



Mock Test Number: 001

1. The price of lunch for 15 people was 207 pounds, including a 15 percent gratuity of service. What was the average price per person, EXCLUDING the gratuity?

A. 11.73 Pounds
B. 12.00 Pounds
C. 13.80 Pounds
D. 14.00 Pounds

Answer: B

For 1 person

price of lunch only = x

Gratuity = $0.15x$

Total price per person = $1.15x$

Total price = $1.15x \times 15 = 207$

For 15 people $x = 12.00/\text{person}$

2. College T has 1000 students. Of the 200 students majoring in one or more of the sciences, 130 are majoring in Chemistry and 150 are majoring in Biology. If at least 30 of the students are not majoring in either Chemistry or Biology, then the number of students majoring in both Chemistry and Biology could be any number from

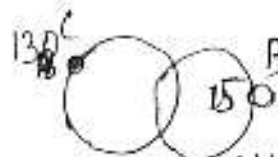
A. 110 to 130
B. 40 to 70
C. 110 to 150
D. 20 to 50

Answer: A

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$n(C \cup B) = n(C) + n(B) - n(C \cap B)$$

$$= 130 + 150 - n(C \cap B)$$



MAX
C & B can be
130.

Now, if at least 30 are not majoring in chem or Bio at most $(200 - 30) = 170$ are majoring.
Putting $n(C \cup B) = 170$, $170 = 280 - n(C \cap B)$
We get $n(C \cap B) = 110$

3. A drug that is highly effective in treating many types of infection can, at present, be obtained only from the bark of the ibora, a tree that is quite rare in the wild. It takes the bark of 5,000 trees to make one kilogram of the drug. It follows, therefore, that continued production of the drug must inevitably lead to the ibora's extinction. Which of the following, if true, most seriously weakens the argument above?

A. The drug from ibora bark is dispensed to doctors from a central university.
B. The drug made from ibora bark is expensive to produce.
C. The leaves of the ibora are used in a number of medical products.
D. The ibora can be propagated from cutting and grown under cultivation ✓

Answer: D

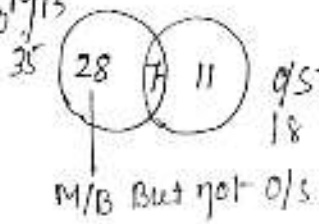
4. Among a group of 2500 people, 35 percent invest in municipal bonds, 18 percent invest in oil stocks, and 7 percent invest in both municipal bonds and oil stocks. If 1 person is to be randomly selected from 2500 people, what is the probability that the person selected will be one who invests in municipal bonds but not in oil stocks

A. $27/50$
 B. $7/25$

C. $21/50$
 D. $7/20$

Answer: B

Not considering 2500, considering 100 MB

$$\text{So } P(\text{MB}) = \frac{28}{100} = \frac{7}{25}$$


5. What is the lowest possible integer that is divisible by each of the integers 1 through 7, inclusive?

A. 420
 B. 840

C. 1260
 D. 2520

Answer: A

$$\text{LCM of } (1, 2, 3, 4, 5, 6, 7) = 420$$

6. Of the following, which is the closest approximation of $(50.2 \times 0.49) / 199$, 8?

A. $1/10$
 B. $1/8$

C. $1/4$
 D. $21/2$

Answer: B

$$\frac{50 \times 0.5}{200} = \frac{1}{8}$$

7. Guitar Strings often go dead - become less responsive and bright in tone - after a few weeks of intense use. A researcher whose son is a classical guitarist hypothesized that dirt and oil, rather than changes in the material properties of the string, were responsible. Which of the following investigations is most likely to yield significant information that would help evaluate the researcher's hypothesis?

A. Determining whether a metal alloy is used to make their strings go dead faster than do folk guitarists

B. Determining whether identical lengths of string, of the same gauge, go dead at different rates when strung on various brands of guitars

C. Determining whether a dead string and a new string produce different qualities of sounds

☒ D. Determining whether smearing various substances on a new guitar strings causes them to go dead

Answer: D

8. Wood smoke contains dangerous toxins that cause changes in human cells. Because wood smoke presents such a high health risk, legislation is needed to regulate the use of open-air fires and wood burning stoves *which statement strengthens the argument above*
- A. Within the jurisdiction covered by the proposed legislation, most heating and cooking is done with oil or natural gas
 - B. Smoke produced by coal-burning stoves is significantly more toxic than smoke from wood burning stoves
 - C. In valleys where wood is used as the primary heating fuel, the concentration of smoke results in poor air quality ✓
 - D. The amount of toxins present in the wood smoke is much less than the amount contained in an equal volume of automobile exhaust

Answer: C

9. Country Club has an indoor swimming club. Thirty percent of the members of a swim club have passed the lifesaving test. Among the members who have not passed the test, 12 have taken the preparatory course and 30 have not taken the course. How many members are there in the swim club?

