

1. A bakery bakes cake with the expectation that it will earn a profit of 40% by selling each cake at marked price. But during the delivery to showroom 16% of the cakes were completely damaged and hence could not be sold. 24% of the cakes were slightly damaged and hence could be sold at 80% of the cost price. The remaining 60% of the cakes were sold at marked price. What is the percentage profit in the whole consignment?

- (1) 3.2
- (2) 2.4
- (3) 2.8
- (4) 4.2
- (5) 3.6

2. A professional institute's total expenditure on students for a particular course is partly fixed and partly varies linearly with the number of students. The average expense per student is Rs. 615 when there are 24 students and Rs. 465 when there are 40 students. What is the average expense when there are 60 students?

- (1) Rs. 370
- (2) Rs. 450
- (3) Rs. 350
- (4) Rs. 420
- (5) Rs. 390

3.

The ratio of the present ages of A and B is 7 : 9.

Six years ago the ratio of  $\frac{1}{3}$  of A's age at that

time and  $\frac{1}{3}$  B's age at that time was 1 : 2. What

will be the ratio of A's to B's age 6 years from now?

- (1) 4 : 5
- (2) 14 : 15
- (3) 6 : 7
- (4) 18 : 25
- (5) 22 : 25

4. A, B and C have to type 506 pages to finish an assignment. A can type a page in 12 minutes, B in 15 minutes and C in 24 minutes. If they divide the task into three parts so that all three of them spend equal amount of time in typing what is the number of pages that B should type?

- (1) 172
- (2) 176
- (3) 154
- (4) 168
- (5) 164

**Directions (Q. 5-9):** The question consists of a question and two statements 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 choose the appropriate option.

5. What is the base of a triangle PQR with PQ as base?

- I. Height and base of a triangle are in the ratio of 3 : 4.
- II. The area of the triangle is  $48 \text{ cm}^2$ ,  
perimeter 36 cm and height  $\frac{2}{3}$  of the  
perimeter.

- (1) 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.
- (2) The data either in statement I alone or in statement II alone are sufficient to answer the question.
- (3) 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.
- (4) The data in both statements I and II together are necessary to answer the question
- (5) The data even in both statements I and II together are not sufficient to answer the question.

6. What is the speed of the train?

I. A train crosses another train coming from opposite direction at the speed of 45 kmph in 20 seconds.

II. The train crosses another train running in the same direction at the speed of 42 kmph in 1 minute 18 seconds.

- (1) The data either in statement I alone or in statement II alone are sufficient to answer the question.
- (2) 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.
- (3) The data even in both statements I and II together are not sufficient to answer the question.
- (4) The data in both statements I and II together are necessary to answer the question
- (5) 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.

### **7. What is the rate of interest pcpa?**

I. An amount invested on simple interest becomes four times in 24 years.

II. The difference between compound interest and simple interest for two years on an amount of Rs. 10000 at that rate is Rs. 156.25.

(1) 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.

(2) 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.

(3) The data in both statements I and II together are necessary to answer the question

(4) The data even in both statements I and II together are not sufficient to answer the question.

(5) The data either in statement I alone or in statement II alone are sufficient to answer the question.

### **8. What is the total strength of institute X?**

I. Out of the total strength of Institute X, 35% are females and rest are males. The number of females in Institute X is equal to the number of males in Institute Y.

II. Out of the total strength of Institute Y, the no. of males is 560, which is 28% of the total strength.

(1) The data either in statement I alone or in statement II alone are sufficient to answer the question.

(2) 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.

(3) The data even in both statements I and II together are not sufficient to answer the question.

(4) 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.

(5) The data in both statements I and II together are necessary to answer the question.

### **9. What is the cost of fencing a rectangular plot along all four sides @ Rs. 450 per metre?**

I. The area of the plot is 1458 m<sup>2</sup>, which is 54 times the numerical value of its breadth.

II. The length of the plot is 200% of its breadth and the breadth is 50% of its length.

(1) The data even in both statements I and II together are not sufficient to answer the question.

