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SNAP 2011 Question Paper

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General Awareness

1. "Swayamsidha" is a scheme launched by the Government of India to help

    A   School Children only

    B   Health workers only

    C   Senior citizen without any regular income

    D   Women only

2. What is 'Share swap'?
A. A business takeover in which acquiring company uses its own stock to pay for the acquired company.
B. When a company uses its own share to get some short term loan for working capital requirement
C. When companies are require to float a new issue to earn capital for their expansion programmes, each shareholder gets some additional preferential share. The process is known as Share Swap.

    A   Only A

    B   Only A and B

    C   Only C

    D   None of the above

3. Regarding "carbon credits" which of the following statements is not correct?

    A   The carbon credits system was ratified in conjunction with Kyoto Protocol

    B   Carbon credits are awarded to those countries or groups who have reduced the green house gases below their emission quota

    C   The goal of carbon credit system is to reduce carbon dioxide emission

    D   Carbon credits are traded at a price fixed from time to time by the United Environment Programme

4. Both Foreign Direct Investment (FDI) and Foreign Institutional Investor (FII) are related to investment in a country. Which one of the following statements best represents an important difference between the two?

    A   FII helps bring better management skills and technology while FDI only bring capital

    B   FII helps in increasing capital availability in general, while FDI only targets specific sectors

    C   FDI flows only into secondary markets while FII targets primary markets

    D   FII is considered to be more stable than FDI

5. In context of global oil prices, "Brent crude oil" is frequently referred to in the news. What does this term imply?
1) It is a major classification of crude oil
2) It is sourced from North sea
3) It does not contain sulphur
Which of the statement given above is /are correct?

   A   2 only

   B   1 and 2 only

   C   1 and 3 only

   D   1, 2 and 3

6. With reference to "Look East Policy" of India consider the following statements:
1. India wants to establish itself as an important regional player in the East Asian affairs.
2. India wants to plug the vacuum created by the termination of Cold war.
3. India wants to restore the historical and cultural ties with its neighbors in Southeast and East Asia.
Which of the statements given above is/are correct?

   A   1 only

   B   1 and 3 only

   C   3 only

   D   1, 2 and 3

7. Recently "oilzapper" was in news. What is it?

   A   It is eco friendly technology for the remediation of oily sludge and oil spills

   B   It is the latest technology developed under sea oil exploration

   C   It is genetically engineered high biofuel - yielding maize variety

   D   It is the latest technology to control accidentally caused flames from oil wells.

8. Why is the offering of "teaser loans" by commercial banks a cause of economic concern?
1. The teaser loans are considered to be an aspect of sub - prime lending and banks may be exposed to the risk of defaulters in future.
2. The teaser loans are given to inexperienced entrepreneurs to set up manufacturing or export units.
Which of the statements given above is/are correct?

   A   1 only

   B   2 only

   C   Both 1 and 2

   D   Neither 1 nor 2

9. Why is the government of India disinvesting its equity in the Central Public Sector Enterprises (CPSE)?
1. The Government intends to use the revenue earned from disinvestment mainly to pay the External debt
2. The Government no longer intends to retain the management control of CPSEs
Which of the statements given above is/are correct?

A   1 only

B   2 only

C   Both 1 and 2

D   Neither 1 nor 2

10. The book "Unto this Last" which influenced Gandhiji, was authored by

A   Boris Yeltsin

B   Pushkin

C   Ruskin Bond

D   John Ruskin

11. Besides USA, India has signed, with which of the following countries the agreement being named as "Cooperation Agreement on the development of Peaceful Uses of Nuclear Energy"?

A   Italy

B   Germany

C   France

D   Australia

12. Which of the following country is not a member of the Nuclear Suppliers Group (NSG)?

A   Russia

B   USA

C   Italy

D   Irans

13. Many times we read in the newspaper that several companies are adopting the FCCBs route to raise capital. What is the full form of FCCB?

A   Foreign Currency Convertible Bonds

B   Foreign Convertible Credit Bonds

C   Financial Consortium and Credit Bureau

D   None of these

14. As per the reports published in various newspapers, RBI has asked banks to make plan to provide banking services in villages having population of 2000. This directive issued by the RBI will fall in which of the following categories?

A   Plan for financial inclusion

B   Efforts to meet Priority sector lending

C   Extension of Internet and Branchless banking

D   None of these

15. Which of the following is/ are treated as artificial currency?

A   ADR

B   GDR

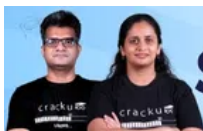**C**   Both GDR and ADR

D   SDR

16. Which of the following terms indicates a mechanisms used by commercial banks to provide credit to the Government?

A   Cash Credit Ratio

B   Debit Service Obligation

C   Liquidity Adjustment Facility

D   Statutory Liquidity Ratio

17. Who among the following was not part of the drafting committee of the Lokpal Bill?

A   Salman Khurshid

B   Anna Hazare

C   Arvind Kejriwal

D   Kiran Bedi

18. Criminal procedure is a subject of which of the following lists?

A   State List

B Concurrent List

C Union List

D Both 1 and 3

19. One of the world's biggest Uranium resources was recently found in

A Andhra Pradesh

B Maharashtra

C Jharkhand

D Uttarakhand

20. Which of the following was the first venture of Kishore Biyani

A Pantaloons

B Big Bazaar

C Central

D Future Capital Holdings

21. Who among the following is often referred to as father of India's "Green Revolution"?

A Dr. Verghese Kurien

B Dr. Amrita Patel

C M. S. Swaminathan

D Gurudev Khush

22. Who among the following directed the movie Peepli Live?

A Ashutosh Gowarikar

B Kiran Rao

C Anusha Rizvi

D Seema Chisti

23. The point at which soild, liquid and gaseous forms of a substance co - exist is called

A sublimation

B distillation point

C triple point

D melting point

24. The limit beyond which the stars suffer internal collapse is called the

A Raman Effect

B Chandrashekhar limit

C Aurora Borealis

D Quasan Zone

25. UNDP reports publishes every year the Human Development Index. Which of the following is not a criteria used to measure the Human Development Index?

A Health

B Education

C Living Standards

D Human Rights

26. The software company I - flex Solutions was originally a division of which famous financial services company?

A Citicorp

B ICICI

C HSBC

D ABN Amro Bank

27. Which of the following is not a member of SAARC?

A Bhutan

B Bangladesh

C Burma

D Maldives

28. Which article of the Indian constitution recognizes Hindi in Devanagari Script as the official language of India?

A Art 345

B Art 343

C Art 348

D Art 334

29. India has finally woken up to the needs of the country's elderly. With the number of people in the 60 - plus age group in India expected to increase to 100 million in 2013 and to 198 million in 2030, the health ministry is all set to roll out the

   A National Programme for Health care of the Elderly

   B National Programme for Senior Citizens

   C National Programme for Old Aged

   D Rashtriya Vriddha Swasthya Yojana

30. Which of the following statements is/are correct?
   1. Non - resident Indians (NRIs) can now cast votes in their home constituencies in India.
   2. The NRI can cast his vote by postal balloting.

   A 1 only

   B 2 only

   C Both 1 and 2

   D Neither 1 nor 2

31. In a landmark move, which of these State governments has set up a Savarna Aayog, a commission to identify the deprived and underprivileged families among upper castes?

   A Uttar Pradesh

   B Bihar

   C Madhya Pradesh

   D Rajasthan
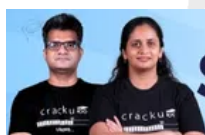
32. Which of these countries has announced one billion US dollar aid for the reconstruction of Nalanda University?

   A Japan

   B Singapore

   C Malaysia

   D China

33. What is the name of the in - house magazine to be published by the Indian Railways, to be distributed to the passengers on high end trains?

A   Rail Vishwa

B   Rail Bandhu

C   Rail Mail

D   Rail Patra

34. The government, in February 2011, set up a task force to create a way to provide direct subsidies to the ultimate beneficiaries on petroleum working gas and fertilizers. The task force will be headed by -

A   Nandan Nilekani

B   Apoorva Sinha

C   Sangam Chitra

D   All of these

35. Which of these countries has been added in the 'BRIC' (Brazil - Russia - India - China) groupin of emerging economies?

A   South Korea

B   Venezuela

C   South Africa

D   Malaysia

36. Which of the following countries was the host of First Asian Yoga Championship held recently?

A   Thailand

B   Cambodia

C   Vietnam

D   Laos

37. Who among the following has been defeated by Saina Nehwal, who has won the Swiss Open Grand Prix Gold title recently, becoming the First Indian to do so?

A   Ji Hyun Sung

B   Wang Lin

C   Kamilla Rytter Juhl

D   Shinta Mulia Sari

38. On March 6, 2011, the Supreme Court held that has ample powers to enact legislation with respect to extra - territorial aspects for the security of India?

  A   President

  B   Prime Minister

  C   Supreme Court

  D   Parliament

39. Which country has appointed Brigadier General Ravinder Singh as its next Army chief, the first Sikh in nearly 30 years to be given the force's batton

  A   Thailand

  B   Singapore

  C   Malaysia

  D   Indonesia

40. Anant Pai, better known as 'Uncle Pai', who recently died was the creator of which among the following comic series?

  A   Chacha Chaudhary

  B   Chandamama

  C   Indrajaal

  D   Amar Chitra Katha

Reasoning

Instructions [41 - 42]

Each question consists of a set of numbered statements. Assume that each one of these statements is individually true. Each of the four choices consists of a subset of these statements. Choose the subset as your answer where the statements therein are logically consistent among themselves:

41. A. Only if the water level in the coastal areas rises, then the people change their lifestyle.
B. People change their lifestyle only if they are rewarded.
C. If people are rewarded, then they will not change their lifestyle.
D. If the temperature rises, then the water level in the coastal areas rises.
E. Whenever the water level in the coastal area rises, then the temperature rises.
F. Unless the people change their lifestyle, temperature rises.
G. People are rewarded.
H. Water level in the coastal areas does not rise.

A   C, D, F, G and H

B   G, F, D, B and H

C   E, F, G, H and B

D   None of the above

42. A. If Kumar sings, then the audiences sleep.
B. If Kumar sings, then the audiences dance.
C. Unless audience do not dance, the concert will be successful.
D. Only if the audience dance, the concert will be successful.
E. If Vina dances, then Kumar sings.
F. Kumar sings only if Vina dances.
G. Vina dances
H. The concert is successful.

A   C, F, G, B and H

B   A, C, F, G and H

C   E, C, G, B and H

D   Both (2) and (3)

Instructions [43 - 45]

These questions are based on the data given below.
There are only four members of a family viz., A, B, C and D and there is only one couple among them. When asked about their relationships, following were their replies:
a: A: B is my son. D is my mother.
b: B: C is my wife. Dis my father.
c: C: D is my mother - in - law. A is my daughter.
d: D: A is my grand - daughter. B is my daughter - in - law

43. Who always speaks the truth?

A   A

B   B

C   C

D   D

44. How is B related to C?

A   Father

B   Mother

C   Wife

D   Husband

45. Which of the following statements must be true?

    A   A's grandmother alternates between the truth and lie.

    B   C's wife always speaks the truth.

    C   A's grandfather always speaks the truth.

    D   B's daughter always tells lies.

Instructions [46 - 48]

These questions are based on the following information.
A cube of 7cm × 7cm × 7cm is kept in the corner of a room and painted in three different colours, each face in one colour. The cube is cut into 343 smaller but identical cubes.

46. How many smaller cubes do not have any face painted?

    A   125

    B   180

    C   144

    D   216

47. How many smaller cubes have exactly one colour on them?

    A   108

    B   72

    C   36

    D   24

48. How many smaller cubes have at the most two faces painted?

    A   343

    B   342

    C   256

    D   282

Instructions [49 - 50]

Amit was driving in New Town, where all roads either north - south or east - west forming a grid. Roads were at a distance of 1 km from each other in parallel.