- A. 60
- B. 80

- C. 110
- D. 120

Answer: A

No. of people taken the course = 12

No. of people not taken the course = 30

Total = 42

↓
which is 70% of total membership

1b 70% = 42

$$100\% = \frac{42}{70} \times 100 = 60$$

10. Machine A produces bolts at a uniform rate of 120 every 40 second, and Machine B produces bolts at a uniform rate of 100 every 20 seconds. If the two machines run simultaneously, how many seconds will it take for them to produce a total of 200 bolts?

- A. 22
- B. 25

- C. 28
- D. 56

Answer: B

$$M_1 = 3 \text{ Bolt/sec}$$

$$M_2 = 5 \text{ Bolt/sec}$$

$$M_1 + M_2 = 8 \text{ Bolt/sec}$$

$$\text{For 200 Bolt } T = \frac{200}{8} = 25 \text{ sec}$$

11. Jose is a student of horticulture in the University of Hose. In a horticultural experiment in his final year, 200 seeds were planted in plot I and 300 were planted in plot II. If 57% of the seeds in plot I germinated and 42% of the seeds in plot II germinated, what percent of the total number of planted seeds germinated?

A. 45.5%
B. 46.5%

C. 48.0%
D. 49.5%

Answer: C

$$\text{Plot 1 (seed germinated)} = \frac{57}{100} \times 200 = 114$$

$$\text{Plot 2 (seed germinated)} = \frac{42}{100} \times 300 = \frac{126}{100}$$

$$\text{Total percentage} = \frac{240}{500} = 48\%$$

12. If $n=4p$, where p is a prime number greater than 2, how many different positive even divisors does n have including n ?

A. Two
B. Three

C. Four
D. Six

Answer: C

$$\text{Take } p=3$$

$$\therefore n = 4 \times 3 = 12$$

(four divisors)

$$1, 2, 3, 6, 4, 12$$

$\therefore 2, 4, 6, 12$ are divisors.

13. Homeowners aged 40 to 50 are more likely to purchase ice cream and are more likely to purchase it in larger amounts than are members of any other demographic group. The popular belief that teenagers eat more ice-cream than adults must, therefore, be false. The argument is flawed because the author

A. Fails to distinguish between purchasing and consuming ✓
B. does not specify the precise amount of ice cream purchased by any demographic group

C. does not supply information about homeowners in age group other than 40 to 50
D. discusses ice cream rather than more nutritious and healthy foods

Answer: A

14. If 75 % of a class answered the first question on a certain test correctly, 55 percent answered the second question on the test correctly, and 20 percent answered neither of the questions correctly, what percentage answered both correctly?

A. 10%
B. 20%

C. 50%
D. 65%

Answer: C

20% answered neither of questions correctly.

$\therefore 100 - 20 = 80\%$ answered at least one correctly.

$$n(A \cup B) = 80$$

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$\Rightarrow 80 = 75 + 55 - x \Rightarrow x = 50\%$$

15. A tank contains 10,000 gallons of a solution that is 5 percent sodium chloride by volume. If 2500 gallons of water evaporate from the tank, the remaining solution will be approximately what percentage of sodium chloride?

A. 1.25%

B. 6.67%

C. 3.75%

D. 11.70%

Answer:

B

Taking 100 l instead of 10,000 l

25 l instead of 2500 l

In 100 l, 95 l = water and 5 l = NaCl

If 25 l of water evaporate = $95 - 25 = 70$ l

$\frac{5 \text{ l NaCl}}{75}$

$$\% \text{ NaCl} = \frac{5}{75} \times 100 = 6.67\%$$

16. A greater number of newspapers are sold in Town S than Town T. Therefore, the citizens of Town S are better informed about major word events than are the citizens of Town T. Each of the following, if true weakens the conclusion above EXCEPT:

A. Town S has a larger population than Town T

C. The average newsstand price of newspaper sold in Town S is lower than average price of newspapers sold in Town T

B. Most citizens of Town T work in Town S and buy their newspaper there

D. The average citizens of Town S spends less time reusing newspaper than does the average citizen of Town T

Answer:

B

17. How many prime numbers between 1 and 100 are factors of 7150?

A. One

B. Two

C. Three

D. Four

Answer:

D

$$7150 = 2 \times 5^2 \times 11 \times 13$$

$\therefore 4$ prime numbers

2, 5, 11, 13

18. Andalusia has been promoting the importance of health maintenance. From January 1, 1991 to January 1, 1993, the number of people enrolled in health maintenance organizations increased by 15 percent. The enrollment on January 1, 1993 was 45 million. How many million people (to the nearest million) were enrolled in health maintenance organizations on January 1, 1991?