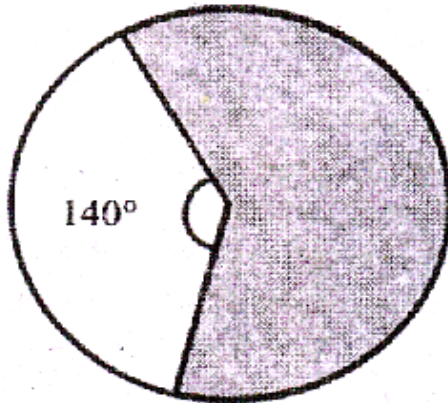
(2) The data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

(3) 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.

(4) The data either in statement I alone or in statement II alone are sufficient to answer the question.

(5) The data in both statements I and II together are necessary to answer the question.

10. In the figure given below, the perimeter of the circle is 220 cm. What is the area of the shaded portion in cm<sup>2</sup>?



- (1)  $2542\frac{7}{9}$
- (2)  $2584\frac{1}{3}$
- (3)  $2447\frac{1}{9}$
- (4)  $2352\frac{7}{9}$
- (5)  $2376\frac{2}{3}$

Directions (Q. 11-1(5): Study the table to answer the given questions.

City	Percentage of people (male and female) who watch the TV Series out of the total population of the city								
	Total population of the city	Big Bang Theory		Arrow		Breaking Bad		Mentalist	
		Male	Female	Male	Female	Male	Female	Male	Female
P	40000	12	14	22	18	18	20	12	10
Q	20000	10	20	20	16	14	10	15	30
R	50000	18	12	10	22	16	12	16	22
S	30000	16	20	10	20	12	30	18	12
T	50000	22	30	12	14	20	12	15	20

11. What is the difference between the total number of people living in City R, Q and T together who do not watch Arrow and the total number of people living in these three cities together who watch Arrow?

- (1) 47200
- (2) 45300
- (3) 47400
- (4) 47600
- (5) 45600

12. What is the average number of males who watch Big Bang Theory in all the cities together?

- (1) 6320
- (2) 6380
- (3) 6340
- (4) 6350
- (5) 6360

13. The ratio of the total number of males to the total number of females in City P is 5 : 3. What percent of the female population watches Breaking Bad in City P?

- (1)  $55\frac{1}{3}$    (2)  $55\frac{2}{3}$    (3)  $58\frac{1}{3}$    (4)  $53\frac{1}{3}$
- (5)  $53\frac{2}{3}$

14. The total population (males and females) of City R watching Mentalist is what percent more than the total population (male and female) of City T watching the same TV Series?

- (1)  $8\frac{3}{7}$    (2)  $8\frac{5}{7}$    (3)  $8\frac{4}{7}$    (4)  $7\frac{3}{7}$
- (5)  $7\frac{4}{7}$

15. What is the ratio of the number of females who watch Breaking Bad in City Q and City S together to the number of females who watch Mentalist in the same cities together?

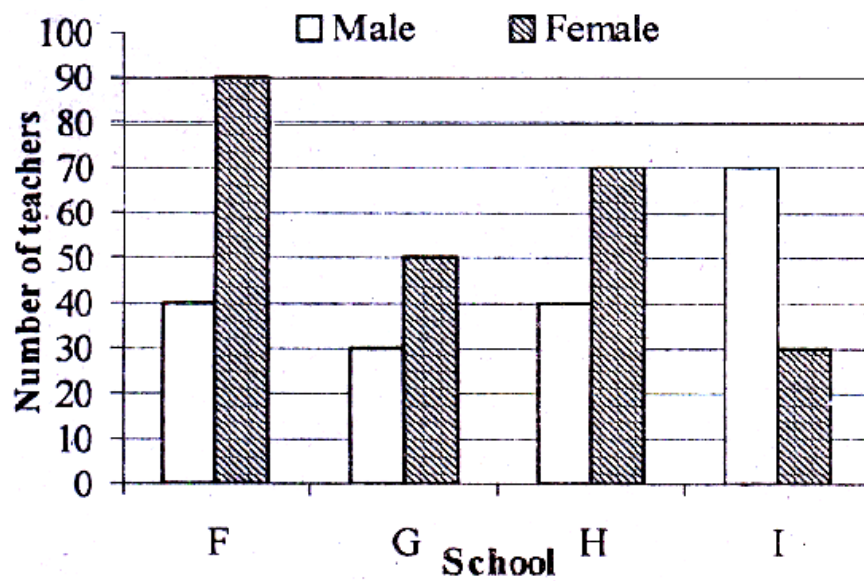
- (1) 59 : 47
- (2) 55 : 48
- (3) 59 : 42
- (4) 55 : 43
- (5) 59 : 45

16. Raghu invested a certain sum in Scheme X for 4 years. Scheme X offers simple interest @ 12 pcpa for the first two years and compound interest (compounded annually) @ 20 pcpa for the next two years. The total interest earned by him after 4 years is Rs. 11016. What was the sum invested by Raghu in Scheme X?