49. Amit started at the intersection of streets no. 7 and 8. He drove 3 km north, 3 km west and 4 km south. Which further route could bring him back to his starting point?
I. 3 km east, then 2 km south
II. 1 km north, then 3 km east
III. 1 km north, then 2 km west

- **A** I only
- **B** II only
- **C** I and II only
- **D** II and III only

50. After driving as stated in question no. 49 above, Amit did not return to his starting point but instead drove 4 km east and 1 km north. How far is he from his starting point?

- **A** 5 km
- **B** 4 km
- **C** 1 km
- **D** 7 km

Instructions [51 - 55]

Refer to the following data and answer the questions that follow:
A numerical machine accepts two values X and Y. Then it updates these values as X = XY and Y = Y + 1 in every step. The machine stops at $X \geq N$.

51. For X = 3, Y = 2 and N = 100, how many steps are performed before the machine stops?

- **A** 2
- **B** 3
- **C** 4
- **D** 5

52. In the above question (51), what is the final value of X?

- **A** 6
- **B** 20
- **C** 72
- **D** 360

53. In the above question (51), what is the final value of Y?

- **A** 4

B 5

C 6

D 20

54. If the value of N is changed to 500, what would be the final value of X?

A 360

B 500

C 560

D 2160

55. If X = 2 and Y = 3, what should be the minimum value of N such that final value of Y is 7?

A 300

B 360

C 720

D 860

Instructions [56 - 60]

Refer to the following statements and answer the questions:
Seven students Priya, Ankit, Raman, Sunil, Tony, Deepak and Vicky take a series of tests. No two students get similar marks. Vicky always scores more than Priya. Priya always scores more than Ankit. Each time either Raman scores the highest and Tony gets the least, or alternatively Sunil scores the highest and Deepak or Ankit scores the least.

56. If Sunil is ranked sixth and Ankit is ranked fifth, which of the following can be true?

A Vicky is ranked first or fourth

B Raman is ranked second or third

C Tony is ranked fourth or fifth

D Deepak is ranked third or fourth

57. If Raman gets the highest, Vicky should be ranked not lower than:

A Second

B Third

C   Fourth

D   Fifth

58. If Raman is ranked second and Ankit is ranked first, which of the following must be true?

A   Sunil is ranked third

B   Tony is ranked third

C   Priya is ranked sixth

D   None of these.

59. If Sunil is ranked second, which of the following can be true?

A   Deepak gets more than Vicky

B   Vicky gets more than Sunil

C   Priya gets more than Raman

D   Priya gets more than Vicky

60. If Vicky is ranked fifth, which of the following must be true?

A   Sunil scores the highest

B   Raman is ranked second

C   Tony is ranked third

D   Ankit is ranked second

61. In 2002, according to a news poll, 36% of the voters had leaning towards party "Y". In 2004, this figure rose to 46%. But in another survey the percentage was down to 40%. Therefore, the party "Z" is likely to win the next election. Which of the following, if true, would seriously weaken the above conclusion?

A   People tend to switch their votes at the last minute.

B   It has been showed that 85% of the voters belonging to the party "Y" vote in an election as compared to 80% of the voters belonging to party "Z".

C   35% of people favour party "Z".

D   No one can predict how people will vote.

62. Inflation rose by 5% over the second quarter, by 4% during the first quarter and higher than 3% recorded during the same time last year. However, the higher price index did not seem to alarm National stock Index as stock prices remain steady.
Which of the following, if true, could explain the reaction of National stock Index?

A   RBI announced that it will take necessary corrective measures

B Stock prices were steady because of a fear that inflation would continue.

C Economists warned that inflation would continue.

D Much of the quarterly increase in the price level was due to a summer drought effect on food price.

63. Pick up the appropriate analogy.
Birth : Dirge

A Sunset : sunrise

B security check : arrival

C marriage : alimony

D welcome address : vote of thanks

64. Beautiful beaches attract people, no doubt about it. Just look at this city's beautiful beaches, which are among the most over crowded beaches in the state. Which of the following exhibits a pattern of reasoning most similar to the one exhibited in the argument above?

A Moose and bear usually appear at the same drinking hole at the same time of day. Therefore, moose and bear must grow thirsty at about the same time.

B Children who are scolded severely tend to misbehave more often than other children. Hence if a child is not scolded severely that child is less likely to misbehave.

C This software programme helps increase the work efficiency of its users. As a result, these users have more free time for other activities.

D During weather my dog suffers from fleas more than during cooler weather. Therefore, fleas must thrive in a warm environment.

65. No national productivity measures are available for underground industries that may exist but remain unreported. On the other hand, at least some industries that are run entirely by self - employed industrialists are included in national productivity measures. From the information given above, it can be validly concluded that

A there are at least some industries run entirely by self - employed industrialists that are underground industries

B no industries that are run entirely by self - employed industrialists operate underground.

C there are at least some industries other than those run entirely by self - employed industrialists that are underground industries.

D there are at least some industries run entirely by self - employed industrialists that are not underground industries

66. Nilu has never received a violation from the Federal Aviation Administration during her 16 - year flying career. Nilu must be a great pilot.
Which of the following can be said about the reasoning above?

A The definitions of the terms create ambiguity

B The argument uses circular reasoning

C The argument is built upon hidden assumptions

D The argument works by analogy

67. Many people argue that the death penalty deters murder. However, the notorious killer Tom Hanks deliberately moved to a state that imposes the death penalty just before embarking on a series of ferocious murders. Thus, it seems clear that the existence of the death penalty does not serve as a deterrent to murder. The argument above may best be characterized as:

A an appeal to emotion.

B a flawed analogy.

C a general conclusion based on a specific example.

D circular reasoning.

