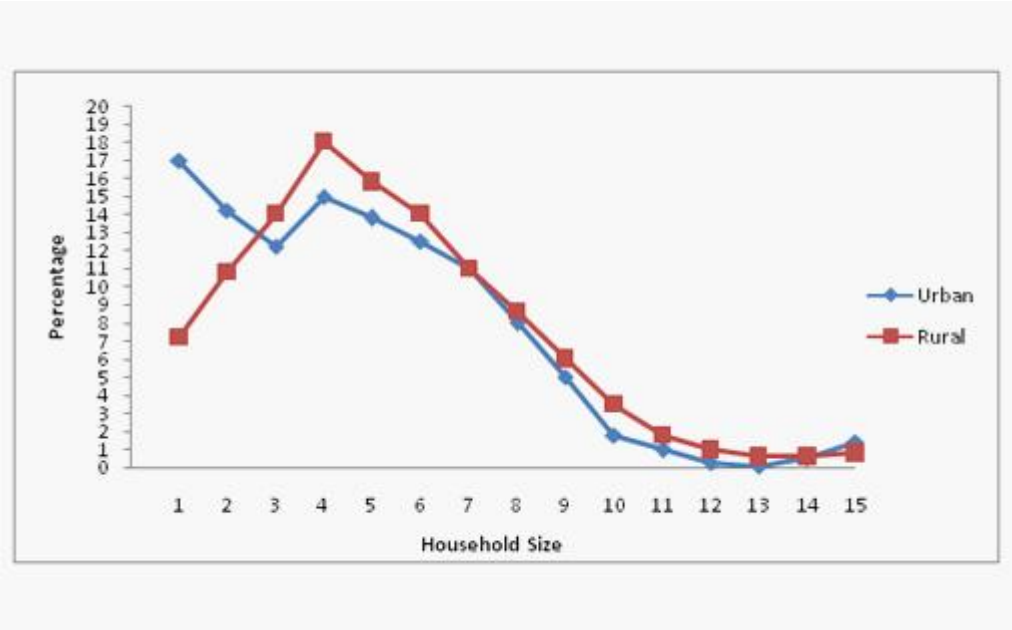
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, SRI CITY
ASSESSMENT TEST – 1 – 06 NOVEMBER, 2019
M – 2019 – APTITUDE & REASONING

NAME: **DURATION – 50 MINUTES**

REG. NUMBER **MAX MARKS - 35**

DIRECTIONS - ***1 to 5:*** The percentage distribution of households by household size and the average sizes of household in.

- All India Rural and Urban areas.
- Urban areas classified as per population size are presented below.



All India	Distribution of People	Average Size of Household
Rural	-	5.08
Urban	-	4.60
Distribution of Urban	Below 15, 000	4.75
	15, 000 - 50, 000	4.50
	50001 – Above	4.70

1. In rural areas, which one of the following sizes of the households is the highest in number?
   A. 15 B. 2 C. 3 **D. 4** E. CBD
2. In urban areas, among the households of different sizes, what is the percentage of households of size 5 or less?
   A. 13 **B. 72** C. 36 D. 87 E. CBD
3. In rural areas, per 100 households, there were 31 households of size:
   A. 3 or above B. 3, 4 and 5 **C. 3 or less** D. 4 or less E. 5 or more
4. As the urban population of towns increase, the average household size
   A. Increases B. Decreases C. remains constant **D. Fluctuating**
   E. Decreases with the exception of category 50,000 and above

5. Which one of the following statements is true?
   A. On the average there are more persons per family in urban areas than in rural areas.
   B. In rural areas, 35 per cent of the households are of the size 7 and above.
   C. In urban areas, the average size of the household is the least for towns.
   D. In urban areas, there are 460 persons on an average per 100 households.
   E. None of these
6. P takes 1.5 hours more than Q in cycling a distance of 45 km. If P pedals with the speed of 25% more than the previous speed he will take 20% more time than than Q. What is the speed of P in the first case?
   a. 10 km/hr b. 12 km/hr c. 15 km/hr d. 16 km/hr
7. A horse chases a pony 3 hours after the pony runs. Horse takes 4 hours to reach the pony. If the average speed of the horse is 35 kmph, what s the average speed of the pony?
   a. 25 Km/ hr b. 30 Km/ hr **c. 20 Km/ hr** d. 45 Km/ hr
8. The distance between two stations A and B is 185 km. Two trains from A and B start travelling simultaneously towards each other. The train from A travelling with speed 50 kmph halted for 6 minutes; before crossing the train from B which is travelling at a speed 45 kmph. After how many hours from the start do they cross each other?
   a. 1 hour b. 3 hours c. 5 hours **d.2 hours**
9. Travelling at 2/3rd of his usual speed, a man reaches his office 12 mins late. Had he travelled at 4/5th of his usual speed, by how much time would he have been late to his office?
   a. 25 minutes **b. 30 minutes** c. 35 minutes d. 40 minutes
10. There is a Ferrari and a Benz car, Benz speed is 10 kmph and it covers 10 km. If Ferrari goes with a speed 3 times faster than Benz, How much time will it take to cover the same distance?
    a. 1/2 **b. 10/30** c. 10/40 d. 1/5
11. A car travels a distance of 30 km in the first 3 hours, 30 km in the next 3 hours and 90 km in the last 9 hours. What is the average speed of the train for the entire journey?
    a. 8 km/hr **b. 10 km/hr** c. 12 km/hr d. 14 km/hr
12. A train 300 m long overtook a man walking along the line in the same direction at the rate of 4 km an hour and passed him in 30 sec. The train reached the station in 15 minutes after it had passed the man. In what time did the man reach the station? **2 and a half hours**
13. If a train 100m long is running at the speed of 30km/hr .Find the time taken by it to pass a man standing near the railway line
    a. 16sec b. 25sec **c. 12sec** d. 2sec
14. Two trains are moving in opposite directions at 60kmph and 90kmph respectively. Their lengths are 1.10km and 0.9km respectively. Find the time taken by the slower train to cross the faster train in seconds ?
    a. 42 **b. 48** c. 54 d. 58
15. Train A is 50% longer than and twice as fast as train B, train B takes 40 seconds to cross a 200 meter platform. Find the time taken by A to cross a 300 meter platform (in seconds).
    a. 20 b. 30 c. 90 d. CBD
16. Bucket P has thrice the capacity as Bucket Q. It takes 60 turns for Bucket P to fill the empty drum. How many turns it will take for both the buckets P&Q, having each turn together to fill the empty drum?
    a. 30 **b. 45** c. 20 d. 25
17. Two pipes A&B together can fill a tank in 30 min and pipe C can fill a tank in 16 minutes. First, A & B are opened. After 7 min, C also opened. In how much time, the tank s full.
    a. 15 min b. 46 min c. 30 min d. 20 min
18. Two pipes A& B together can fill a cistern in 4 hours. Had they been opened separately, then B would have taken 6 hours more than A to fill the cistern. How much time will be taken by A to fill the cistern separately?
    a. 6 hours b. 4 hours c. 3 hours d. 2 hours