- (1) Rs. 17400
- (2) Rs. 18400
- (3) Rs. 16200
- (4) Rs. 11400
- (5) Rs. 9400

Directions (Q. 17): This question is based on the graph below:

**Number of male and female teachers in four schools**



17. What is the difference between the average number of male and female teachers in the given schools?

- (1) 10
- (2) 20
- (3) 5
- (4) 25
- (5) 15

**Directions (Q. 18-22):** In this question two equations numbered I & II are given. You have to solve both the equations and find out the correct option.

18. I.  $6x^2 + 41x + 63 = 0$

II.  $4y^2 + 8y + 3 = 0$

(1) Relationship between  $x$  and  $y$  cannot be established

(2)  $x \geq y$                       (3)  $x < y$

(4)  $x > y$                       (5)  $x \leq y$

19. I.  $x^2 + 10x + 24 = 0$

II.  $4y^2 - 17y + 18 = 0$

(1)  $x \leq y$                       (2)  $x \geq y$

(3) Relationship between  $x$  and  $y$  cannot be established

(4)  $x > y$                       (5)  $x < y$

20. I.  $24x^2 + 38x + 15 = 0$

II.  $12y^2 + 28y + 15 = 0$

(1)  $x \leq y$                       (2)  $x > y$

(3)  $x \geq y$                       (4)  $x < y$

(5)  $x = y$ , or Relationship between  $x$  and  $y$  cannot be established

21. I.  $3x^2 - 20x - 32 = 0$

II.  $2y^2 - 3y - 20 = 0$

(1)  $x < y$                       (2)  $x \leq y$

(3)  $x > y$

(4) Relationship between  $x$  and  $y$  cannot be established

(5)  $x \geq y$

22. I.  $x^2 - 20x + 91 = 0$

II.  $y^2 - 32y + 247 = 0$

(1)  $x > y$

(2) Relationship between  $x$  and  $y$  cannot be established

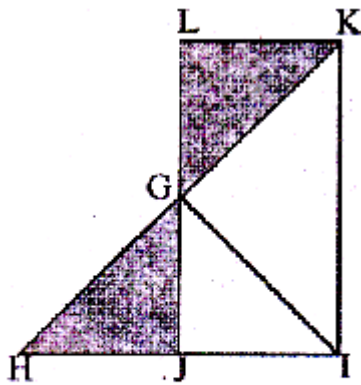
(3)  $x \geq y$                       (4)  $x \leq y$

(5)  $x < y$

**Directions (Q. 23):** In the figure given below:

GHI is an equilateral triangle with side 14 cm. G is the midpoint of JL. What is the area of the shaded portion (in  $\text{cm}^2$ )?

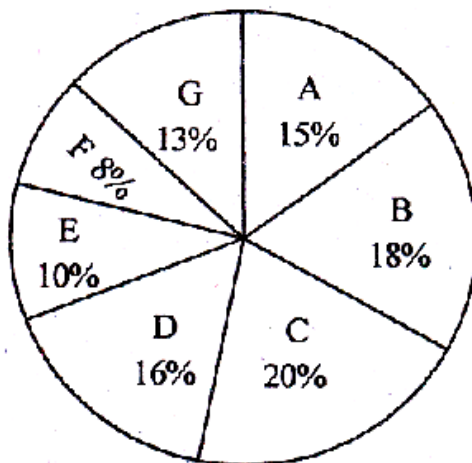
23.