68. What number should replace the question mark?

```
        (4)(3)(2)
     (5)(3)(5)(1)(1)
  (6)(1)(2)(8)(3)(3)(1)
     (7)(2)(8)(4)(3)
        (9)(?)(3)
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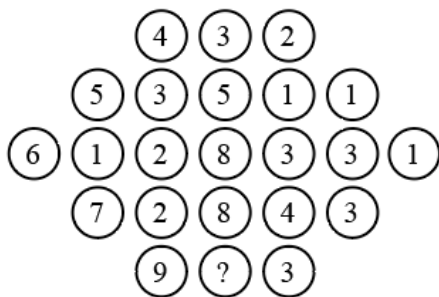
A 1

B 4

C 12

D 6

69. The fewer restrictions there are on the advertising of legal services, the more lawyers there are who advertise their services, and the lawyers who advertise a specific service usually charge less for that service than lawyers who do not advertise. Therefore if the state removes any of its current restrictions, such as the one against advertisements that do not specify fee arrangements, overall consumer legal costs will be lower than if the state retains its current restrictions.
If the statements above are true, which of the following must be true?

A Some lawyers who now advertise will charge more for specific services if they do not have to specify fee arrangements in the advertisements.

B More consumers will use legal services if there are fewer restrictions on the advertising of legal services.

C If the restrictions against advertisements that do not specify fee arrangements is removed, more lawyers will advertise their services.

D If more lawyers advertise lower prices for specific services, some lawyers who do not advertise will also charge less than they currently charge for those services.

70. The fewer restrictions there are on the advertising of legal services, the more lawyers there are who advertise their services, and the lawyers who advertise a specific service usually charge less for that service than lawyers who do not advertise. Therefore if the state removes any of its current restrictions, such as the one against advertisements that do not specify fee arrangements, overall consumer legal costs will be lower than if the state retains its current restrictions.

Which of the following, if true, would most seriously weaken the argument concerning overall consumer legal costs?

A The state is unlikely to remove all of the restrictions that apply solely to the advertising of legal services.

B Lawyers who do not advertise generally provide legal services of the same quality as those provided by lawyers who do advertise.

C Most lawyers who now specify fee arrangements in their advertisements would continue to do so even in the specification were not required.

D Most lawyers who advertise specific services do not lower their fees for those services when they begin to advertise.

Quantitative Aptitude

71. A train travelling at 36 kmph crosses a platform in 20 seconds and a man standing on the platform in 10 seconds. What is the length of the platform in meters?

A 240 meters

B 100 meters

C 200 meters

D 300 meters

SNAP Crash Course

72. By walking at $\frac{4}{5}th$ of his usual speed, a man reaches office 10 minutes later than usual. What is his usual time?

A   20 min

B   40 min

C   30 min

D   50 min

73. A man and a woman 81 miles apart from each other, start travelling towards each other at the same time. If the man covers 5 miles per hour to the women's 4 mile per hour, how far will the woman have travelled when they meet?

A   27

B   36

C   45

D   None of these

74. Two people were walking in opposite directions. Both of them walked 6 miles forward then took right and walked 8 miles. How far is each from starting positions?

A   14 miles and 14 miles

B   10 miles and 10 miles

C   6 miles and 6 miles

D   12 miles and 12 miles

SNAP Online Coaching

75. Four men and three women can do a job in 6 days. When 5 men and 6 women work on the same job, the work gets completed in 4 days. How long will 2 women and 3 men take to do the job?

    A   18

    B   10

    C   8.3

    D   12
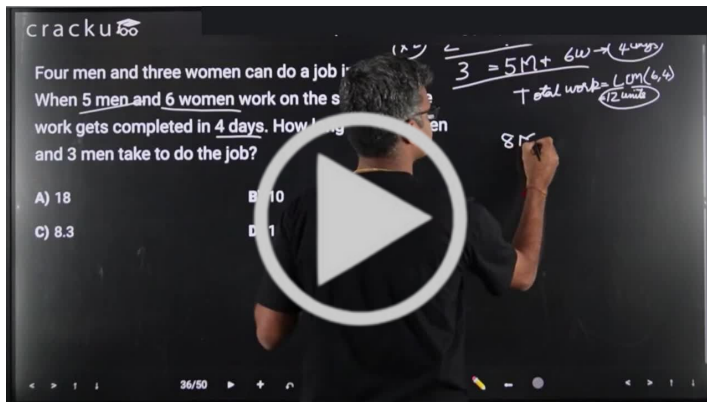
76. Ram completes 60% of a task in 15 days and then takes the help of Rahim and Rachel. Rahim is 50% as efficient as Ram is and Rachel is 50% as efficient as Rahim is. In how many more days will they complete the work?

    A $\frac{121}{3}$

    B $\frac{51}{7}$

    C $\frac{40}{7}$

    D $\frac{65}{7}$
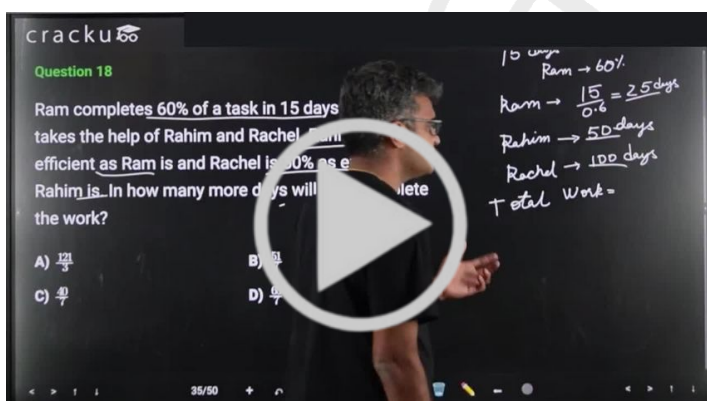
77. A and B can do a piece of work in 21 and 24 days respectively. They start the work together and after some days A leaves the work and B completes the remaining work in 9 days. After how many days did A leave?

A   5

B   7

C   8

D   6

78. A trader makes a profit equal to the selling price of 75 articles when he sold 100 of the articles. What % profit did he make in the transaction?

A   33.33%

B   75%

C   300%

D   150%

79. In a 100 M race, if A gives B a start of 20 meters, then A wins the race by 5 seconds. Alternatively, if A gives B a start of 40 meters the race ends in a dead heat. How long does A take to run 200 M?

A   10 seconds

B   20 seconds

C   30 seconds

D   40 seconds
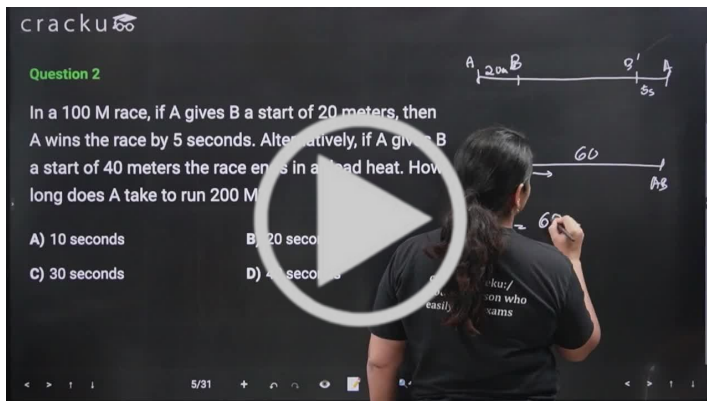
80. A 4 cm cube is cut into 1cm cubes. What is the percentage increase in the surface area after such cutting?

A   4%

B   300%

C   75%

D   400%

81. A number G236G0 can be divided by 36 if G is:

A   8

B   6

C   1

D   More than one values are possible.

82. Amit can do a work in 12 days and Sagar in 15 days. If they work on it together for 4 days, then the fraction of the work that is left is:

A $\frac{3}{20}$

B $\frac{3}{5}$

C $\frac{2}{5}$

D $\frac{2}{20}$

83. A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the park and rest of the park has been used as a lawn. If the area of the lawn is 2109 sq. m, then what is the width of the road?

A   2.91 m

B   3 m

C   5.82 m

D   None of these

84. A bag contains 5 white and 3 black balls; another bag contains 4 white and 5 black balls. From any one of these bags a single draw of two balls is made. Find the probability that one of them would be white and another black ball.

A $\frac{275}{504}$

B $\frac{5}{18}$

C $\frac{5}{9}$

D None of these

▶ VIDEO SOLUTION

Instructions [85 - 88]

Answer the questions on the basis of the information given below.
The following bar graph gives the production, exports and per capita consumption of rice in country A, for the five years from 2006 to 2010.
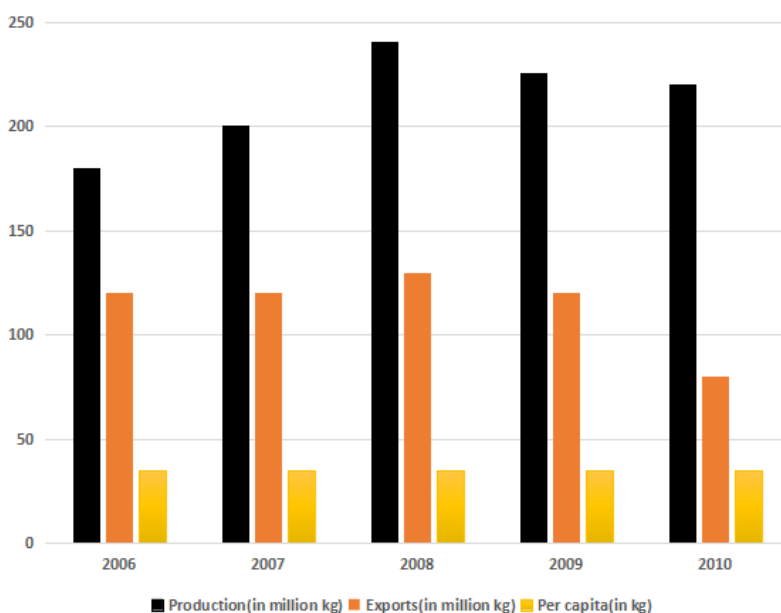
Consumption = Production - Exports

Per Capita Consumption = (Consumption) ÷ (Population)

85. In which year was the percentage increase in the consumption of rice over the previous year, the highest?

    A   2007

    B   2008

    C   2009

    D   2010

86. What is the population of country A in the year 2008 (in million)?

    A   2.64 million

    B   2.72 million

    C   2.79 million

    D   2.85 million

87. The ratio of exports to consumption in the given period was the highest in the year

    A   2006

    B   2007

    C   2008

    D   2009

88. In which of the given years was the population of country A, the highest?

    A   2007

    B   2008

    C   2009

    D   2010

Instructions [89 - 93]

The following pie chart shows the hourly distribution in a day (in degrees) of all the major activities of a student. Moreover, a day has 24 hours.
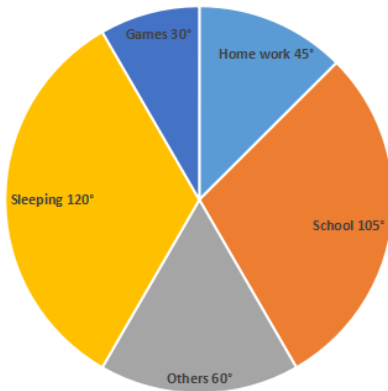
89. The percentage of time which he spends in school is:

    A   38%

    B   30%

    C   40%

    D   25%

90. How much time (in per cent) does he spend in games in comparison to sleeping?

    A   30%

    B   40%

    C   25%

    D   None of these

91. If he spends the time in games equal to the home work and remains constant in other activities, then the percentage decrease in time of sleeping:

    A   15%

    B   12.5%

    C   20%

    D   None of these

92. What is the difference in time (in hours) spent in school and in home work?

    A   2

    B   3

    C   4

    D   8

93. If he spends $\frac{1}{3}rd$ time of homework in Mathematics then the number of hours he spends in rest of the subjects in home work:

A 1

B 2

C 3

D 4

94. Three parallel lines are cut by two transversals as shown in the given figure. If AB = 2 cm, BC = 4 cm and DE = 1.5 cm, then the length of EF is:
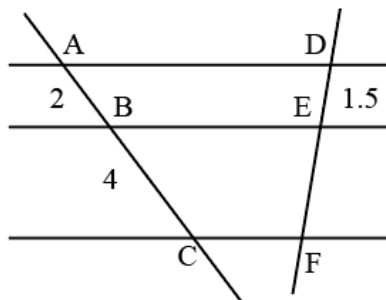
A 2 cm

B 3 cm

C 3.5 cm

D 4 cm

95. Find the value of $\log_{10} 10 + \log_{10} 10^2 + ... + \log_{10} 10^n$

A $n^2 + 1$

B $n^2 - 1$

C $\frac{(n^2+n)}{2} \cdot \frac{n(n+1)}{3}$

D $\frac{(n^2+n)}{2}$

Find the value of $\log_{10} 10 + \log_{10} 10^2 + ... + \log_{10} 10^n$

A) $n^2 + 1$
C) $\frac{(n^2+n)}{2} \cdot \frac{n(n+1)}{3}$

B) $n^2 - 1$
D) $\frac{(n^2+n)}{2}$

$\log_{10} 10^2$

$= 2 \log_{10} 10$

$1 + 2$

96. The sum of a number and its reciprocal is thrice the difference of the number and its reciprocal. The number is:

A $\pm\sqrt{2}$

B $\pm\frac{1}{\sqrt{2}}$

C $\pm\frac{1}{\sqrt{3}}$

D $\pm\sqrt{3}$

The sum of a number and its reciprocal is thrice the difference of the number and its reciprocal. The number is:

$a + \frac{1}{a} \cdot = 3\left(a - \frac{1}{a}\right)$.

$a = $

97. The total number of Natural numbers that lie between 10 and 300 and are divisible by 9 is

A 32

B 30

C 33

D 34

98. If $^nC_x = 56$ and $^nP_x = 336$, then Find n and x?

A 7, 3

B 8, 4

C 8, 3

D 9, 6

99. One side of an equilateral triangle is 24 cm. The midpoints of its sides are joined to form another triangle whose midpoints are in turn joined to form still another triangle. This process continues indefinitely. Find the sum of the perimeters of all the triangles.

A 144 cm

B 72 cm

C 536 cm

D 676 cm

100. The probability that a leap year selected at random contains either 53 Sundays or 53 Mondays, is:

A $\frac{17}{53}$

B $\frac{1}{53}$

C $\frac{3}{7}$

D None of these

101. Find the intercepts made by the line 3x + 4y - 12 = 0 on the axes:

A 2 and 3

B 4 and 3

C 3 and 5
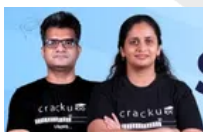
D None of these

102. The average of 4 distinct prime numbers a, b, c, d is 35, where a < b < c < d. a and d are equidistant from 36 and b and c are equidistant from 34 and a, b are equidistant from 30 and c and d are equidistant from 40. The difference between a and d is:

A 30

B 14

C 21

D   Cannot be determined

103. Ramsukh bhai sells rasgulla(a favourite Indian sweets) at Rs. 15 per kg. A rasgulla is made up of flour and sugar in the ratio 5 : 3. The ratio of price of sugar and flour is 7 : 3 (per kg). Thus he earns $66\frac{2}{3}$% profit. What is the cost price of sugar?

