

## **Quantitative Aptitude Analysis (KAS-2010 to 2020)**

### **KAS Prelims Paper-II Quantitative Aptitude 2020**

- 1) If the product of two numbers is 47,915 and their H.C.F. is 37, then their sum is
  - 1) 333
  - 2) 444
  - 3) 555
  - 4) 666
  
- 2) A meeting is scheduled at 11:00 AM and a person 'P', who is at a distance of 100 km from the meeting place, has to attend. If 'P' starts at 09:45 AM in his car which moves with a speed of 60 kmph, then 'P' is late to the meeting by how many minutes?
  - A. 5 minutes
  - B. 15 minutes
  - C. 25 minutes
  - D. 35 minutes
  
- 3) At what time between 3 and 4 o'clock will the hands of a watch point in opposite directions?
  - 1) 49  $\frac{1}{11}$  minutes past 3
  - 2) 50 minutes past 3
  - 3) 49  $\frac{5}{11}$  minutes past 3
  - 4) 49  $\frac{10}{11}$  minutes past 3
  
- 4) A student who scored 30% marks in the first paper of Physics out of 180 marks, has to get an overall score of at least 50% two papers. The second paper is of 150 marks. The percentage of marks he should score in the second paper to get the overall average score is
  - 1) 70 %
  - 2) 74%
  - 3) 76%
  - 4) 80%
  
- 5) Thirty-six vehicles are parked in a parking area in a single row. After the first car, there is one scooter. After the second car, there are two scooters and so

on. Work out the number of scooters in the second half of the row.

- 1) 10
- 2) 12
- 3) 15
- 4) 17

6) A training college has to conduct a refresher course for teachers of seven different subjects, Mechanics, Psychology, Philosophy, Sociology, Economics, Science

and Engineering from 22<sup>nd</sup> July to 29<sup>th</sup> July.

- I. Course should start with Psychology.
- II. 23<sup>rd</sup> July, being Sunday, should be a holiday.
- III. Science subject should be on the previous day of Engineering subject.
- IV. Course should end with Mechanics subject.
- V. Philosophy should be immediately after the holiday.
- VI. There should be a gap of one day between Economics and Engineering
- VII. There should be a gap of two days between Sociology and Economics.

Based on the above information, which subject precedes Science?

- 1) Sociology
- 2) Engineering
- 3) Economics
- 4) Mechanics

7) A two-digit number is such that the product of its digits is 14. When 45 is added to this number the digits interchange their position (like  $12 + 9 = 21$ ). What is that number?

- 1) 54

- 2) 27
- 3) 36
- 4) 72

8) Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is

- (1) 1 : 3
- (2) 3 : 2
- (3) 3 : 4
- (4) None of these

9) In an examination, it is required to get 36% of maximum marks to pass. A student gets 113 marks and is declared failed by 85 marks. The maximum marks is

- (1) 500
- (2) 550
- (3) 640
- (4) 1000

**KAS Prelims Paper-II Quantitative Aptitude 2017**

10) Sitting in a car moving with constant velocity of 30 km/h eastwards relative to the road, a person throws a ball vertically upwards up to a few metres. If we neglect the air resistance during flight completely, the ball

- (1) will land behind the person moving in the car
- (2) will land ahead of the person moving in the car
- (3) will land on the person moving in the car
- (4) may fall on the ground outside the car

11) In the Budget speech of 2017 ¶ 18 the Hon'ble Chief Minister of Karnataka has announced to start new Tree Parks in the State in the name of which famous social figure?

- (1) Bhimrao Babasaheb Ambedkar

- (2) Nadaprabhu Kempegowda
- (3) Basavanna
- (4) Saalumurada Thimmakka

**Directions (Questions no. 12 and 13):** The following table gives the sales of batteries manufactured by a company over the years. Study the table and answer the questions that follow.