- (1)  $56\sqrt{3}$                       (2)  $70\sqrt{3}$   
 (3)  $35\sqrt{3}$                       (4)  $49\sqrt{3}$   
 (5)  $42\sqrt{3}$

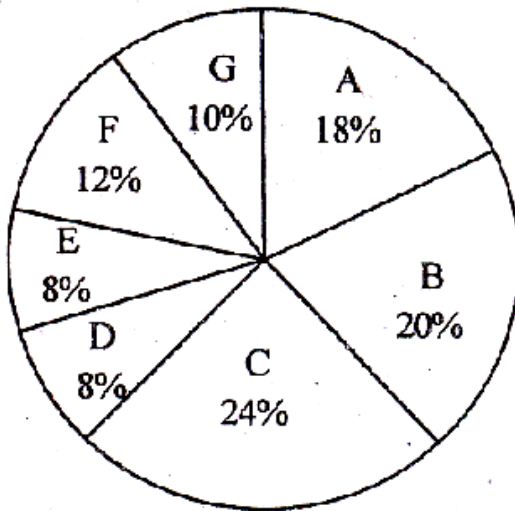
**Directions (Q. 24-28):** Refer to the pie-chart and answer the given questions:

**Distribution of the total number of novels (Romantic and Horror) sold by 7 stores**  
**Total number = 63000**





**Distribution of the total number of Romantic novels  
sold by 7 stores  
Total number = 36000**



24. What is the ratio of the number of novels (Romantic and Horror) sold by store E to the total number of Horror novels sold by stores C and F together?

- (1) 35 : 32
- (2) 45 : 32
- (3) 35 : 24
- (4) 35 : 26
- (5) 45 : 34

25. What is the average number of Horror novels sold by stores B, C, E and F together?

- (1) 2960
- (2) 3060
- (3) 2680
- (4) 3240
- (5) 3180

26. What is the central angle corresponding to the number of novels (Romantic and Horror) sold by store B?

- (1) 68.2°
- (2) 72.6°
- (3) 62.4°
- (4) 64.8°
- (5) 70.8°

27. The number of novels (Romantic and Horror) sold by store F is what percent less than the total number of Romantic novels sold by stores B and G together?

(1)  $51\frac{2}{3}$  (2)  $53\frac{1}{3}$  (3)  $55\frac{2}{3}$  (4)  $58\frac{1}{3}$

(5)  $56\frac{1}{3}$

28. What is the difference between the total number of Romantic novels sold by stores A, D and G together and the total number of Horror novels sold by the same stores together?

(1) 2000

(2) 1600

(3) 2400

(4) 1800

(5) 2200

29. A, B and C started a business investing Rs. 42000, Rs. 30000 and Rs. 28000 respectively. After 4 months A withdrew Rs. 12000, B withdrew Rs. 6000 and C withdrew Rs. 8000. If after 10 months a total profit of Rs. 46420 is earned, what is the share of C?

(1) Rs. 12580

(2) Rs. 13160

(3) Rs. 13020

(4) Rs. 12540

(5) Rs. 12760

**Directions (Q. 30-34):** Study the following information to answer the questions.

In an organisation there are 1700 employees. The organisation has five departments - HR, Finance, Marketing, Administration and Manufacturing. Out of the total number of female employees in the organisation, 34% work in HR department, 20% work in Marketing department, 18% work in Finance department and the remaining 224 female employees work in Administration department. Manufacturing department has no female employees. Out of the total number of male employees in the organisation, 12% work in HR department, 35% work in Marketing department, 30% work in Finance department, 10% work in Administration department and the remaining employees work in Manufacturing department.

**30. If the male employees in Finance department increase by 10%, the male employees in Administration department increase by 20%, 23 male employees join Manufacturing department and the number of male employees in HR and Marketing department remains the same, what is the percentage increase in the number of male employees in the organisation?**

- (1)  $7\frac{4}{9}$    (2)  $7\frac{1}{9}$    (3)  $7\frac{5}{9}$    (4)  $7\frac{2}{9}$   
(5) None of these

**31. The total number of male employees working in Marketing and Finance department together is what percent of the total number of employees (male and female) working in these two departments together? (Round off to numerical integers).**

- (1) 66  
(2) 63  
(3) 62  
(4) 60  
(5) 70

**32. If 26 male employees from HR department are transferred to Administration department and 28 female employees from Administration department are transferred to HR department, what is the ratio of the number of male employees to the number of female employees in Administration department after the transfer of employees?**