A   Rs. 10/kg

B   Rs. 9/kg

C   Rs. 18/kg

D   Rs. 14/kg

104. A reduction of 20% in the price of sugar enables a person to purchase 6 kg more for Rs. 240. What is the original price per kg of sugar?

A   Rs. 10/kg

B   Rs. 8/kg

C   Rs. 6/kg

D   Rs. 5/kg

105. A solid sphere is melted and recast into a right circular cone with a base radius equal to the radius of the sphere. What is the ratio of the height and radius of the cone so formed?

A   4 : 3

B   2 : 3

C   3 : 4

D   None of these

106. The speed of scooter, car and train are in the ratio of 1 : 4 : 16. If all of them cover equal distance then the ratio of time taken/velocity for each of the vehicle is:

A 256 : 16 : 1

B 1 : 4 : 16

C 16 : 4 : 1

D 16 : 1 : 4

107. B is twice efficient as A and A can do a piece of work in 15 days. A started the work and after a few days B joined him. They completed the work in 11 days, from the starting. For how many days did they work together?

A 1 day

B 2 days

C 6 days

D 5 days

108. A, B, C and D purchased a restaurant for Rs. 56 lakhs. The contribution of B, C and D together is 460% that of A, alone. The contribution of A, C and D together is 366.66% that of B's contribution and the contribution of C is 40% that of A, B and D together. The amount contributed by D is:

A 10 lakhs

B 12 lakhs

C 16 lakhs

D 18 lakhs

109. The salary of Raju and Ram is 20% and 30% less than the salary of Saroj respectively. By what percent is the salary of Raju more than the salary of Ram?

A 33.33%

B 50%

C 15.18%

D 14.28%

110. The radius of a wire is decreased to one - third and its volume remains the same. The new length is how many times the original length?

A 2 times

B 4 times

C 5 times

D 9 times

General English

Instructions [111 - 116]

Read the following passage and answer the questions that follow.
Passage:

D. H. Lawrence - 1885 - 1930: The Supreme Triumph For man, the vast marvel is to be alive. For man as for flower and beast and bird, the supreme triumph is to be most vividly, most perfectly alive. Whatever the unborn and the dead may know, they cannot know the beauty, the marvel of being alive in the flesh. The dead may look after the afterwards. But the magnificent here and now of life in the flesh is ours, and ours alone, and ours only for a time. We ought to dance with rapture, that we should be alive and in the flesh, and part of the living, incarnate cosmos. I am part of the sun as my eye is the part of me. That I am part of the earth my feet below know the perfectly, and my blood is part of the sea. My soul knows that I am a part of the human race, my soul is an inorganic part of the great human soul, as my spirit is a part of my nation. In my own very self, I am part of my family. There is nothing of me that is alone and absolute except my mind, and we shall find that the mind has no existence by itself, it is only the glitter of the sun on the surface of the waters. - Apocalypse, 1931.

111. By triumph the author means-

A sin

B loss

C sorrow

D victory

112. When the dead look after the afterwards the living should look at life

A forever

B   for some months

C   for only a short while

D   in the past

113. By rapture the author means an emotion involving great

A   trepidation

B   thrill

C   fear

D   joy

114. By the last line "It ……………… waters", the author means that the mind is only

A   a mirage

B   an illusion

C   magic

D   a reflection

115. The tone of this passage is

A   social

B   moral

C   reflective

D   philosophical

116. The most suitable title for this passage would be -

A   The Surface of the Waters

B   My Mind

C   The Human Race

D   Alive and Kicking

117. Choose the correct option.
The repetition of messages or the use of superfluous expressions is called …………….....……

A   redundancy

B   hyperbole

C   alliteration

D   allegory

118. Choose the correct option.
Ink : pen : paper

A   watch : dial : strap

B   book : paper : words

C   farmer : plough : field

D   colour : brush : canvas

119. Choose the correct option.
Choose the correct option for realia

A   theoretical constructs

B   fabricated examples

C   objects from real life

D   based on reality

120. Choose the grammatically correct option from the following

A   'Are these gloves belonging to you?' she asked.

B   'Does this gloves belong to you?' she asked.

C   'Do these gloves belongs to you?' she asked.

D   'Do these gloves belong to you?' she asked.

121. Choose the grammatically correct option from the following

A   I live in a house in a street in the countryside. The street is called "Bear Street" and the house is old - more than 100 years old!

B   I live in the house in the street countryside. The street is called "Bear Street" and the house is old - more than 100 years old!

C   I live in a house in the street in the countryside. The street is called "Bear Street" and the house is old - more than 100 years old!

D   I live in a house in a street in the countryside. The street is called "Bear Street" and a house is old - more than 100 years old!

122. Choose the grammatically correct option from the following

A The teachers will be able to visit our schools and compare our teaching methods to their own.

B The teachers will be able to pay a visit to our schools and compare teaching methods for their own.

C The teachers will be able to visit our schools and compare our teaching methods with their own.

D The teachers will be able to visit our school and compare their teaching method with their own.

123. Choose the grammatically correct option from the following

A Could you give me the amount that you filled out in the check which was sent?

B Could you give me the amount what you filled out in the check you sent?

C Could you give me the amount for which you filled out in the check you sent?

D Could you give me the amount wherein you filled out in the check you sent?

124. Choose the grammatically correct option from the following

A I have completed the work yesterday.

B I did completed the work yesterday.

C I have had completed the work yesterday.

D I completed the work yesterday.

125. Choose the grammatically correct option from the following

A The train couldn't stop in time and crashed with the truck.

B The train couldn't stop in time and crashed into the truck.

C The train couldn't stop in time and crashed against the truck.

D The train couldn't stop in time and crashed before the truck.

Instructions [126 - 130]

Choose the correct synonymous word or description for each qouted (" ") word

The Jan Lokpal Bill, also "referred to" (126) as the citizens' ombudsman bill, is a proposed "independent" (127) anti - corruption law in India. Anti - corruption social activists proposed it as a more effective improvement on the original Lokpal Bill, which is currently being proposed by the government of India. The Jan Lokpal Bill aims to effectively "deter" (128) corruption, redress "grievances" (129) of citizens, and protect whistle - blowers. If made into law, the bill would create an independent "ombudsman" (130) body called the Lokpal. It would be empowered to register and investigate complaints of corruption against politicians and bureaucrats without prior government approval. (Source: Wikipedia)

126. Choose the correct option

A described as

B included in

C supported for

D reformed as

127. Choose the correct option

A self - centered

B impartial

C self - seeking

D self - possessed

128. Choose the correct option-

A swell

B prevent

C propel

D lucubrate

129. Choose the correct option-

A complaints

B dishonesty

C committees

D opinions
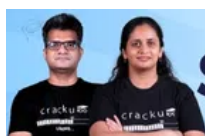
130. Choose the correct option-

A a government appointee who investigates complaints by private persons against bureaucrats and/or politicians.

B a government appointee who investigates complaints by government against common citizens.

C a government appointee who investigates complaints by citizens against citizens.

D a government appointee who investigates complaints by government against government officials.

Instructions [131 - 134]

In the following sentences, one word or a phrase is used wrongly. Choose the word that must be changed or modified or deleted to make the sentence correct. There are sentences without any errors too.

131. The committee came to a decision to discuss in detail about assorted problems that people have been facing for a long time.

    A   came to

    B   to discuss

    C   about

    D   a long time

132. I know you must not see eye to eye with the philosophy of Ramkrishna but you must admit that he had had tremendous influence over a great many followers.

    A   see eye to eye

    B   had had

    C   influence over

    D   no error

133. The Principal inquired with the students if they would like their teacher to repeat the lesson again.

    A   inquired with

    B   to repeat

    C   again

    D   no error

134. One of the security guards rushed forward; unlocked the gate and asked whether I had anything objectionable.

    A   security guards

    B   forward

    C   objectionable

    D   no error

Instructions [135 - 136]

Rearrange the following sentence fragment (P, Q, R and S) to make meaningful sentences.

135. I always told them ………… and consideration for me.
    P. How for me she
    Q. Always exuded warmth
    R. Was like a family's
    S. Elder and how she has

    A   PRSQ

B PQSR

C PRQS

D SQPR

136. A year or ………… foreign languages
P. I picked up a liking for learning
Q. the largest urban area and primary
R. so after leaving Bangkok
S. city of Thailand and a place of unique beauty

A RPQS

B RQSP

C RSPQ

D SPQR

137. Choose the correct option.
This book …………… five sections

A comprises of

B comprises

C consists

D comprises to

138. Choose the correct option.
My grandfather left most of his money to an NGO; the rest went directly to my daughter and ………………..

A I

B me

C myself

D myself too

139. Choose the correct option.
Parts of a country behind the coast or a river's banks