A. 38

B. 39

C. 40

D. 41

Answer:

B

After 15% Increase

$$P \times 1.15 = 45$$

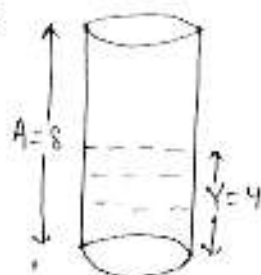
$$P = \frac{45}{1.15} = 39.13$$

19. A closed cylindrical tank contains 36 pie cubic feet of water and it's filled to half its capacity. When the tank is placed upright on its circular base on level ground, the height of water in the tank is 4 feet. When the tank is placed on its side on level ground, what is the height, in feet, of the surface of the water above the ground?

A. 3
B. 6

C. 9
D. 2

Answer: A



$$V_{\text{cylinder}} = \pi r^2 (h/2)$$

$$\Rightarrow 36\pi = \pi r^2 4$$

$$\Rightarrow r = 3$$



Water will rise again upto half level above ground.

20. The present ratio of students to teachers at a certain school is 30 to 1. If the student enrollment were to increase by 50 students and the number of teachers were to increase by 5, the ratio of the teachers would then be 25 to 1 what the present number of teachers is?

A. 15
B. 8

C. 10
D. 18

Answer: A

$$\frac{S}{T} = 30$$

$$\Rightarrow S = 30T$$

$$\frac{S+50}{T+5} = \frac{25}{1}$$

$$30T + 50 = (T+5) 25$$

$$T = 15$$

21. Red blood cells in which the malarial-fever parasite resides are eliminated from a person's body after 120 days. Because the parasite cannot travel to a new generation of red blood cells, any fever that develops in a person more than 120 days after that person has moved to malaria free region is not due to malaria parasite. Which of the following, if true, most seriously weakens the conclusion above?

☒ A. In some cases, the parasite that causes malarial fever travels to cells of the spleen, which are less frequently eliminated from a person's body than are red blood cells

B. The fever caused by the malaria parasite may resemble than fever caused by flu viruses

C. In any region infested with malaria carrying mosquitoes, there are individuals who appears to be immune to malaria

D. The anopheles mosquito, which is the principal insect carrier of the malaria parasite, has been eradicated in many parts of the world

Answer: A

22. If the area of a square region having sides of length 6 cm is equal to the area of a rectangular region having width 2.5 cm, then the length of the rectangle, in cm, is

A. 9.5

B. 14.4

C. 13.6

D. 8.5

Answer: B

$$A^2 = L \times B$$

$$L = \frac{A^2}{B} = \frac{6^2}{2.5} = \frac{36}{5/2} = \frac{72}{5} = 14.4$$

23. A certain company retirement plan has a rule of 70 provisions that allows an employee to retire when the employee's age plus years of employment with the company total at least 70. In what year could a female employee hired in 1986 on her 32nd birthday first be eligible to retire under this provision?

A. 2003

B. 2004

C. 2005

D. 2006

Answer: C

Let she be eligible to retire after x years

So her age at that time will be $32 + x$

Age + no. of years of employment = 70

$$(32 + x) + x = 70 \Rightarrow x = 19$$

19 years i.e. after 1986 $\Rightarrow 1986 + 19 = 2005$

24. Juan is a gold medalist in athletics. In the month of May, if Juan takes 11 seconds to run y yards, how many seconds will it take him to run x yards at the same rate?

A. $11x/y$

B. $11y/x$

C. $x/11y$

D. $11/x y$

Answer: A

$$y \text{ yards} = 11 \text{ sec}$$

$$1 \text{ yard} = 11/y \text{ sec}$$

$$x \text{ yard} = 11 x/y \text{ sec} = 11x/y$$

25. A necklace is made by stringing N individual beads together in the repeating pattern red bead, green bead, white bead, blue bead and yellow bead. If the necklace begins with a red bead and ends with a white bead, then N could be:

A. 16

B. 32

C. 54

D. 68

Answer: D

Either N is divided by 5 remainder should be 3.

As there are 5 beads, 2 white is the 3rd 'one' 68

leaves a remainder 3 when divided by 5.

26. A student's average (arithmetic mean) test score on 4 tests is 78. What must be the student's score on a 5th test for the student's average score on the 5th test to be 80?