- (1) 23 : 49  
(2) 29 : 49  
(3) 25 : 49  
(4) 23 : 47  
(5) 25 : 47

**33. What is the average number of employees (male and female) who work in Manufacturing, Marketing and Administration departments together?**

- (1) 360  
(2) 392  
(3) 302  
(4) 368  
(5) 386

**34. If equal number of female employees and male employees working in Finance department leave the job, the ratio of the number of male employees working in Finance department to the number of female employees working in the same department reduces to 40 : 19. What is the total number of employees working in Finance department who left the job?**

- (1) 20
- (2) 60
- (3) 30
- (4) 50
- (5) 40

**35. A boat takes 35 minutes less to travel 28 km downstream than it takes to travel the same distance upstream. If the speed of the boat in still water is 14 kmph, what is the speed of the stream? (in kmph)**

- (1) 2.5
- (2) 6.5
- (3) 2
- (4) 9.5
- (5) 10.5

**Directions (Q. 36-40):** In the following number series, only one number is wrong. Find out the wrong number.

**36. 41 45 61 97 181 261 405**

- (1) 181
- (2) 97
- (3) 261
- (4) 61
- (5) 45

**37. 16 30 58 114 226 496 898**

- (1) 58
- (2) 226
- (3) 30
- (4) 114
- (5) 496

**38. 15 21.5 46.5 145 585.5 2933 17603.5**

- (1) 585.5
- (2) 2933
- (3) 46.5
- (4) 145
- (5) 21.5

**39. 5 6 16 57 246 1245 7506**

- (1) 16
- (2) 6
- (3) 1245
- (4) 246
- (5) 57

**40. 2 13 46 145 452 1333 4006**

- (1) 1333
- (2) 452
- (3) 46
- (4) 145
- (5) 13

**41. There are two vessels A and B. Vessel A is containing 40 litres of pure milk and vessel B is containing 22 litres of pure water. From vessel A, 8 litres of milk is taken out and poured into vessel B. Then 6 litres of mixture (milk and water) is taken out and from vessel B poured into vessel A. What is the ratio of the quantity of pure milk in vessel A to the quantity of pure water in vessel B?**

- (1) 14 : 9
- (2) 21 : 11
- (3) 24 : 13
- (4) 14 : 5
- (5) 21 : 13

**42. It takes 24 seconds for a train travelling at 93 kmph to cross entirely another train half its length travelling in opposite direction at 51 kmph. It passes a bridge in 66 seconds. What is the length of the bridge? (in m)**

- (1) 1065
- (2) 1600
- (3) 1705
- (4) 1580
- (5) None of these

**43. A rectangular plot, 36m long and 28m broad, has two concrete roads 5m wide running in the middle of the park, one parallel to the length and the other parallel to the breadth. What would be the total cost of gravelling the plot, excluding the area covered by the roads, @ Rs. 3.60 per sq m?**

- (1) Rs. 2772.20
- (2) Rs. 2466.60
- (3) Rs. 2654.40
- (4) Rs. 2332.60
- (5) Rs. 2566.80

**Directions (Q. 44-45):** Study the following table the answer the given questions.

Number of girls studying IT and Electronics

Engineering from from Five colleges College IT Electronics

<b>College</b>	<b>IT</b>	<b>Electronics</b>
A	240	315
B	350	285
C	260	225
D	325	255
E	275	220

A 240 315

B 350 285

C 260 225

D 325 255

E 275 220

**44. The total number of girls studying IT Engineering from college B, C and D together is by what percent more than the total number of girls studying Electronics Engineering from these three colleges?**

(1)  $22\frac{2}{9}$  (2)  $23\frac{1}{9}$  (3)  $22\frac{2}{3}$  (4)  $23\frac{5}{9}$

(5)  $23\frac{1}{3}$

**45. What percent of the girls in college C study Electronics Engineering out of the girls studying IT and Electronics Engineering? (rounded off to the nearest integer)**