A Isthumus

B Archipelago

C Hinterland

D Swamps

Instructions [140 - 141]

In the questions below, the sentences have been given in Active/Passive voice. From the given alternatives, choose the one which best expresses the given sentence in Passive /Active voice

140. Who is creating this mess?

A Who has been created this mess?

B By whom has this mess been created?

C By whom this mess is being created?

D By whom is this mess being created?

141. You should open the wine about three hours before you use it.

A Wine should be opened about three hours before use.

B Wine should be opened by you three hours before use.

C Wine should be opened about three hours before you use it.

D Wine should be opened about three hours before it is used.

142. In the questions below, the passage consist of six sentences. The first and the sixth sentences are given. (S1, S6) The middle four sentences in each have been removed and jumbled up. These are labeled as P, Q, R and S. Find out the proper order for the four sentences.
S1: Metals are today being replaced by polymers in many applications.
P: Above all, they are cheaper and easier to process making them a viable alternative to metals.
Q: Polymers are essentially a long chains of hydrocarbons molecules.
R: Today polymers as strong as metals have been developed.
S: These have replaced the traditional chromium - plated metallic bumpers in cars.
S6: Many Indian Institutes of Science and Technology run special programmes on polymer science.
The proper sequence should be:

A QRSP

B RSQP

C RQSP

D QRPS

143. Choose the word which best expresses the meaning of the given word.
FRUGALITY

A Foolishness

B Extremity

C Enthusiasm

D Economy

144. Choose the word which best expresses the meaning of the given word.
HARBINGER

A Massenger

B Steward

C Forerunner

D Pilot

145. Choose the word which is the exact OPPOSITE of the given words.
EXODUS

A Influx

B Home - coming

C Return

D Restoration

146. Choose the word which is the exact OPPOSITE of the given words.
EQUANIMITY

A Resentment

B Dubiousness

C Duplicity

D Excitement

147. Find the Odd one out from the group of words.

A Bludgeon

B Dragon

C Black Jack

D Order

148. Each pair of capitalized words given is followed by four pair of words. Select the pair that DOES NOT expresses a relationship similar to that expressed by the capitalized pair.
KERNAL : SHELL

A   Caterpillar : Pupa

B   Larva : Cacoon

C   Lassitude : Syncope

D   Passenger : Car

149. Both of them ……………. since their childhood.

A   are working here

B   work here

C   have been working

D   are liking to work

150. Although initial investigations pointed towards him ……………………...

A   the preceding events corroborated his involvement in the crime.

B   The additional information confirmed his guilt

C   the subsequent events established that he was guilty

D   the subsequent events proved that he was innocent

Answers

General Awareness

1.**D**	2.**A**	3.**D**	4.**B**	5.**B**	6.**B**	7.**A**	8.**A**
9.**A**	10.**D**	11.**C**	12.**D**	13.**A**	14.**A**	15.**D**	16.**D**
17.**D**	18.**B**	19.**A**	20.**A**	21.**C**	22.**C**	23.**C**	24.**B**
25.**D**	26.**A**	27.**C**	28.**B**	29.**A**	30.**A**	31.**B**	32.**D**
33.**B**	34.**A**	35.**C**	36.**A**	37.**A**	38.**D**	39.**B**	40.**D**

Reasoning

41.**C**	42.**C**	43.**D**	44.**C**	45.**D**	46.**D**	47.**A**	48.**B**
49.**B**	50.**C**	51.**C**	52.**D**	53.**C**	54.**D**	55.**A**	56.**D**
57.**C**	58.**D**	59.**A**	60.**A**	61.**C**	62.**D**	63.**C**	64.**D**
65.**D**	66.**C**	67.**C**	68.**D**	69.**C**	70.**D**		

Quantitative Aptitude

71.**B**	72.**B**	73.**B**	74.**B**	75.**C**	76.**C**	77.**B**	78.**C**
79.**C**	80.**B**	81.**A**	82.**C**	83.**B**	84.**A**	85.**B**	86.**C**
87.**A**	88.**D**	89.**B**	90.**C**	91.**B**	92.**C**	93.**B**	94.**B**
95.**D**	96.**A**	97.**A**	98.**C**	99.**A**	100.**C**	101.**B**	102.**B**
103.**D**	104.**A**	105.**D**	106.**A**	107.**B**	108.**D**	109.**D**	110.**D**

General English

111.**D**	112.**C**	113.**D**	114.**D**	115.**D**	116.**D**	117.**A**	118.**D**
119.**C**	120.**D**	121.**A**	122.**C**	123.**A**	124.**D**	125.**B**	126.**A**
127.**B**	128.**B**	129.**A**	130.**A**	131.**C**	132.**B**	133.**C**	134.**D**
135.**A**	136.**B**	137.**B**	138.**B**	139.**C**	140.**D**	141.**D**	142.**D**
143.**D**	144.**C**	145.**A**	146.**D**	147.**B**	148.**D**	149.**C**	150.**D**

Explanations

General Awareness

Reasoning

41. C
Let us solve the problem by eliminating the options.
G: People are rewarded
C: if people are rewarded then they will not change their lifestyle.
F: Unless people change their lifestyle, temperature rises This can also be put In the following manner.
If people do not change their lifestyle then temperature rises.
This is an example of binary logic - If not A then B which can also be expressed as if not B then 'A'.
Thus if the temperature doesn't rise then people change their lifestyle.
Here, accordingtoG and C, people do not change their lifestyle and so temperature rises.
D: If temperature rises, then water level in the coastal area rises.
H: Water level In the coastal area doesn't rise.
Here, D is in accordance with G, C and F but H is not So option (A) is incorrect.
B: People change their lifestyle only if they are rewarded.
This means that if people have changed their lifestyle then they have been rewarded.
Note that if people are rewarded, they may or may not have changed their lifestyle.
G: People are rewarded.
From B and G. we don't know whether people have changed their lifestyle or not.
F: Unless the people change their lifestyle, temperature rises.
This can also be put as - If the people don't change their lifestyle then temperature rises
But

as we don't know whether people have changed their lifestyle or not,

v/e cannot conclude whether temperature has risen or not.
D: if temperature rises, then water level in the coastal area rises.
H: Water level in the coastal area doesn't rise.
As we don't know whether temperature has risen or not, H cannot be concluded using D.
Hence, option (B) is also incorrect.

42. C
In option 2, statement A says- If Kumar sings then the audiences sleep.
Out

of the other 4 statements C, F,G and H, none of the statements mention

anything about sleep and hence option (B) is incorrect.
If option (B) is incorrect, option (D) is also incorrect as it mentions both (B) and (C).
C: Unless audience does not dance, the concert will be successful.
This can also be put as - If the audience dance, the concert will be successful.
F: Kumar sings, only if Vina dances.
This means that - If Kumar has sung, then Vina has danced.
But if Vina has danced, Kumar may or may not have sung.
B: if Kumar sings, then the audience dances.
We

don't know whether Kumar has sung or not and so we don't know whether

the audience have danced or not. Hence we cannot conclude that the

concert is successful as given in statement H.
So option (A) is also logically incorrect.
E: if Vina dances, then Kumar sings.

G: Vina dances.

Thus from these two statements v/e know that Kumar sings.

B: If Kumar sings, then audiences dance.

Thus audiences have danced.

C: Unless audience does not dance, the concert will be successful.

This can also be put as - If the audience dance, the concert will be successful.

Thus the concert is successful as mentioned in statement H.

43. **D**

From the statement of A, we cannot state any information about C. Similarly B and C are also providing partial details. We can find out that Dis the grandfather and A is the grandson, and CB are the couple, thus statement B is a complete truth.

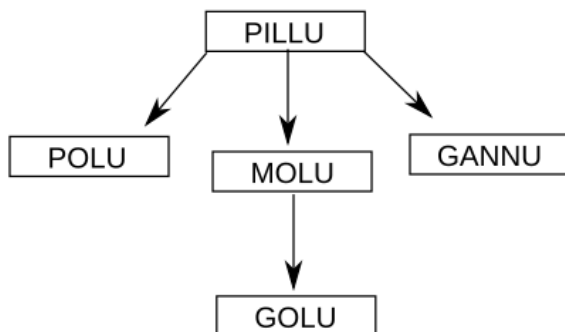We are able to set the relationship.
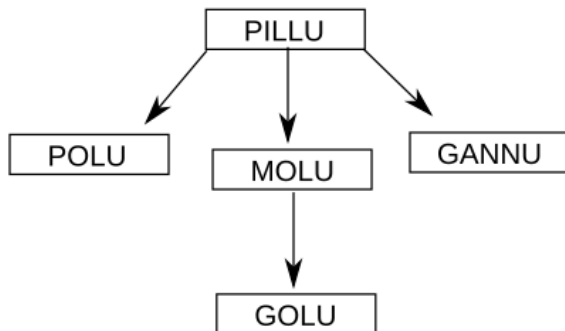
Option D

44. **C**

From the statement of A, we cannot state any information about C. Similarly B and C are also providing partial details. We can find out that Dis the grandfather and A is the grandson, and CB are the couple, thus statement B is a complete truth.
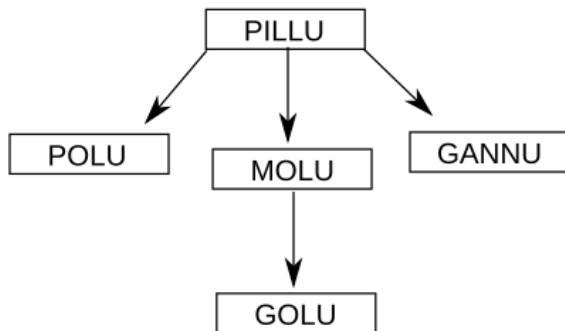
We are able to set the relationship.

Option C

45. **D**

From the statement of A, we cannot state any information about C. Similarly B and C are also providing partial details. We can find out that Dis the grandfather and A is the grandson, and CB are the couple, thus statement B is a complete truth.
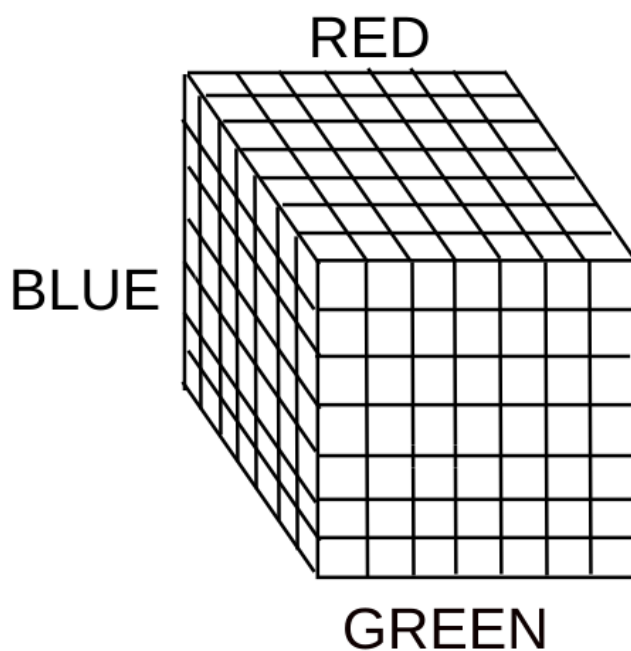
We are able to set the relationship.

Both the statements of B are false.

Option D

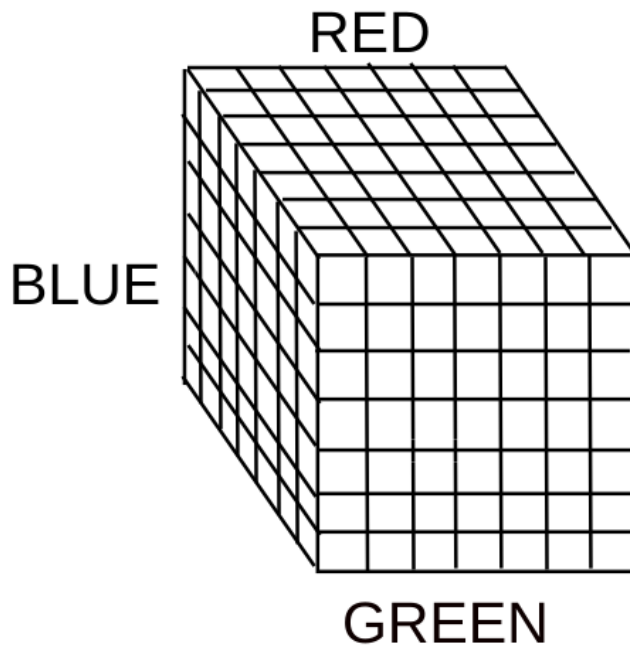46. **D**

Three faces are painted as given in the figure.

Total number of cubes= 343

Total number of painted cubes=7x7+7x6+6x6=49+42+36=127

Number of cubes which are colourless = 343-127=216

Option D

47. **A**

RED

BLUE

GREEN

Three faces are painted as given in the figure.

Total number of cubes= 343

The number of cubes with only one color on them: Blue= 6x6

Green= 6x6

Red=6x6

=3x36

=108

Option A

48. **B**

RED

BLUE

GREEN
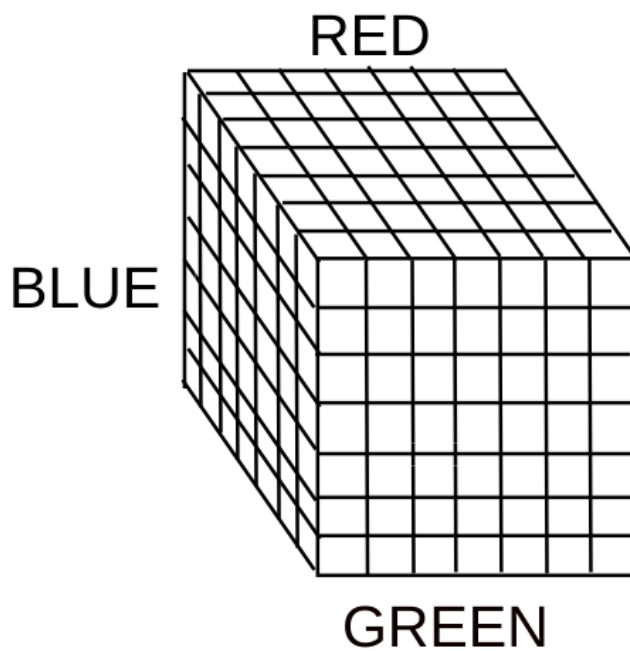
Three faces are painted as given in the figure.

Total number of cubes= 343

Faces with three sides painted =1
Answer= 343-1=342

Option B
49. **B**
We can draw the following diagram for its initial movement:

To return to its original position it can move along the path II, mentioned above.
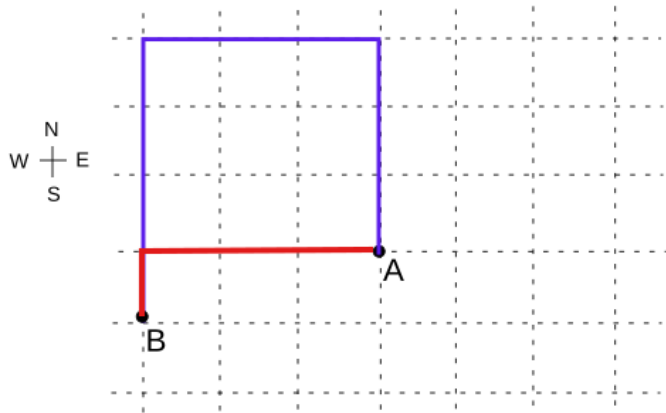
Option B is correct.

50. **C**
We can draw the following diagram for its initial movement:
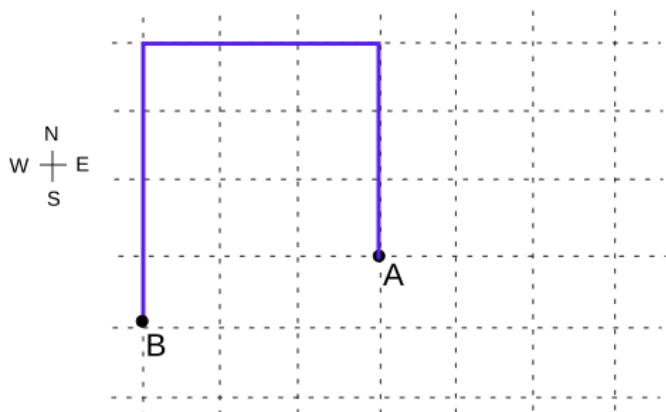
Further, it moves 4 km east and 1 km north.
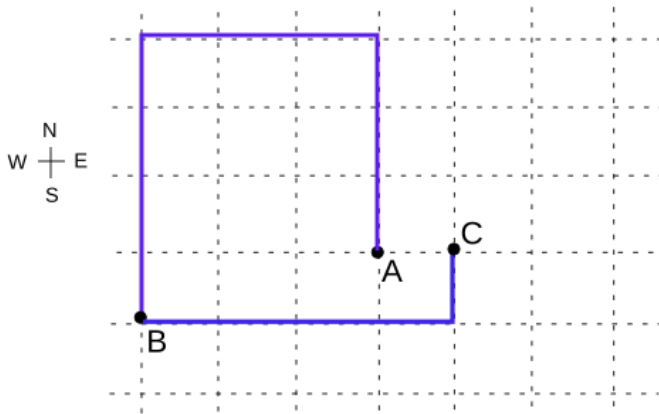
He is 1km from the starting point.
Option C

51. **C**
X = 3, Y = 2 and N = 100

Step 1. X=6 Y=3

Step 2. X=18 Y=4

Step 3. X=72 Y=5

Step 4. X=360 Y=6

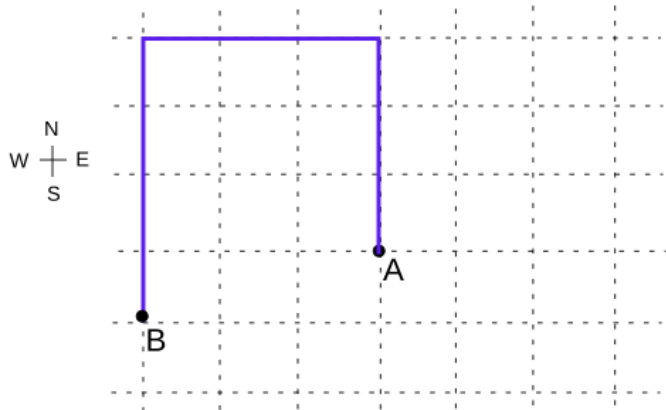Hence Option C is correct.

52. **D**
X = 3, Y = 2 and N = 100

Step 1. X=6 Y=3

Step 2. X=18 Y=4

Step 3. X=72 Y=5

Step 4. X=360 Y=6

Option D

53. **C**
X = 3, Y = 2 and N = 100

Step 1. X=6 Y=3

Step 2. X=18 Y=4

Step 3. X=72 Y=5

Step 4. X=360 Y=6

Hence Option C is correct.

54. **D**
X = 3, Y = 2 and N = 100

Step 1. X=6 Y=3

Step 2. X=18 Y=4

Step 3. X=72 Y=5

Step 4. X=360 Y=6

Step 5. X=2160 Y=7

