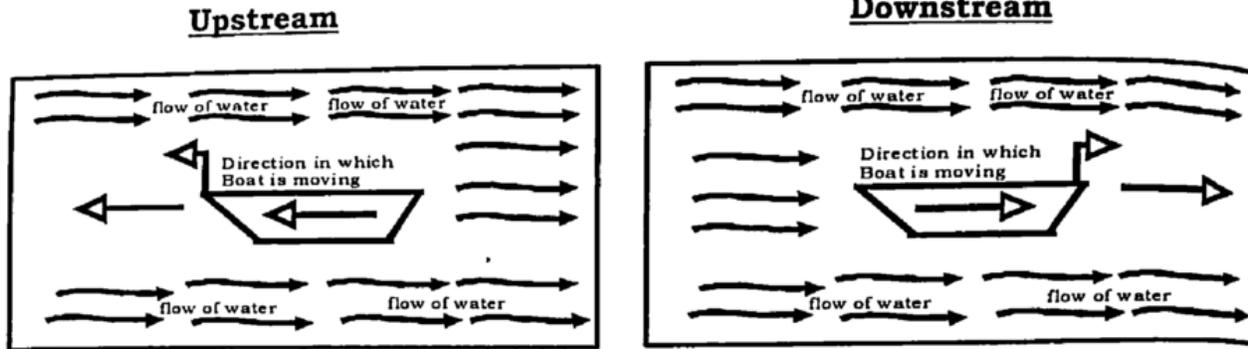


Bhavan's Gandhi Vidhyashram, Kodaikanal
Grade 11 – Applied Mathematics – Holiday Assignments – 2018-2019

Name: _____

Answer all the questions given below:

IMPORTANT FORMULAE



Where,

S_b = Speed of boat in still water

S_c = Velocity of the stream

y = Speed Upstream

x = Speed Downstream

Important formulae:-

$(i) S_b = \frac{1}{2}(x + y)$	$(ii) S_c = \frac{1}{2}(x - y)$	$(iii) x = S_b + S_c$	$(iv) y = S_b - S_c$
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1. A boat rowed down a river at 21km/hr and rowed up the river at 9km/hr. What is the velocity of the stream?
2. A Swimmer can swim downstream at 14km/hr and upstream at 6km/hr. What is the speed of the swimmer in still water?
3. The speed of a boat in still water is 4km/hr while its speed against the stream is 2km/hr. What is the velocity of the stream?
4. The speed of boatman in the direction of stream is 15km/hr while the velocity of the stream is 1.5km/hr. What is the velocity of the boatman against the stream?
5. If the speed of a boat in still water is 7km/hr and its speed against the stream is 2.5km/hr, then what is its speed in the direction of the current?
6. 4 men and 6 women working together can complete the work within 10 days. 3 men and 7 women working together will complete the same work within 8 days. In how many days 10 women will complete this work?
7. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?

8. A and B together can complete a task in 20 days. B and C together can complete the same task in 30 days. A and C together can complete the same task in 30 days. What is the respective ratio of the number of days taken by A when completing the same task alone to the number of days taken by C when completing the same task alone?
9. What was the day of the week on 28th May, 2006?
10. Study the following information to answer the given questions (a to d).
 i) There are 9 friends A, B, C, D, E, F, G, H seated in a circle facing the centre.
 ii) AC, DG, HE and FB are seated adjacent to each other. A seated adjacent to H
 iii) B is 2nd to the right of H. iv) E is 3rd to the right of C.
- a) Who is 3rd to the left of C? B) Who is 2nd to the right of A?
 c) Who is 2nd to the left of A? D) What is C's position with reference to E?
11. Deepak starts walking straight towards east. After walking 75 m he turns to the left and walks 25 m straight. Again he turns to the left and walks a distance of 40m straight, again he turns to the left and walks a distance of 25 m. How far is he from the starting point?
12. Arun started walking towards North. After walking 30 m, he turned left and walked 40 m. He then turned left and walked 30 m. He again turned left and walked 50 m. How far is he from his original position?
13. Pointing to a man, a woman said, "His mother is the only daughter of my mother". How is the woman related to man?
14. If Neha says, "Amruta's father Raj is the only son of my father-in-law, Mahesh"; then how Bindu, who is sister of Amruta, is related to Mahesh?
15. The mean of the heights of 6 males is 152 cm. If the individual heights of five of them are 151 cm, 153 cm, 155 cm, 149 cm and 154 cm, find the height of the sixth boy.
16. The average height of 30 males was calculated to be 150 cm. It was detected later that one value of 165 cm was wrongly copied as 135 cm for the computation of the mean. Find the correct mean.
17. A, B and C started a business by investing Rs. 1,20,000, Rs. 1,35,000 and Rs.1,50,000 respectively. Find the share of C, If annual profit is Rs. 56,700.
18. Four electronic devices make a beep after duration of 30 minutes, 1 hour, 3/2 hours and 1 hour 45 min. respectively. If all the devices beeped together at 12 noon at what time will they beep together again?