T.I.M.E.
Triumphant Institute of Management Education Pvt. Ltd.

Advanced Educational Activities Pvt. Ltd.

QUANTITATIVE ABILITY HANDOUT

(Time & Work)

Ref: QAHO1162504

Directions for questions 1 to 20: Select the correct alternative from the given choices.

Concept Introduction

1. A and B working alone can complete a piece of work in 24 days and 12 days respectively. In how many days can they complete the work working together?
(1) 4 (2) 6 (3) 8
(4) 12 (5) 18

2. A and B together can complete a piece of work in 14 days. A alone can complete the same work in 21 days. In how many days can B alone complete the work?
(1) 8.5 (2) 21 (3) 28
(4) 35 (5) 42

3. A and B can complete a piece of work in 36 days, B and C together can complete the same work in 45 days and A and C together can do it in 60 days. In how many days can each of A, B and C complete the work respectively?
(1) 60, 90, 180 (2) 90, 60, 180
(3) 80, 100, 120 (4) 90, 120, 150
(5) 60, 45, 36

4. **(a)** A and B alone can complete a piece of work in 25 days and 20 days respectively. A started the work and after 7 days, B joined him. In how any days will the entire work be completed?
(1) 12 (2) 13 (3) 14
(4) 15 (5) 16

(b) A and B can complete a piece of work in 28 days and 16 days respectively. They together started the work, but B left after 4 days. In how many days will the entire work be completed?
(1) 18 (2) 15 (3) 21
(4) 24 (5) 25

5. A can complete a piece of work in 12 days and B can complete the same work in 24 days. If they work on alternate days starting with A, then in how many days will they complete the work?
(1) 16 (2) 15 (3) 18
(4) 9 (5) 20

6. A and B can complete a piece of work in 10 and 5 days respectively. If they work on alternate days, find the least number of days in which they can complete the work.
(1) $8^3/_5$ (2) $8^2/_5$ (3) $7^2/_5$
(4) 7 (5) $6^1/_2$

7. P and Q can complete a piece of work in 12 days and 16 days respectively. With the help of R, they completed it in 6 days and they together earned ₹16,800. What are the respective shares of P, Q and R?
(1) ₹8,400; ₹6,300; ₹2,100
(2) ₹8,400; ₹4,200; ₹4,200
(3) ₹6,300; ₹9,000; ₹1,500
(4) ₹9,000; ₹4,800; ₹3,000
(5) None of these

8. A is 30% more efficient than B. If B can complete a piece of work in 26 days, then in how many days can A alone complete the work?
(1) 20 (2) 22 (3) 24
(4) 25 (5) 26

9. A is twice as efficient as B. Working together, they can complete a piece of work in 21 days. In how many days can B alone complete the work?
(1) 42 (2) 63 (3) 36
(4) 24 (5) $31\frac{1}{2}$

10. Working together, Pavan and Naveen can complete a work in n days. Naveen alone can complete the same work in 9 days more than n, while Pavan alone can complete the same work in 16 days more than n. Find n.
(1) 15 (2) 12 (3) 21
(4) 28 (5) None of these

11. Sixty machines can manufacture 8000 bolts in 15 days, working 8 hours a day. In how many days can 45 machines manufacture 3000 bolts, working 6 hours a day?
(1) 8 (2) 10 (3) 9
(4) 12 (5) 14

12. **(a)** Pipe A can fill an empty tank in 12 minutes and pipe B can empty the full tank in 8 minutes. If both the pipes are opened simultaneously when the tank is half full, then in how many minutes will the tank become empty?
(1) 18 (2) 24 (3) 12
(4) 6 (5) 5

(b) Pipe A can fill an empty tank in 12 minutes but due to a leak at the bottom it took 20 minutes. In how many minutes the leak will empty the full tank?
(1) 60 min (2) 45 min (3) 30 min
(4) 90 min (5) 15 min

13. Pipe A can fill an empty tank in 8 hours. Due to a leak at the bottom of the tank, it takes 12 hours to fill the empty tank. In what time can the leak empty half the tank?
(1) 50 hrs (2) 48 hrs (3) 30 hrs
(4) 24 hrs (5) 12 hrs

Concept Application

14. A, B and C can complete a piece of work in 25 days, 40 days and 48 days respectively. They together started the work but A left 4 days before the completion of the work and C left 2 days before the completion of the work. In how many days was the work completed?
(1) 14 (2) 13 (3) 12
(4) 11 (5) 10

15. Six men and nine women can do a piece of work in 10 days. Five men and four women can do the same work in 15 days. In how many days can four men and seven women complete the same work?
(1) 14 (2) 16 (3) 15
(4) 17 (5) 18

16. Two pipes P and Q can fill an empty tank in six hours. Pipe Q alone takes 9 hours more than P to fill the tank. P and Q are opened for two hours and then closed. What fraction of the tank is still empty?
(1) 3/5 (2) 1/4 (3) 1/3
(4) 2/3 (5) None of these

17. A group of 42 men can complete a piece of work in 15 days. All of them started and worked for first five days. Next 5 days, only 30 men worked. In the following days, if 12 men report to the work, in how many days the remaining work will be completed?
(1) $11\frac{1}{2}$ (2) $7\frac{1}{2}$ (3) $17\frac{1}{2}$
(4) $22\frac{1}{2}$ (5) None of these

18. A project can be completed by 12 men or 15 women in 10 days. M number of men and 4M of number of women start working together and complete 84% of the work in 3 days. What is the value of M?
(1) 15 (2) 10 (3) 8
(4) 12 (5) 6

19. Two pipes A and B of equal capacity can fill an empty tank in 30 minutes when both are opened simultaneously. A pipe C can empty the full tank in 80 minutes. If A and C are opened simultaneously, then in how many hours is the empty tank filled?
(1) 4 (2) 3 (3) 6
(4) 2 (5) 1.5

20. Two taps P and Q can empty a full tank in 15 hours and 20 hours respectively. The tank was initially $4/5^{th}$ full. After four hours of opening of P and Q, an inlet tap R which can fill the empty tank in 4 hours is also opened. In how many more hours will the tank be full?
(1) 8 (2) 4 (3) 6
(4) $4^1/_2$ (5) 5