A. 80
B. 84

C. 86

D. 88

Answer:

D

$$\text{Total score in 4th test} = 4 \times 78 = 312$$

$$\text{Total score in 5th test} = 312 + x$$

$$\text{Average} = \frac{312 + x}{5} = 80 \Rightarrow \boxed{x = 88}$$

27. Rural households have more purchasing power than do urban households at the same income level, since some of the income urban and suburban households use for food and shelter can be used by the rural households for other needs. Which of the following inferences is best supported by the statement made above?

A. The average rural household includes more people than does the average urban and suburban household

B. Rural households have lower food and housing costs than do either urban or suburban households

C. All three types of household spend more of their income on housing than on all other purchases combined

D. Suburban households generally have more purchasing power than do either rural or urban households

Answer:

B

28. After loading a dock, each worker on the night crew loaded $\frac{3}{4}$ as many boxes as each worker on the day of the crew. If the night crew has $\frac{4}{5}$ as many workers as the day crew, what fraction of all the boxes loaded by two crews did the day crew load?

A. $\frac{1}{2}$
B. $\frac{2}{5}$

C. $\frac{4}{5}$

D. $\frac{5}{8}$

Answer:

D

Let D/c has 5 workers.

\therefore N/c has 4 workers

Also each D/c suppose to load 4 boxes so N/c load 3.

In daytime no. of boxes loaded = $5 \times 4 = 20$

In night no. of boxes loaded = $4 \times 3 = 12$

20 is fraction of 32 $\Rightarrow \frac{20}{32} = \frac{5}{8}$

29. Kelly and Chris are moving into a new city. Both of them love books and thus packed several boxes with books. If Chris packed 60% of the total number of boxes, what was the ratio of the number of boxes Kelly packed to the number of boxes Chris packed?

A. 1 to 6

B. 2 to 3

C. 3 to 5

D. 2 to 5

Answer:

B

Chris = 60%

Kelly = 40%

Ratio of Kelly: Chris $\Rightarrow 40:60 \Rightarrow 2:3$

30. A bakery opened yesterday with its daily supply of 40 dozen rolls. Half of the rolls were sold by noon and 80 % of the remaining rolls were sold between noon and closing time. How many dozen rolls had not been sold when the bakery closed yesterday?

A. 1
B. 5

C. 4
D. 2

Answer: C

By noon, half of supply were sold = 20

Remaining rolls = 20

By evening (closing time) 80% of 20 = 16

So, no. of rolls unsold = 20 - 16 = 4

31. There are 4 more women than men on Centerville's board of education. If there are 10 members on the board, how many are women

A. 3
B. 5

C. 7
D. 8

Answer: C

By hit and trial method,

M = 3, W = 7

Men = x

women = x + 4

$x + x + 4 = 10$

$x = 3$

$\therefore \text{women} = 3 + 4 = 7$

32. A dealer originally bought 100 identical batteries at a total cost of q rupees. If each battery was sold at 50 percent above the original cost per battery, then, in terms of q, for how many rupees was each battery sold?

A. $3q/200$
B. $3q/2$

C. 150q
D. $q/100 + 50$

Answer: A

CP of 1 battery = $q/100$

$SP = \left(1 + \frac{50}{100}\right) \frac{q}{100}$

$= \frac{3}{2} \left(\frac{q}{100}\right) = \frac{3q}{200}$

33. When a polygraph test is judged inconclusive, this is no reflection on the examinee. Rather, such a judgment means that the test has failed to show whether the examinee was truthful or untruthful. Nevertheless, employers will sometime refuse to hire a job applicant because of an inconclusive polygraph test result. Which of the following conclusions can most properly be drawn from the information above?

- A. Most examinees with inconclusive polygraph test results are in fact untruthful
 ✓ B. An inconclusive polygraph test result is sometimes unfairly held against the examinee

- C. Polygraph test should not be used by employers in the consideration of job applicants
 D. Some employers have refused to consider the results of polygraph tests when evaluating job applicants

Answer: B

34. Analyzing the good returns that Halo circle Insurance Pvt. Ltd was giving, Ratika bought a 1-year, Rs 10,000 certificate of deposit that paid interest at an annual rate of 8% compounded semi-annually. What was the total amount of interest paid on this certificate at maturity?

- A. 10464
 B. 864

- C. 816
 D. 800

Answer: C

$$A = P \left(1 + \frac{r/2}{100} \right)^{2 \times t}$$

$$= 10,000 \left(1 + \frac{4}{100} \right)^2$$

$$= 10,816$$

$r = \text{annual rate} = 8\%$

$t = \text{total time} = 1 \text{ year}$

Div by two amt is compounded semi-annually.

Interest amount = 816.