19. Ronald and Elan are working on an assignment. Ronald takes 6 hours to type 32 pages on a computer, while Elan takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?
a. 8 hours b. 7 hours c. 6 hours **d. NOTA**

20. Two workers A and B are engaged to do a work. A working alone takes 8 hours more to complete the job than if both working together. If B worked alone, he would need 4 1/2 hours more to compete the job than they both working together. What time would they take to do the work together?
a. 6 days b. 8 days c. 10 days d. 12 days

21. A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in how many days?
a. 25 days b. 35 days c. 45 days d. 55 days

22. A is thrice as good a workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:
a. 25/2 days b. 35/2 days **c. 45/2 days** d. 55/2 days

23. A & B can do a work in 8 days, B & C can do the same work in 12 days. A,B & C together can finish in 6 days. A & C will do it in how many days?
a. 6 days **b. 8 days** c. 10 days d. 12 days

24. A man, a woman and a boy can complete a job in 3, 4 and 12 days respectively. How many boys must assist 1 man and 1 woman to complete the job in ¼ of a day?
a. 15 days b. 29 days c. 54 days **d. 41 days**

25. 12 men can complete a piece of work in 4 days, while 15 women can complete the same work in 4 days. 6 men start working on the job and after working for 2 days, all of them stopped working. How many women should be put on the job to complete the remaining work, if it is to be completed in 3 days?
a. 15 days b. 29 days c. 54 days d. 49 days

26. Two men under take a job for Rs.960. They can complete it in 16 days and 24 days. They work along with a third man and take 8 days to complete it. Find the share that the third man should get.
a. Rs. 120 b. Rs. 140 **c. Rs. 160** d. Rs. 200

27. A can complete a job in 20 days while B can complete the same job in 30 days. If A starts the work and B joins 10 days later, in how many days is the entire work completed?
a. 12 1/2 days b. 14 days c**. 16 days** d. 18 days

28. A boat can travel at a speed of 8kmph upstream and 10kmph downstream. If it travels a distance of 40km upstream and 50km downstream then average speed for the entire journey is
a. 8kmph b. 10kmph c. 12kmph **d. 9kmph**

29. Boat P starts from end A of a river on an upstream journey .After one hour, boat Q starts from the opposite end B of the river towards A. After 1hour more, both boats meet each other after each covering half the distance AB the speeds of the both boats in still water are the same. Find the ratio of the speed of boat P in still water and speed of stream
a. 2:1 b. 3:2 c. 4:3 **d. 3:1**

30. A person can swim at a rate of 6kmph upstream and 14kmph downstream. Find the time taken by the person to swim 10m in still water
a. 32sec b. 3.2sec **c. 3.6sec** d. 4sec

Directions – 31 – 33

In each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

Give answer

- (A) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
- (B) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
- (C) If the data in both statements I and II together are necessary to answer the question
- (D) If the data either in statement I alone or in statement II alone are sufficient to answer the question
- (E) If the data given in both statements I and II together are not sufficient to answer the question and

31. The variable C is an integer ls C even? **D**
    Statements:
    (a) C + 6 is even
    (b) C - 5 is odd
32. Is the perimeter of the triangle PQR greater than 10 cm? **D**
    Statements:
    (a) PQ-QR=5cm
    (b) The area of the triangle is 10cm
33. What is the speed of the train whose length is 210 metres? **C**
    Statements:
    (a) The train crosses another train (Howrah Express/12869) of 300 metres length running in opposite direction in 10 seconds.
    (b) The train crosses another train (Howrah Express/12869) running in the same direction at the speed of 60 km/hr in 30 seconds.
34. What is the sum of X & y2 **C**
    Statements:
    (a) x is 70% of K and y is 60% of K
    (b) K = 2
35. How is R related to P **C**
    Statements:
    (a) P is the son of T, who is Q's grandfather
    (b) Q is the daughter of R and sister of S