Number of Different Types of Batteries Sold by a Company Over The Years (Numbers in Thousands)						
Year	Types of Batteries					
	4AH	7AH	32AH	35AH	55AH	TOTAL
1992	75	144	114	102	108	543
1993	90	126	102	84	126	528
1994	96	114	75	105	135	525
1995	105	90	150	90	75	510
1996	90	75	135	75	90	465
1997	105	60	165	45	120	495
1998	115	85	160	100	145	605

12) The percentage of 4AH batteries sold to the total number of batteries sold was maximum in the year

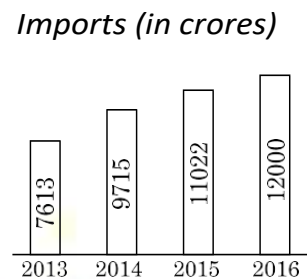
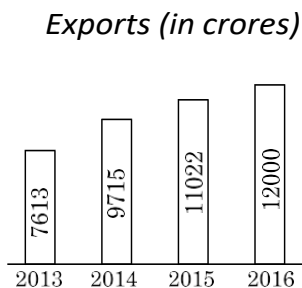
- (1) 1994
- (2) 1995
- (3) 1996
- (4) 1997

13) In which type of battery was there a continuous decrease in sales from 1992 to 1997?

- (1) 4AH
- (2) 7AH
- (3) 32AH
- (4) 35AH

**Directions (Questions no. 14 and 15):** Study the following graphs carefully and answer the questions given below them.

Exports and Imports data of a country



14) What was the approximate difference between the average imports and average exports over the given years (2013 to 2016)?

- (1) 362 crores
- (2) 380 crores
- (3) 350 crores
- (4) None of these

15) What was the approximate percentage increase in the imports from 2015 to 2016?

- (1) 10%
- (2) 15%
- (3) 11%
- (4) 13%

16) A group of friends decided to go on a picnic with an estimated expenditure of  $< 960$ . But at the last minute four of them did not turn up. As a consequence, the remaining ones had to contribute

- A.  $< 40$  each extra. Then the number of
- B. friends who went to the picnic is

- 1. 12
- 2. 24
- 3. 8

4. 16

Raju alone can do a piece of work in 10 days and Manu alone can do it in 12 days. They undertook to do it for ₹ 4,800. With the help of Anand, they completed the work in 5 days.

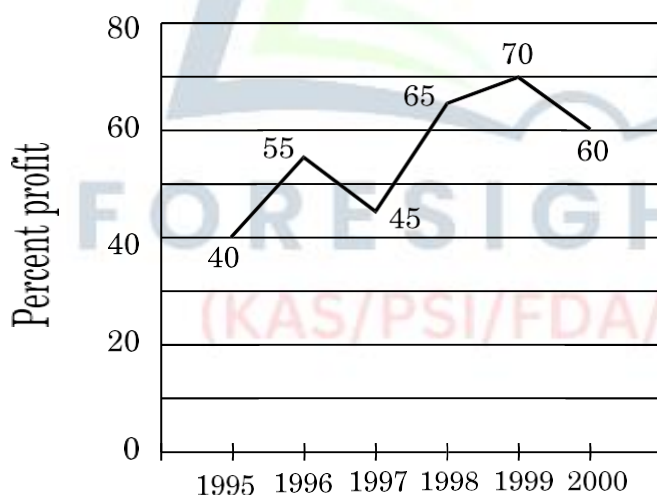
Then the amount paid to Raju and Anand respectively is

- (1) ₹ 2,000 and ₹ 400
- (2) ₹ 2,400 and ₹ 400
- (3) ₹ 2,400 and ₹ 2,000
- (4) ₹ 2,200 and ₹ 500

17) Directions (Questions no. 17 to 34): The following line-graph gives the annual percent profit earned by a company during the period 1995 to 2000. Study the line-graph and answer the following questions based on it.