Hence Option D is correct.

55. **A**

1. X=2, Y=3

X = XY and Y = Y + 1

2. X=6, Y=4

3.X=24, Y=5

4. X=120, Y=6

5. X= 720, Y=7

Hence X can take any value above 120

Hence among the given values Option A is the correct choice.

56. **D**

The following arrangement is possible:

1.Raman

2.

3.

4.

5.Ankit

6.Sunil

7.Toni

Deepak can rank any among 2nd, 3rd, 4th respectively.

Hence Option D is correct.

57. **C**

Lowest position for Vicky which satisfy the above conditions is:

1.Raman

2.

3.

4.Vicky

5.Priya

6.Ankit

7. Toni

Vicky cannot get the position lower than this.

Option C

58. **D**

Priya always scores more than Ankit......Hence there is a logical error.

Option D

59. **A**

It is given in the question: Vicky always scores more than Priya. Priya always scores more than Ankit.

If Sunil ranked second, then Raman scored the highest and Tony scored the least.

Raman -1

Sunil   -2

...

.

.

Tony   -7

Hence only statement A is possible, all the other options are incorrect.

60. **A**

Vicky ranked fifth then Priya and Ankit should be sixth and seventh respectively.

Sunil scores the highest and Deepak or Ankit scores the least.

Thus Sunil will score the highest.

Option A

61. **C**

Conclusion: the party "Z" is likely to win the next election

Option A: People tend to switch their votes at the last minute, still they can give vote to any party, thus the party Z might win the election.

Option B: Even if the given scenario turnout, still party X will have the majority.

Option C: This statement will weaken the main argument of the passage as it contradicts the prediction of the chances of winning.

Option D: Still election can turn out in any direction.

Option C is correct.

62. **D**

Inflation rose by 5% over the second quarter, by 4% during the first quarter and higher than 3% recorded during the same time last year. However, the higher price index did not seem to alarm the National stock Index as stock prices remain steady.

Option A: The option might be true, but cannot guarantee that National stock Index will remain steady.

Option B and C cannot explain the reaction of National stock Index, they are opposite of what the index expects.

Option D is correct, as it will confirm the inflation to be temporary because of the external factors.

63. **C**

dirge: a lament for the dead, especially one forming part of a funeral rite.

The two are related as the second is the act performed on the antonym of the first.

Option A: Sunset : sunrise are just antonyms.

Option B: security check : arrival , even at the arrival a security check is done.

Option C:marriage : alimony, Alimony is a provision for a spouse on divorce.

Option D: welcome address: vote of thanks, not related

Hence Option C is correct
64. **D**
Beautiful beaches attract people, no doubt about it. Just look at this city's beautiful beaches, which are among the most overcrowded beaches in the state. The pattern of reasoning exhibited in the argument above It generalised one model to all over the world. The similar generalisation is in Option D, the extent spread of fleas is generalised by taking an example of a particular dog.

65. **D**
No national productivity measures are available for underground industries that may exist but remain unreported.

Underground industries: No national productivity measures

At least some industries that are run entirely by self - employed industrialists are included in national productivity measures.

Some self - employed industrialists industries: national productivity measures
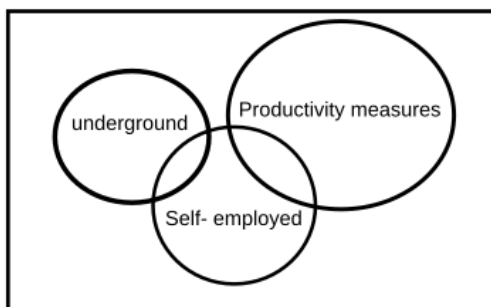
Only Option D is correct.

66. **C**
Nilu has never received a violation from the Federal Aviation Administration during her 16 - year flying career. Nilu must be a great pilot.

We cannot infer the argument **"Nilu must be a great pilot."** on the basis of a single premise, there must be major hidden assumptions to state this argument.

67. **C**
Premise:

1. people argue that the death penalty prevents murder.

2. notorious killer Tom Hanks deliberately moved to a state that imposes the death penalty just before embarking on a series of ferocious murders.

Argument: "the existence of the death penalty does not serve as a deterrent to murder"

The argument is drawn on a specific example, hence, Option C is correct.

68. **D**

The values in the middle column are the average of the sum of values on both sides.

(4+2)/2 = 3

(5+3+1+1)/2 = 5

(6+1+2+3+3+1)/2 = 8

.....

(9+3)/2=6

Option D

69. **C**

Premise (facts) -

1. "The fewer restrictions on the advertising of legal services ------ the more lawyers there are who advertise their services"

which imply: **Lesser restrictions will lead to more advertisements by the lawyers**

2. The lawyers who advertise a specific service charge less for that service than lawyers who do not advertise.
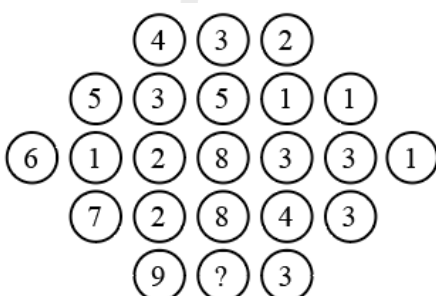
: **The one who advertise charges lesser fee for their services.**

Argument-

"Therefore if the state removes any of its current restrictions, such as the one against advertisements that do not specify fee arrangements, overall consumer legal costs will be lower than if the state retains its current restrictions.

Argument: **If the state removes restrictions on advertisements, the consumer legal costs will decrease.**

Option A: It is against the **argument** as if some lawyers start charging more for their services, will increase the legal cost for consumers.

Option B: The statement is far-fetched, we cannot state that more consumers will use legal services if we remove restrictions.

Option C: It is the unstated inference between the facts and the main argument. Hence the correct option.

"If the restrictions [are] ..... removed, more lawyers will advertise their services."

Option D: This statement is also far-fetched. More number of lawyers will advertise but whether other lawyers will decrease their fees is an overstatement.

Option C is correct.

70. **D**

Premise (facts) -

1. "The fewer restrictions on the advertising of legal services ------ the more lawyers there are who advertise their services"

which imply: **Lesser restrictions will lead to more advertisements by the lawyers**

2. The lawyers who advertise a specific service charge less for that service than lawyers who do not advertise.

: **The one who advertise charges lesser fee for their services.**

Argument-

"Therefore if the state removes any of its current restrictions, such as the one against advertisements that do not specify fee arrangements, overall consumer legal costs will be lower than if the state retains its current restrictions.

Argument: **If the state removes restrictions on advertisements, the consumer legal costs will decrease.**

Option A & **Option B** do not attack the main argument that the consumer legal cost will decrease.

Option C does not weaken the argument.

Option D: If the lawyers will not lessen the fees even after the state removes the restrictions, then the consumer still has to bear the higher legal costs.

Hence Option D is correct.

Quantitative Aptitude

71. **B**
Speed of the Train = 36 km/hr.
= 36 × 5/18 [Changing into m/s]
= 2 × 5
= 10 m/s.

Time taken to cross the Platform = 20 seconds.
Time taken to cross the man = 10 seconds.
∵ Speed of the Train = Length of the Train/Time to cross the Man

∴ Length of the Train = Speed of the Train × Time to cross the Man.
= 10 × 10
= 100 m.
Sum of the Length of Platform and train = Speed of the Train × Time taken by the Train to cross the Platform.
= 10 × 20
= 200 m.
∵ Length of the Train + Length of the Platform = 200
∴ 100 + Length of the Platform = 200
∴ Length of the Platform = 200 - 100
= 100 m.
∴ Length of the Platform is 100 m.

▶ VIDEO SOLUTION

72. **B**
Let the usual speed and the time taken by the man = 5v, 4t respectively.

If the man walks at $\frac{4}{5}th$ of his usual speed, a man reaches office 10 minutes later than usual

i.e the time taken by the man = $\frac{5}{4}$ of the usual time (Speed and time are inversely proportional to each other)

=5t

5t-4t = 10 minutes.

t = 10 minutes.

Usual time taken by the man = 4t = 40 minutes
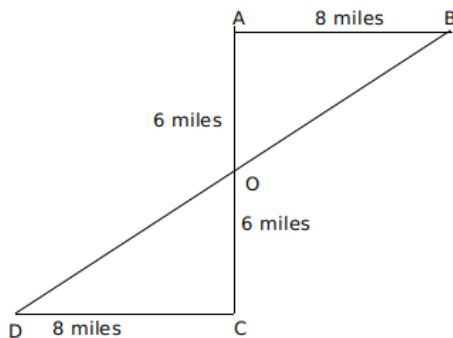
B is the correct answer.

73. **B**
Time taken to meet = $\frac{Dis\tan ce\ between\ them}{Relative\ speed}$

Relative Speed = 5 +4 = 9 miles per hour.
Time take to cover 81 miles = $\frac{81}{9}$ = 9 hours.
Woman travelled in 9 hours = 9*4 = 36 miles.

74. **B**

1 person :

$6^2 + 8^2 = OB^2$

√(36+64) = OB

√(100)= OB

10 = OB...

The distance of the first person from his starting point is 10 miles.
Similarly, the distance of the second person from his starting point is 10 miles.
B is the correct answer

75. **C**

(4M+ 3W)6 = (5M+6W)4 = W

4M = 6W

2M = 3W

let x be the number of days taken by 2 women and 3 men take to do the job

(4M+3W)6=(2W+3M)x

9W*6=6.5W*x

x=8.3 days

C is the correct answer.

> ● VIDEO SOLUTION

76. **C**

Let the total work be 25x units

Ram completes 60% of the task in 15 days.

Ram's efficiency = x units per day

Rahim is 50% as efficient as Ram is and Rachel is 50% as efficient as Rahim is

Efficiency of Rahim = 0.5x units per day

Efficiency of Rahim = 0.25x units per day

Ram will come 15x units in 15 days.

The remaining 10x units of work will be done by Ram, Rahim, Rachel.

= $\frac{10x}{x+0.5x+0.25x}$

= $\frac{10}{1.75}$

= $\frac{1000}{175}$

$= \frac{40}{7}$

C is the correct answer.

77. **B**

Let the total work be LCM of (21, 24) = 168 units.

Amount of work done by A on 1 day = $\frac{168}{21}$ = 8 units

Amount of work done by B on 1 day = $\frac{168}{24}$ = 7 units

Let p be the number of days for which they worked together.

In P days, the amount of work done by A and B = 15p

Remaining work = 168x-15p, which is completed by B in 9 days.

168x-15p=9*7

p=7

So A left after 7 days.

B is the correct answer.

78. **C**

It is given that profit on 100 articles = SP of 75 articles

100(SP-CP) = 75*SP

4(SP-CP) = 3SP

SP = 4CP

Profit = $\frac{SP-CP}{CP} \times 100$

$= \frac{4CP-CP}{CP} \times 100$

=300%

C is the correct answer.

79. **C**

Let us consider A covers 100 m in t sec.

