

**003 - Aptitude Development-II**

P. Pages : 2

Time : Two Hours

**GUG/S/25/14294**

Max. Marks : 60

1. a) A and B together can complete a work in 8 days. B alone can complete it in 12 days. How long will A alone take? **12**

**OR**

- b) A pipe can fill a tank in 15 hours, and another can fill it in 10 hours. A waste pipe can empty it in 30 hours. If all three pipes are opened together, how long will it take to fill the tank? **12**

2. a) Sohan starts from his house and walks 10 km west, then turns left and walks 6 km. He then turns right and walks 4 km. After that, he turns right again and walks 6 km. then  
(a) How far is he from his starting position?  
(b) In which direction is he now? **12**

**OR**

- b) Eight people - A, B, C, D, E, F, G, and H - are sitting in a circle facing the center. **12**  
B is to the immediate left of A but not to the immediate right of F.  
C is opposite to G.  
H is second to the right of C.  
E sits between G and D.  
F sits second to the left of E.  
Then who is sitting exactly opposite to B?

3. a) The table below shows the number of cars sold (in thousands) by five different companies over five years. **12**

Year	Hyundai	Maruti	Tata	Honda	Mahindra
2019	50	70	45	30	40
2020	55	75	50	32	42
2021	58	80	55	35	45
2022	62	85	60	38	48
2023	65	90	65	40	50

- 1) What is the total number of cars sold by Tata in these five years?
- 2) Which company had the highest percentage increase in sales from 2019 to 2023?
- 3) What is the average number of cars sold by Honda over these five years?

**OR**

- b) A school conducted an annual examination for 500 students across five subjects: **12**  
 Mathematics, Science, English, History, and Geography.  
 20% of students scored above 90 marks in Mathematics.  
 25% of students scored between 70 and 90 marks in Science.  
 The number of students scoring below 50 marks in English is 10% of the total students.  
 In History, 30% of students scored more than 80 marks.  
 The number of students who failed in Geography (scoring below 40) is 12% of the total students.  
 Then,  
 1. How many students scored above 90 marks in Mathematics?  
 2. How many students scored between 70 and 90 in Science?  
 3. How many students failed in Geography?  
 4. How many students scored more than 80 marks in History?

4. a) In a school, 400 students participate in at least one sport: Football, Basketball, and **12**  
 Volleyball. The survey found that: 180 students play Football, 150 students play  
 Basketball, 130 students play Volleyball, 70 students play both Football and Basketball, 50  
 students play both Basketball and Volleyball, 40 students play both Football and  
 Volleyball, 30 students play all three sports. Then how many students play only Football?

**OR**

- b) A company has 500 employees, of which 300 use Android, 250 use iPhones, and 100 use **12**  
 both; if one employee is picked randomly, what is the probability that they use only an  
 iPhone?
5. a) A pipe can fill a tank in 10 hours. Another pipe can fill the same tank in 15 hours. How **3**  
 long will they take together?
- b) If "PENCIL" is written as "QFOCJM" how is "ERASE" write? **3**
- c) A laptop is sold for ₹45,000 after a 10% discount. What was the original price? **3**
- d) Using the digits 1, 2, 3, 4, 5, how many three-digit numbers can be formed if: **3**  
 i) Digits cannot be repeated?  
 ii) Digits can be repeated?

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