$$\% \text{ Profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

Percent profit earned by a company over the years



18. If the income in 1998 was ₹ 264 crores, what was the expenditure in 1998?

1. ₹ 104 crores
2. ₹ 145 crores
3. ₹ 160 crores

4. < 185 crores
19. Out of the following years given, for which year the ratio of income to expenditure is the minimum?
1. 1996
  2. 1997
  3. 1998
  4. 2000
20. What is the average of percentage profit earned for the given years (from 1995 to 2000)?
- 1) 50.66
  - 2) 55.83
  - 3) 60.17
  - 4) 33.5
21. While facing East, Williams turns to his left and walks 6 metres, then he again turns to his left and walks 6 metres, then turns  $45^\circ$  towards his right and walks a distance of 5 metres. Then what are the direction he is facing and the distance from his starting point?
- (1) North-east,  $5 + 6\sqrt{2}$  m
  - (2) North-west,  $5 + 6\sqrt{2}$  m
  - (3) South-west, 17 m
  - (4) North-west, 17 m
22. A swimming pool is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the swimming pool in the same time, during which the swimming pool is filled by the third pipe alone. The second pipe alone fills the swimming pool 5 hours faster than the first pipe and 4 hours slower than the third pipe.
- The time required by the first pipe only to fill the swimming pool is
- 1) 8 hours
  - 2) 12 hours
  - 3) 15 hours
  - 4) 18 hours
23. Ajith, an eighteen-year-old literate, unemployed youth without any income knows tailoring and has a valid 40% and above Disability Certificate issued by the Medical Board. Since birth, he has been living in Hassan district. Under which scheme can he get assistance of < 20,000 as an interest free loan and < 15,000 for a kiosk to set up business?

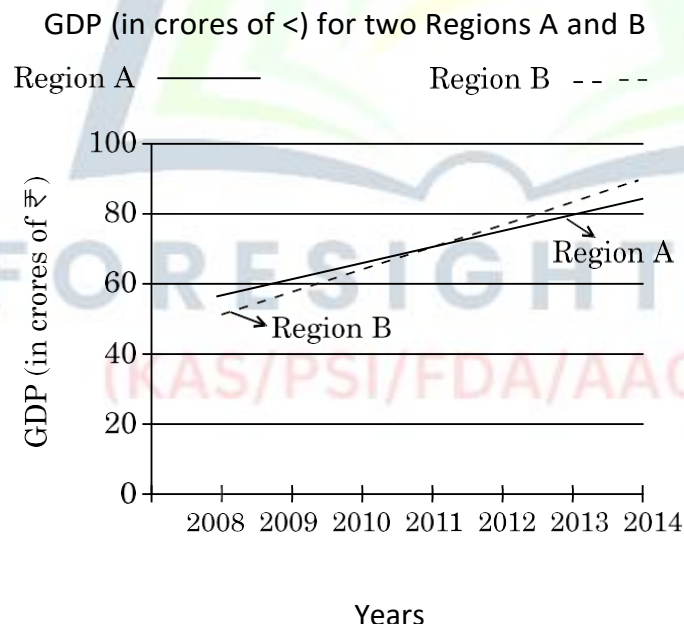


- A. Adhara
- B. Udyogi
- C. Chetan
- D. None of the above

24. The ozone layer comprises the greaterpart of the stratosphere between altitudes of 10 km and 50 km. Which of the following is a scale for measuring thethickness of stratospheric ozone layer?

- 1. Dobson unit
- 2. Candella unit
- 3. Melson unit
- 4. Silvert unit

The following graph represents the GDP (Gross Domestic Product) in crores of rupees for 2 regions A and B:



For the figure, which of the following statements is most appropriate?

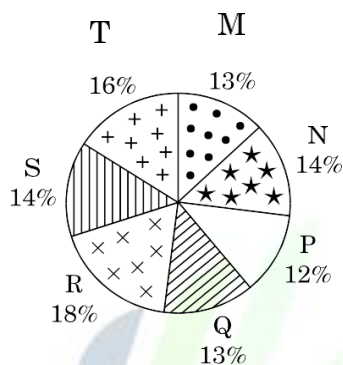
- (1) The rate of growth for region B is greater than region A before the year 2011 and is lower afterwards.
- (2) The growth rate for region B is lower compared to region A before the year 2011 and is greater afterwards.