Speed of A = $\frac{100}{t}$

Since A gave B a headstart of 20m, B covers 80m in (t+5) sec (Given)

Speed of B = $\frac{80}{t+5}$

If A gives head start of 40m to B, then the time taken by A to cover 100m is the same as the time taken by B to cover 60m

$\frac{100}{\frac{100}{t}} = \frac{60}{\frac{80}{t+5}}$

n solving for t, we get

t = 15 sec

Speed of A = $\frac{100}{15}$ m/sec

Time taken by A to cover 200m(x) =

200=time * $\frac{100}{15}$

x = 30 sec

C is the correct answer.

80. **B**

Initial surface area of the cube = $6(side)^2$

= $6(4)^2$

= $96cm^2$

No. of new cubes = $\frac{Volume\ of\ older\ cube}{Volume\ of\ 1\ new\ cube}$

= $\frac{4\times\ 4\times\ 4}{1\times\ 1\times\ 1}$

=64 cubes

Newer surface area of 64 cubes = $64*6(1)^2$ = $384cm^2$

Percentage increase in surface area = $\frac{384-96}{96}$ *100

= $\frac{28800}{96}$

= 300%

B is the correct answer

81. **A**

36 = 9*4 Since 9 and 4 are co-prime to each other, we can say that for a number to be divisible by 36 it must be divisible by both 9 and 4.

For G236G0, to be divisible by 4, last two digits should be divisible by 4.

Hence G0 should be a multiple of 4.

Possible values of G are 2, 4, 6, 8, 0

For the number to be divisible by 9, the sum of the digits should be a multiple of 9

G+2+3+6+G+0 = 11+2G should be multiple of 9

If G = 0, 11+2G is not a multiple of 9

If G = 2, 11+2G is not a multiple of 9

If G = 4, 11+2G is not a multiple of 9

If G = 6, 11+2G is not a multiple of 9

If G = 8, 11+2G is a multiple of 9.

Hence 8 is the correct answer.

82. **C**

Let the total work be LCM of (12, 15) = 60 units.

Amount of work done by Amit on one day = $\frac{60}{12}$ = 5 units

Amount of work done by Sagar on one day = $\frac{60}{15}$ = 4 units

Amount of work completed by them on 4 days = (5+4)*4 = 36 units

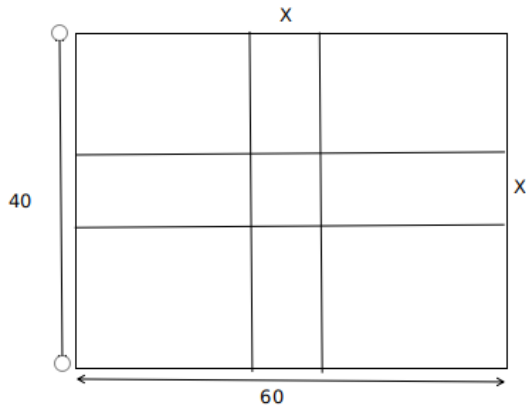The amount of work left out = 60-36 = 24 units.

Fraction of work left out = $\frac{24}{60}$

= $\frac{2}{5}$

C is the correct answer.

83. **B**

Area of the park = (60 x 40) m^2 = 2400 m^2.

Area of the lawn = 2109 m^2.

Area of the crossroads = (2400 - 2109) m^2 = 291 m^2.

Let the width of the road be x metres.

Then, $60x + 40x - x^2 = 291$

$x^2 - 100x + 291 = 0$

$(x - 97)(x - 3) = 0$

$x = 3$.

B is the correct answer

84. **A**

Let P(B$_1$) and P(B$_2$) denote the probabilities of the events of drawing balls from the bag I or bag II.

Since both the bags are equally likely to be selected, P(B$_1$) = P(B$_2$) = $\frac{1}{2}$

Let E denote the event of drawing two balls of different colours from a bag.

The required probability

= P(B$_1$)P($\frac{E}{B_1}$)+ P(B$_2$)P($\frac{E}{B_2}$)

P($\frac{E}{B_1}$) denote the probability of drawing the two balls from bag I and as that from bag II.

= $\frac{1}{2}\left[\frac{^5C_1 \times {}^3C_1}{^8C_2} + \frac{^5C_1 \times {}^4C_1}{^9C_2} \right]$

= $\frac{1}{2}\left[\frac{15}{28} + \frac{5}{9} \right]$

= $\frac{275}{504}$

A is the correct answer.

85. **B**

Year	Consumption of rice	% increase wrt previous year
2006	72.5	-
2007	88	21.38
2008	108	22.73
2009	105	-
2010	127	20.95

From the above table, it is clear that the percentage increase in the consumption of rice over the previous year was highest in 2008

B is the correct answer.

86. **C**

Population = $\frac{Consumption}{Percapita\ consumption}$

In 2008, the population of A = $\frac{230-138}{38.7}$ = 2.79 million

C is the correct answer.

87. **A**

	2006	2007	2008	2009	2010
Production(P)	180	200	240	225	220
Expenditure(E)	120	120	130	120	80
PCConsumption	30	30	30	30	30
Consumption(C)	60	80	110	105	140
E/C	2	1.5	1.18	1.14	0.57

Exports to consumption ratio was highest in the year 2006

Answer is option A.

88. **D**

Population = $\frac{Consumption}{Percapita\ consumption}$

Year	Consumption	Percapita consumption	Population(in millions)
2006	72.5	36.25	2
2007	88	35.2	2.5
2008	108	38.7	2.79
2009	105	40.5	2.59
2010	127	42	3.02

The population of country A was the highest in the year 2010.

89. **B**

The time spent in school corresponds to 105^0

Percentage of time spent in school = $\frac{105}{360} \times 100$

= Approx 30%

B is the correct answer.

90. **C**

Time spent on games corresponds to 30^0 and on sleeping to 120^0

Required ratio = $\frac{30}{120} \times 100$

=25%

C is the correct answer.

91. B

The time spent in playing games and in doing homework corresponds to 30° and 45° respectively.

If the time spent in playing games is equal to that spent on doing homework, then there should be an increase of 15° in the time spent in games.

If this 15 ° is obtained by decreasing the time spent in sleeping (with the other activities remaining constant),

The percentage decrease in the time spent in sleeping = $\frac{15^0}{120^0} \times 100$

= 12.5^0

B is the correct answer.

92. C

School corresponds to 105^0 and homework corresponds to 45^0

Difference = 105^0 - 45^0

=60^0

= $\frac{60}{360} \times 24$

= 4 hrs

C is the correct answer.

93. B

The total number of hours = 24

Time spent on homework = 45^0

= $\frac{45}{360} \times 24$ = 3 hrs

It is given that she spent $\frac{1}{3}rd$ time of homework in Mathematics.

The time she spent on Mathematics = $\frac{1}{3} \times 3$

=1 hr

The time she spent on the rest of the subjects = 3-1 = 2 hr

B is the correct answer.

94. B

AD is parallel to BE is parallel to CF

$\frac{AB}{BC} = \frac{DE}{EF}$ [Basic proportionality theorem]

$\frac{2}{4} = \frac{1.5}{EF}$

EF = 3 cm

B is the correct answer.

95. D

$\log_{10} 10 + \log_{10} 10^2 + ... + \log_{10} 10^n$

Since $\log_a a$ = 1

$\log_{10} 10 + \log_{10} 10^2 + ... + \log_{10} 10^n$ = 1+2+....n

= $\frac{n(n+1)}{2}$

= $\frac{(n^2+n)}{2}$

D is the correct answer.

96. A

Let the number be a

It is given that sum of a number and its reciprocal is thrice the difference of the number and its reciprocal.

a+ $\frac{1}{a}$ = 3(a- $\frac{1}{a}$)

2a = $\frac{4}{a}$

a = $\frac{2}{a}$

$a^2 = 2$

a = $\pm\sqrt{2}$

A is the correct answer.

97. A

The first natural number between 10 and 300 which is divisible by 9 is 18

The last natural number which is divisible by 9 and is less than 300 is 297

This is an AP with first term 18, the last term 297 and common difference = 9

297=18+(n-1)9

279=(n-1)9

n-1 = 31

n=32

A is the correct answer.

98. C

^nP_r = ^nC_r*r!

$^nP_x = 336$

$^nC_x * x!$ = 336

x!= $\frac{336}{56}$

x!=6

x=3

$^nC_x = 56$

$\frac{n!}{(n-x)!\times x!} = 56$

$\frac{n!}{(n-3)!\times 3!} = 56$

n=8

∴ n= 8, x=3

C is the correct answer.

99. A

Side of an equilateral triangle= 24 cm

The mid-points of its sides are joined to form another triangle whose mid-points are joined to form another triangle. This process continues indefinitely.

Side of 2nd equilateral triangle=12 cm [Line segment joining midpoint of two sides of a triangle is parallel to the third side and half of it.]

Similarly, Side of third equilateral triangle=6 cm

Sides are 3, 1.5,3/4,....

Perimeter of 1st triangle=24+24+24=72 cm

Perimeter of 2nd triangle=12+12+12=36 cm

Perimeter of 3rd triangle=6+6+6=18 cm

....

The sum of the perimeter of all the triangles=72+36+18+9+9/2+9/4+........

This is a geometric progression having a common ratio =36/72=1/2

Sum of an infinite G.P=

= 72 × 2

=144 which is the sum of the perimeter of all triangles.

A is the correct answer.

100. **C**
Total number of days in a leap year = 366

It will contain 52 weeks and 2days

These two days can be (Sunday, Monday); (Monday, Tuesday); (Tuesday, Wednesday); (Wednesday, Thursday); (Thursday, Friday); (Friday, Saturday); (Saturday, Sunday)

For 53 Sundays, probability = $\frac{2}{7}$

Similarly for 53 Mondays, probability = $\frac{2}{7}$

This includes one way where Sunday and Monday occur simultaneously (i.e) Sunday, Monday

Probability for this = $\frac{1}{7}$

Hence required probability = $\frac{2}{7}$ + $\frac{2}{7}$- $\frac{1}{7}$

= $\frac{3}{7}$

C is the correct answer.

101. **B**
The intercept form of the line = $\frac{x}{a} + \frac{y}{b} = 1$ where a is x-intercept and b is y-intercept.

3x + 4y - 12 = 0

3x + 4y = 12

$\frac{3x}{12} + \frac{4y}{12} = 1$

$\frac{x}{4} + \frac{y}{3} = 1$

So the intercepts are 4 and 3.

B is the correct answer.

102. **B**

Given,

The average of the four prime numbers = 35.

a + b + c + d = 35 * 4 = 140.

Since a and d are equidistant from 36.

a + d = 72 --- Eq (1)

b + c = 68 --- Eq (2)

a + b = 60 --- Eq (3) and c + d = 80 --- Eq (4)

Using the equation (3) let us look for the prime values of a and b and the corresponding values of c and d using Eq 2 and 1.

Also given that a < b < c < d.

a	b	c	d	Note
7	53	15	65	c,d are not prime
13	47	21	59	c is not prime
17	43	25	55	c,d are not prime
23	37	31	49	d is not prime
29	31	37	43	Possible

(a, b, c, d) = 29, 31, 37, 43

d - a = 43 - 29 = 14

B is the correct answer.

▶ VIDEO SOLUTION

103. **D**
SP of 1kg rasgulla= Rs.15
Profit= $\frac{200}{3}$%
CP of 1 kg rasgulla = ($\frac{15 \times 100}{\frac{500}{3}}$) = Rs. 9
CP of 1 kg of sugar= 7x
CP of 1 kg of floor= 3x
3x   7x

         9
7x-9   9-3x
$\frac{7x-9}{9-3x}$ $=$ $\frac{5}{3}$
x=2
CP of sugar= 7x= 14 per kg

D is the correct answer.

104. **A**
Let the initial price of 100 kg Sugar was Rs. 100.
Now, a 20% decrease in rate then rate of 100 kg sugar would be Rs. 80.
So, Rs. 80 = 100 kg sugar.
Rs. 100 = 100× $\frac{100}{80}$ = 125 Kg sugar.
Increment in sugar = 25 kg.
% increment = $\frac{125-100}{100}$ $\times$ 100 = 25%.
25% increment = 6 kg of sugar

total sugar initially = 6*4 =24 kg

Original price of the sugar = $\frac{240}{24}$

= Rs. 10 per kg

A is the correct answer.

105. **D**

Let the radius of solid sphere be r.

The volume of sphere $V_s = \frac{4}{3} \pi r^3$

It is melted and recast into a right circular cone of radius r and height h.

The volume of cone $V_c = \frac{1}{3} \pi r^2 h$

The same volume of material is used for recasting. Therefore,

$$V_s = V_c$$

$\frac{4}{3} \pi r^3 = \frac{1}{3} \pi r^2 h$

h = 4r

$\frac{h}{r} = 4$

D is the correct answer.

106. **A**

Let the distance covered be 16 km, and the velocities be 1kmph, 4kmph and 16kmph.

Then the time taken: 16h, 4h, and 1h respectively