(1) 46

(2) 52

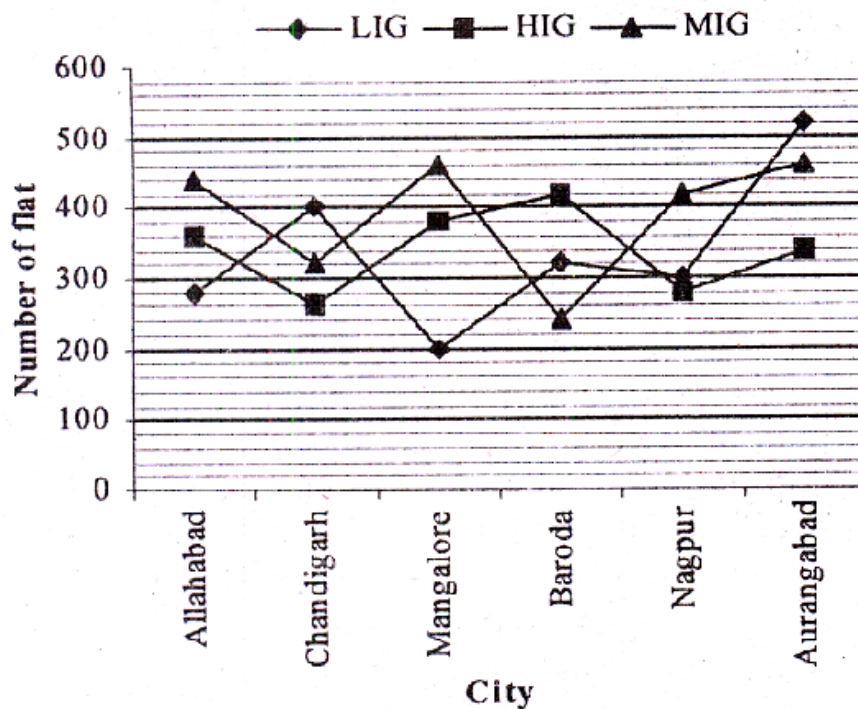
(3) 51

(4) 42

(5) 49

Directions (Q. 46-50): Study the following graph carefully to answer the given questions.

**Number of the flat booked in HIG, MIG and LIG categories from different cities in 2004.**



46. If for Aurangabad the number of HIG flats booked in 2005 was more than that in 2004 by 15%, the number of MIG flats booked in 2005 was more than that in 2004 by 10% and the number of LIG flats booked in 2005 was more than that in 2004 by 20% then what was the total number of flats booked in Aurangabad in 2005?

- (1) 1565
- (2) 1521
- (3) 1625
- (4) 1642
- (5) 1544

47. Out of the LIG flats booked from Chandigarh, 35% were by employees of a Financial Institution and out of the remaining flats, those booked by officers from a software company and HRM department of Government of India were in the ratio of 6 : 7. What was the total no. of LIG flats booked by officers from the software company?

- (1) 130
- (2) 120
- (3) 160
- (4) 140
- (5) 150

**48. The total number of MIG flats booked in Manglore, Baroda and Nagpur is by what percent more than the total number of LIG flats booked from these three cities together? (rounded off to the nearest integer)**

- (1) 37
- (2) 35
- (3) 39
- (4) 32
- (5) 34

**49. What is the difference between the total number of MIG flats booked in Allahabad, Mangalore, Nagpur and Aurangabad together and the total number of LIG flats booked in these four cities together?**

- (1) 420
- (2) 480
- (3) 460
- (4) 360
- (5) 260

**50. What is the ratio of the total number of flats (all three types) booked in Allahabad to that in Baroda?**

- (1) 54 : 49
- (2) 51 : 46
- (3) 54 : 47
- (4) 58 : 49
- (5) 55 : 48

## Answers

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1. (1) 2. (5) 3. (3) 4. (2) 5. (1) 6. (3) 7. (5) 8. (5) 9. (5) 10. (4) 11. (4) 12. (1) 13. (4) 14. (3) 15. (2) 16. (3) 17. (5) 18. (3) 19. (5) 20. (3) 21. (4) 22. (4) 23. (4) 24. (4) 25. (2) 26. (4) 27. (2) 28. (4) 29. (5) 30. (3) 31. (1) 32. (2) 33. (3) 34. (2) 35. (3) 36. (1) 37. (5) 38. (5) 39. (4) 40. (2) 41. (2) 42. (1) 43. (5) 44. (1) 45. (1) 46. (2) 47. (2) 48. (1) 49. (2) 50. (1)