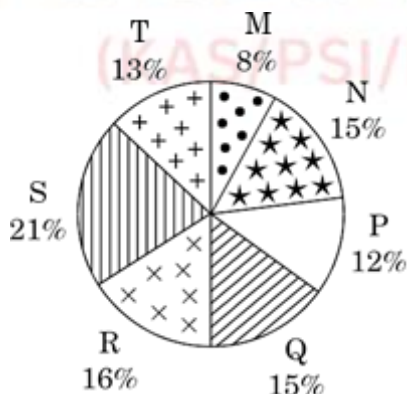
- (3) From the figure it is difficult to draw any conclusion.
- (4) The rate of growth of GDP for region B is always greater than region A.

**25. Directions (Questions no. 25 and 26):** The following pie charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town. Distribution of Students at Graduate and Post-Graduate levels in seven institutions

Total Number of Students of Graduate level = 27300



Total Number of Students of Post-Graduate level = 24700



26. What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

- (1) 14 : 19
- (2) 19 : 21
- (3) 17 : 21
- (4) 19 : 14

27. What is the ratio between the number of students studying at post-graduate level from institute S and the number of students studying at graduate level from institute Q?

- (1) 13 : 19
- (2) 19 : 13
- (3) 21 : 13
- (4) 13 : 18

**KAS Prelims Paper-II Quantitative Aptitude 2014**

28. 583 people can make 385 baskets in 385 days. All the people work at the same rate and all baskets require same efforts. How long will one person take to prepare two such blankets?

- A. 385
- B. 583
- C. 1166
- D. 770

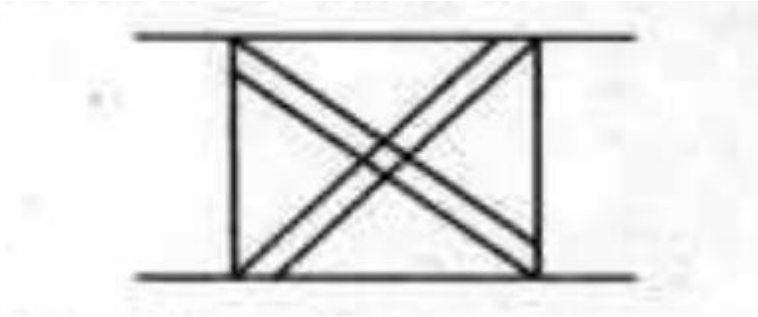
29. Look at the series 3, 10, 101... what number should come next?

- a) 10101
- b) 10201
- c) 10202
- d) 11012

30. By selling an umbrella for rupees 300, a shopkeeper gains 20%. During a clearance sale, the shopkeeper allows a rebate of 10% on the marked price. the percentage of the shopkeeper's gain is

