filled in 5 hrs, takes 1 hour more to be filled owing to a leak in its bottom. If the tank is full, the leakage will empty the tank in.

(1) 1hr (2) 11 hrs (3) 13 hrs (4) 30 hrs

6) Pipe A can fill a tank in 16 min and pipe B can empty it in 24 min. If both are opened, after how many minutes should pipe B be closed, so that tank is filled in 30 min?

(1) 20 **(2) 21** **(3) 23** **(4) 22**

7) Two pipes can fill a tank in 18 min and 27 min. A third pipe can empty full tank in 6 min. All three are opened when tank was 2/3 full. In how many min, will tank become empty?

(1) 11 **(2) 9** **(3) 13** **(4) 7**

8) A, B & C can fill a tank in 12, 24, 48 hrs. They are opened together, but B is closed 3 hrs before and C closed 2 hrs before filling of tank. In how many hours, was tank filled?

(1) 6 **(2) 8** **(3) 7** **(4) 9**

10) Three pipes A, B and C can fill a tank in 8 hrs. All the three pipes are opened for 2 hrs and then C is closed. If A & B fill the remaining tank in 9 hrs, find the time taken by C alone to fill the tank?

(1) **12** **(2) 18** **(3) 24** **(4) 36**

(2)

11) At 10 AM taps A,B and C are turned on. A can fill the tub in 5 hrs, B can fill it in 10 hrs and C can empty it in 7½hrs. At what time, working together will the tank be filled

1) **4 AM** **(2) 6 AM** **(3) 4 PM** **(4) 6 PM**

12) A pipe can fill a tank in 15 hours. Due to a leak in the bottom, it is filled in 20 hours. If the tank is full, how much time will the leak take to empty it?

1. 60 hrs **2.40 hrs** **3.30 hrs** **4.20 hrs**

13) A cistern is normally filled in 8 hours but takes 2 hours longer to fill because of a leak in its bottom; if the cistern is full the leak will empty it in.

1. 20 hrs **2.25 hrs** **3.40 hrs** **4.16 hrs**

14) Tap A can fill a water tank in 25 minutes, tap B can fill the same tank in 40 minutes and tap C can empty the tank in 30 minutes. If all the three taps are opened together, in how many minutes will the tank be completely filled up or emptied?

1. $3\frac{2}{11}$ **2.** $15\frac{15}{13}$ **3.** $8\frac{2}{13}$ **4.** $31\frac{11}{19}$

15) Two pipes can fill a tank in 10 minutes and 20 minutes and an outlet pipe can empty 220 litres of water for minute. If all the three pipes are opened it is filled in 1 hour 20 minutes then the capacity of the tank is.

1. 1600 litres **2.2800 litres** **3.3200 litres** **4.2400 litres**

16) Two pipes P and Q would fill a cistern in 24 hours and 32 hours respectively. If both pipes are opened together, find when the first pipe must be turned off so that the cistern may be just filled in 16 hours.

1. 11 hrs **2.12 hrs** **3.13 hrs** **4.14 hrs**

17) Two taps A and B can fill a tank in hours respectively. Both pipes are opened together, but due to a leak in the bottom it takes 24 minutes more to fill the tank. How much time the leak takes to empty the full tank.

1. 6.8 min **2.16.8 min** **3.24.5 min** **4.15.7 min**