35. The water from one outlet, flowing at a constant rate, can fill the swimming pool in 9 hours. The water from second outlet, flowing at a constant rate can fill up the same pool in approximately in 5 hours. If both the outlets are used at the same time, approximately what is the number of hours required to fill the pool?

- A. .22
 B. .31

- C. 3.21
 D. 4.56

Answer: C

Outlet 1	Outlet 2	
9	5	
5	9	LCM = 45
Total part = 5+9=14		
$45/14 = 3.21$		

36. Jan has 4 Sundays and 4 Thursdays. Find day of 1st Jan?

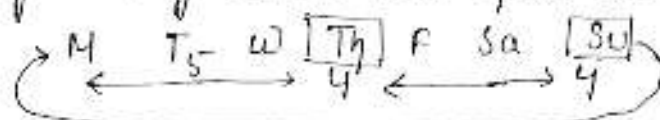
- A. Monday
 B. Tuesday

- C. Thursday
 D. Friday

Answer: A First day is Monday.

$$31/7 = 3$$

∴ Only three consecutive day can be five in a month having 31 day & four will have four in a month.



37. A car covers a square of length x at 10kph, 20kph, 30kph, 40kph per side. Find avg. speed?

- ☐ A. 22.5km/hr
- ☒ B. 19.2km/hr

- C. 35km/hr
D. 14.2km/hr

Answer: β

$$\text{Perimeter} = 4a$$

$$\text{Avg. speed} = \frac{\text{total distance}}{\text{total time}} = \frac{4a}{a/10 + a/20 + a/30 + a/40}$$

$$= 19.2 \text{ Km/hr}$$

38. A gives Rs 30000, B gives Rs 40000 and C gives Rs 50000. B leaves after 6 months. Profit is Rs 90000 after 1 year. What is A's share?

- A. 25000/-
B. 27500/-

- C. 27000/-
D. 27200/-

Answer: C

$$\begin{aligned} A \times 12 : B \times 6 : C \times 12 &= 30 \times 12 : 40 \times 6 : 50 \times 12 \\ \text{MONTH} &= 36 : 24 : 60 \end{aligned}$$

A's share = $\frac{3}{3+2+5} = \frac{3}{10}$ of profit

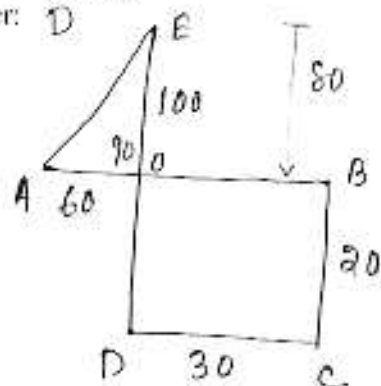
$$\frac{3}{10} \times 90,000 = 27,000/-$$

39. Son searching for father moves 90m towards east, then turns right and walks 20m and then again turns right and walks another 30m where he reaches uncles house but his father was not there. So he turns north and walks 100m and finds his father. Calculate distance from origin?

- A. 200
B. 300

- | | |
|----|-----|
| C. | 500 |
| D. | 100 |

Answer: D



$AF = 2$

$\text{€ } D = 100$

$$BC = 20 = OD$$

$$EO = 100 - 20 = 80$$

$$AB = AO + BO$$

$$90 = A_0 + 30 \Rightarrow A_0 = 60$$

$$AE = \sqrt{AO^2 + EO^2}$$

$$= \sqrt{(80)^2 + (60)^2}$$

$$\Rightarrow \boxed{AE = 00}$$

40. On a circle there are 42 dots on the circumference. A bug is at position 1. Movement is $f(n+r)$ where n =current position, r =steps it has moved. R can be found as $r=|t|\%41$; if suppose the bug is at position 1 and has to move 5 steps then $f(1+5)=6$ position. If it is at position 18, what will be position after 2012 seconds?

A. 28

B. 15

C. 37

D. 29

Answer: C

If bug is at position 18 (Location 18)

Sec	$f(n+r)$	Step to move	Location	
1	$18+0$	18	36	$\delta = 0\%41$ 2041
2	$36+7$	43	37	$\delta = 18\%41$ 2012
3	$37+10$	47	42	$\delta = 43\%41$
4	$42+3$	45	3	$\delta = 47\%41$
5	$3+1$	4	7	$\delta = 45\%41$
6	$7+4$	11	18	$\delta = 4\%41$ 2010

So, bug is again at 18 after 6 sec

$$\frac{2012}{6} = 335 \frac{2}{6}$$

So, after $6 \times 335 = 2010$ bug will be at again 18.

\therefore New Location after 2012 will be 37.