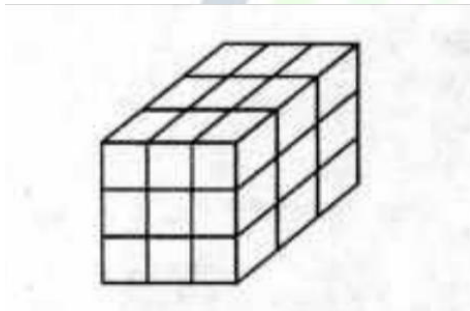
- a) 7%
- b) 7.5%
- c) 8%
- d) 8.5%

30. Natesh borrowed some money at the rate 6%p.a for the first 3 years, 9% p.a for the next 5 years and 13% p.a beyond 8 years. the above are all simple interest rates. if Natesh pays a total of 8160 after 11 years, how much money did he borrow?8
- a) 8000
  - b) 10000
  - c) 12000
  - d) 14000
31. An express train travelled at an average speed of 100 km/hr, stopping for 3 minutes after every 75km, how much time does the train take to travel between two places which are 600 km apart?
- a. 6 hrs 21 min
  - b. 6 hrs 24 min
  - c. 6 hrs 27 min
  - d. 6 hrs 30 min
32. The seed of particular variety of rose in a rose garden. multiple into 2 everyday due to reproduction. if there is only one seed on the first day. it increases to two on the second day, increase to four on third day, increases to eight on fourth day and so on. if starting with one seed it takes 30 days to cover 200 squares meters' plot, how long will it take to cover the same plot if started with two seeds?
- a) 16 days
  - b) 15 days
  - c) 17 days
  - d) 29 days
33. On a bus route from place A to place B, if the fare is kept at rupees' x passengers are expected to travel, what should be the fare in order to maximize the revenue?
- a) 15
  - b) 20
  - c) 25
  - d) 30
34. The number of triangle in the following figure is



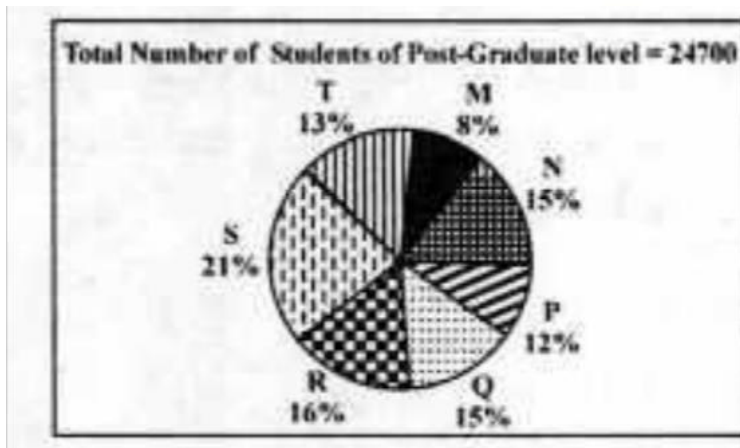
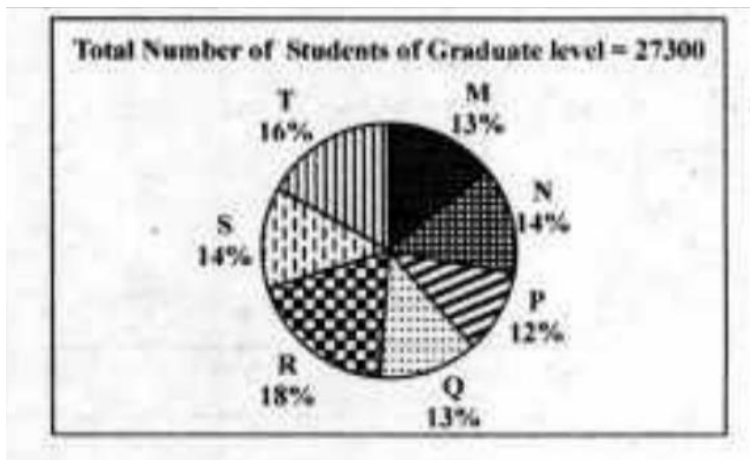
- a) 8
- b) 10
- c) 12
- d) 14

35. A cube is taken and all its it's six faces are painted then, the cube is cut by six planes, so as to yield the maximum number of smaller cubes. if 3.5 litres of paint was consumed to paint the original cube, find the additional amount of paint needed to paint all the unpainted faces of all the smaller cubes



- a) 3 litres
- b) 11.5 litres
- c) 7 litres
- d) 10.5 litres

the following pie charts shows the distribution of students of graduate and post-graduate level in seven different institute in a town, Answer the following two questions (36&37) Distribution of students at Graduate and post- graduate levels in seven institutes.