Ratio of time and velocity for each vehicle: $\frac{16}{1} : \frac{4}{4} : \frac{1}{16}$

$= 16 : 1 : \frac{1}{16}$

=256:16:1.

107. **B**

A can do a piece of work in 15 days.
B is twice as efficient as A.
So B can do the same piece of work in 7.5 days.
Assume the total work to be 15 units
A does 1 unit per day and B does 2 units per day.
For the first x days, A worked alone and hence work done per day is
1 * x = x units.
For the next (11 - x) days, A and B worked together. In 1 day, they will do (1 + 2) = 3 units.
So in 11 - x days, they will do 33 - 3x units.
33 - 3x + x = 15
2x = 18 and x = 9.
Thus A worked alone for 9 days the A and B worked together for 2 days.

▶ VIDEO SOLUTION

108. **D**

A+B+C+D = 56 -- Eq 1

B+C+D = 4.6A   -- Eq 2

A+C+D = $\frac{11B}{3}$ --- Eq 3

A+B+D = 2.5C --Eq 4

Using Eq 1 and 2, we get A = 10

Using Eq 1 and 4, we get C = 16

Using Eq 1 and 3, we get B = 12

On substituting the values of A, B, C in Eq 1, we get D = 18

D is the correct answer.

109. D

Let the salary of Saroj be 100x

The salary of Raju = 80x

The salary of Ram = 70x

the percent by which the salary of Raju more than the salary of Ram = $\frac{80x - 70x}{70x} \times 100$

= $\frac{1}{7} \times 100$

=14.28%

D is the correct answer.

110. D

We know that wire is in the shape of a cylinder.

So, the volume of wire = $\pi r^2 h$

$\pi r^2 h_1 = \pi \left(\frac{r}{3}\right)^2 h_2$

Cancelling π on both sides,

$r^2 h_1 = \frac{r}{9}^2 h_2$

$9h_1 = h_2$

length is increased by 9 times

D is the correct answer.

General English

111. D

In the passage, the author describes the "supreme triumph" as being vividly and perfectly alive. The term "triumph" here refers to the victory or great achievement of experiencing life in its fullest form, being part of the living, incarnate cosmos. The context focuses on the marvel and victory of being alive. Therefore, the correct answer is **victory**.

112. C

Refer to the fourth line - the authorsays '... life in the flesh is ours... only for a time.' Here the author implies that it is only for a short while we are alive, and we need to look at the now while we can, even for this short while.

Option C is the correct answer.

113. D

In the passage, the author speaks about the marvel and beauty of being alive and suggests that we should "dance with rapture" because of it. "Rapture" in this context refers to an intense feeling of happiness and joy, making "joy" the most appropriate choice. Therefore, Option D is the correct answer.

114. D

In the last sentence he compares the mind to 'the glitter of the sun on the surface of the waters' which is a reflection, not an illusion. Essentially saying that mind only exists as long is there is something around it.

Option D would be the correct answer.

115. D

While the author is reflective (pondering) the tone is best described as philosophical based on the title (The Supreme Truth) and his talking of man in general and looking at things from a larger perspective.

He is not talking in a social aspect (option A), or giving a moral lesson (option B), he does ask us to reflect, but the text itself is not reflective (option C), but philosophical in nature.

Therefore, Option D is the correct answer.

116. **D**
The most suitable title for this passage is d) "Alive and Kicking" because it captures the central theme of D. H. Lawrence's writing: the celebration of being vividly and fully alive in the present moment.

The passage emphasizes the "supreme triumph" of living in the flesh, connected to the cosmos, nature, and humanity, and it urges a joyful, rapturous embrace of life. While the other options—a) "The Surface of the Waters", b) "My Mind", and c) "The Human Race"—touch on elements mentioned in the text, they are too narrow and fail to reflect the broader, exuberant focus on life itself. "Alive and Kicking" conveys both the vitality and the active engagement with existence that Lawrence champions.

117. **A**
The repetition of messages is known as redundancy.

118. **D**
Pen is dipped in ink and is used to write on paper. Similarly, brush is dipped in paint and is used to paint on canvas.

No other option follows the same analogy.

Therefore, Option D is the correct answer.

119. **C**
Realia refers to objects and materials from everyday life used as teaching aids.

120. **D**
Option A is wrong as it should start with do and not are. Option B is eliminated because of does it should have been do. Option C is eliminated because of the word belongs, it should be belong, therefore, option D is the correct answer.

121. **A**
It should be a house, a street and the countryside, so option B and C are eliminated. In option D is should be the house is old as it is referring to a particular sentence mention in first part.

122. **C**
Comparing is followed by the preposition with, so options A and B are eliminated. Option D is wrong as comparing is done with two or more things and not with self. Therefore, option C is correct.

123. **A**
Option B is eliminated because of wrong usage of what, and option C is eliminated because of the wrong usage of which, and option D is eliminated because of wrong usage of wherein.

Option A is a grammatically correct option.

124. **D**
Option A: The present perfect tense ("have completed") is used for actions that have relevance to the present moment or are ongoing, but "yesterday" specifies a definite past time, which conflicts with the present perfect.

Option B: The correct form would be "I did complete the work yesterday."

Option C: The present perfect "have had" combined with "completed" is not a valid construction here, and it also clashes with "yesterday".

Option D: This sentence is grammatically correct and hence, would be the correct answer.

125. B

"Crashed into" is the most natural and commonly used preposition to describe a collision between two objects, such as a train and a truck.

The other options imply a different meaning that does not fit the context of a collision.

Therefore, Option B is the correct answer.

126. A

Option A is the correct answer.

The phrase "referred to" means being called or described as something. In this context, the Jan Lokpal Bill is described as the citizens' ombudsman bill, making option A the correct answer.

127. B

independent means free from outside control so correct synonym is impartial.
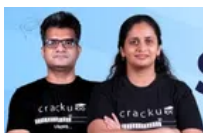
128. B

Synonym of deter is to stop or prevent.

129. A

Grievances here refers to the complaints of the citizens.

130. A

An ombudsman means an official appointed to investigate individuals' complaints against a company or organization, especially a public authority.

131. C

Discuss means 'to talk about sth'

Discuss about is a redundant word, hence incorrect.

132. B

The context requires a single 'had' to refer to the past; the double 'had' makes it a past perfect which is incorrect here.
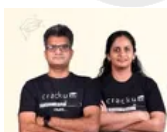
133. C

'Again' is redundant since the sentence already has 'repeat' which means to say or do again.

134. D

There is no error in this sentence.

135. A

PRSQ is the right sequence -I always told them how for me she was like a family's elder and how she has always exuded warmth and consideration for me.

136. B

RQSP fills the blank aptly. A year or so after leaving Bangkok, the largest urban area and primary city of Thailand and a place of unique beauty, I picked up a liking for learning foreign languages. Q and S describe Bangkok and hence follow it.

137. **B**
"Comprises" means "consists of" and is used without "of" or "to" in standard English.

138. **B**
The objective case 'me' is apt.

139. **C**
The correct option is c) Hinterland, which refers to the inland areas behind a coast or a river's banks, typically less developed or remote compared to coastal regions. a) Isthmus is a narrow strip of land connecting two larger landmasses, b) Archipelago is a group of islands, and d) Swamps are wetlands, none of which specifically denote the inland region behind a coast or riverbank. Thus, Hinterland best fits the description.

140. **D**
The given sentence is in the active voice. The correct passive form is choice (d). The given sentence has the present continuous (is creating) and so has choice (d) (is being created).

141. **D**
The given sentence is in active voice and the correct passive construction is given in choice (d). The sentence has two parts (before and after 'about') and both parts have been correctly put in passive in choice (d).

142. **D**
The first sentence S, introduces polymers. Q follows telling us what polymers are. R and P give two qualities of polymers - strength and cost + convenience - which follows Q (and precedes S) giving reasons for their use given in S. S is linked to P - 'alternative to metals' in P leads to 'replacing metallic bumpers' in S. Hence QRPS is the right sequence.

143. **D**
Frugal means being economical.

144. **C**
A harbinger is one who announces or foretells what is coming.

145. **A**
'Exodus' means a mass departure or emigration. Its opposite is influx or coming in.

146. **D**
The exact opposite of **equanimity** is **excitement**.

Equanimity refers to mental calmness, composure, and evenness of temper, especially in difficult situations. Excitement, on the other hand, refers to a state of heightened emotional arousal, which contrasts with the calmness and balance of equanimity.

147. **B**
While bludgeon, backjack and order are both nouns and verbs, dragon is only a noun and can't be used as a verb.

148. **D**
The relationship between "Kernel" and "Shell" is that the kernel is enclosed within the shell, just like the inner part of something is protected by an outer covering.

Option D does not have the same relationship because a passenger is not naturally enclosed within a car the way a kernel is enclosed in a shell.

149. **C**

Since the blank is followed by 'since', the present perfect continuous (have been working) is apt.

150. **D**

The sentence begins with 'although' implying a contrast and talks of what the initial investigation revealed. The blank must therefore be about what subsequent events showed or proved.