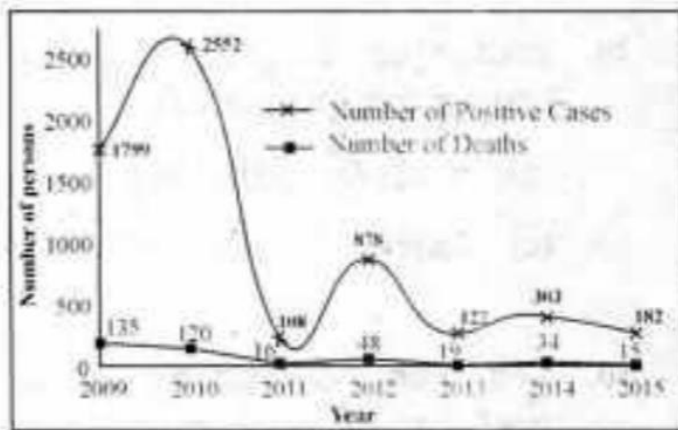
36. what is the ratio between the number of students studying at post-graduate and graduate level respectively from institute S?

- a) 14:19
- b) 19:21
- c) 17:21
- d) 19:14

37. Total number of students studying at post- graduate level from institute N and P is

- a) 5601
- b) 5944
- c) 6669
- d) 8372

Answer the following two questions (Q. Nos 38& 39) from the figures given below:  
Department of health and family welfare, Government of Karnataka has published swine flu epidemic situation in Karnataka from 2009 to 2015



38. maximum percentage of deaths due to swine epidemic among positive cases is from the year

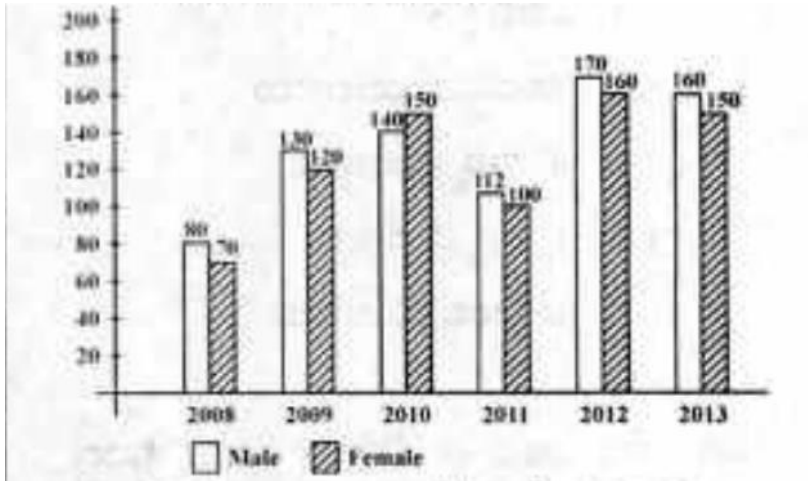
- a) 2009
- b) 2010
- c) 2011
- d) 2013

39. what is the trend of the percentage of deaths due to swine flu epidemics from 2009 to 2014?

- a) Non- increasing
- b) Non- decreasing
- c) steady
- d) Fluctuating

Male and female population of a country (in lakhs) for the period 2008 to 2013 are presented in the following graph





40. In how many of the given years, was the male population at least 10% more than the female population?

- a) 3
- b) 2
- c) 1
- d) 0

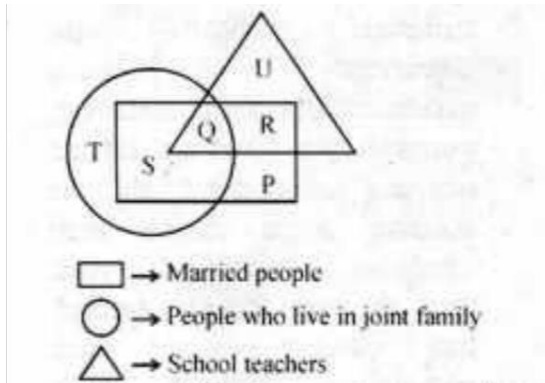
41. A survey was conducted to analyse the public opinion on liquor ban in a city, the opinion recorded based on a questionnaire is given in the following table:

	For ban	Against ban	No opinion	Total
Men	680	1290	110	2080
Women	920	380	120	1420
Total	1600	1670	230	3500

- a) more women are against banning liquor
- b) more men are against banning liquor
- c) more men are for banning liquor
- d) more than 10% men have no opinion



study the following figure and answer the question given below:



42. By which letter, the married people who live in joint family but not are school teacher are represented?

- a) T
- b) R
- c) Q
- d) S

Eight friends E, F, G, H, I, J, K and L are seated around a square table- two on each side. There are 3 girls who are not seated next to each other.

- J is between L and F
  - G is between I and F
  - H, a girl is second to the left of J
  - F, a boy is seated opposite to E, a lady member.
  - There is a girl between F and I. What is true about J and K?
- a) J is boy, K is girl
  - b) J is girl, K is boy
  - c) both are girls
  - d) both are boys

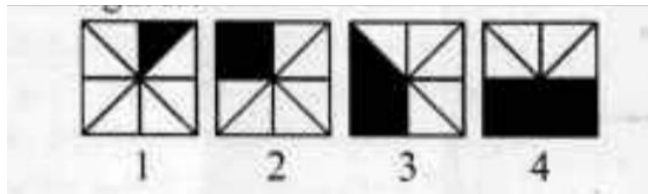
43. Read the following informations carefully and answer the questions given below:

The sum of the income of Ramu and Shyamu is more than the sum of the income of Chandru and Deepu. The sum of the income of Ramu and Chandru is same as the sum of income of Syamu and Deepu, Moreover Ramu earns half as much as the sum of the income of Shyamu and Deepu

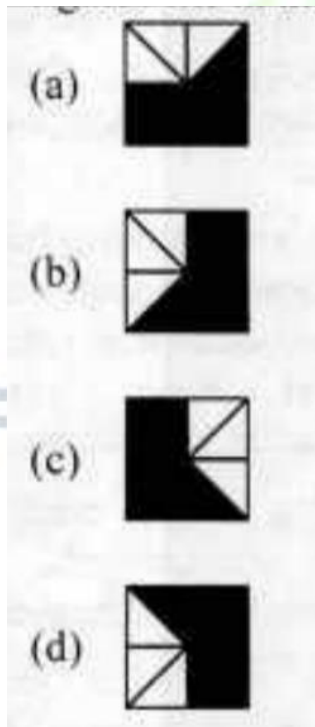
Whose income is the highest?

- a) Ramu
- b) Shyamu
- c) Chandru
- d) Deepu

44. Consider the following four figures.



45. which of the following figures fits in the fifth place?



46. Let, A, B, C, D, E and F be a group of friends, there are two housewives, one professor, one doctor, one engineer and a lawyer in the group. there are only two married couples in the group. the lawyer is married to D, who is a housewife, no women in the group is either a doctor or an engineer, C, the engineer is married to F, who is professor. A is married to a housewife. E is not a housewife, which one of the following is a married couple?

- a) A and B
- b) B and E
- c) D and E
- d) A and D

47. As a municipal commissioner you are criticized for the increasing pig menace. these pigs belong to a community very close to the local MLA. it would be very difficult for you to shift the pigs, as they manage to come back some of the leaders also convince you that pigs solve garbage problem by consuming them. your local lower/reporting authority resorts to shooting pigs. one such bullet pierces the legs of kid. it results in huge unrest. what would you do?

- a) Immediately stop shooting of the pigs and dismiss your reporting authority who ordered the shooting
- b) Defend the reporting authority and stick to your stand and continue the shooting
- c) Defend your reporting authority and suspend the shooting operations.
- d) Suspend all operations and keep quiet until everything subsides.

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