MAH-CET-2023 Slot-3

Questions and Answers

Q1. Choose the correctly spelled word.

a. **Flocciinaucinihilipilification**
b. **Floccinaucniihilipilification**
c. **Floccinaucinihilipilification**
d. **Floccinaucinihillipilification**
e. **None of these**

A meteor stream is composed of dust particles that have been ejected from a parent comet at a variety of velocities. These particles follow the same orbit as the parent comet, but due to their differing velocities they slowly gain on or fall behind the disintegrating comet until a shroud of dust surrounds the entire cometary orbit. Astronomers have hypothesized that a meteor stream should broaden with time as the dust particles' individual orbits are perturbed by planetary gravitational fields. A recent computer-modeling experiment tested this hypothesis by tracking the influence of planetary gravitation over a projected 5,000-year period on the positions of a group of hypothetical dust particles. In the model, the particles were randomly distributed throughout a computer simulation of the orbit of an actual meteor stream, the Geminid. The researcher found, as expected, that the computer-model stream broadened with time. Conventional theories, however, predicted that the distribution of particles would be increasingly dense toward the center of a meteor stream. Surprisingly, the computer-model meteor stream gradually came to resemble a thick-walled, hollow pipe.
Whenever the Earth passes through a meteor stream, a meteor shower occurs. Moving at a little over 1,500,000 miles per day around its orbit, the Earth would take, on average, just over a day to cross the hollow, computer-model Geminid stream if the stream were 5,000 years old. Two brief periods of peak meteor activity during the shower would be observed, one as the Earth entered the thick-walled —pipe‖ and one as it exited. There is no reason why the Earth should always pass through the stream's exact center, so the time interval between the two bursts of activity would vary from one year to the next. Has the predicted twin-peaked activity been observed for the actual yearly Geminid meteor shower? The Geminid data between 1970 and 1979 show just such a bifurcation, a secondary burst of meteor activity being clearly visible at an average of 19 hours (1,200,000 miles) after the first burst. The time intervals between the bursts suggest the actual Geminid stream is about 3,000 years old.

2. The primary focus of the passage is on which of the following?
(A) Comparing two scientific theories and contrasting the predictions that each would make concerning a natural phenomenon
(B) Describing a new theoretical model and noting that it explains the nature of observations made of a particular natural phenomenon
(C) Evaluating the results of a particular scientific experiment and suggesting further areas for research
(D) Explaining how two different natural phenomena are related and demonstrating a way to measure them
(E) Analysing recent data derived from observations of an actual phenomenon and constructing a model to explain the data

3. According to the passage, which of the following is an accurate statement concerning meteor streams?

(A) Meteor streams and comets start out with similar orbits, but only those of meteor streams are perturbed by planetary gravitation.
(B) Meteor streams grow as dust particles are attracted by the gravitational fields of comets.
(C) Meteor streams are composed of dust particles derived from comets.
(D) Comets may be composed of several kinds of materials, while meteor streams consist only of large dust particles. (E) Once formed, meteor streams hasten the further disintegration of comets.

4. The author states that the research described in the first paragraph was undertaken in order to (A) determine the age of an actual meteor stream
(B) identify the various structural features of meteor streams
(C) explore the nature of a particularly interesting meteor stream
(D) test the hypothesis that meteor streams become broader as they age
(E) show that a computer model could help in explaining actual astronomical data

5. It can be inferred from the passage that which of the following would most probably be observed during the Earth‟s passage through a meteor stream if the conventional theories mentioned in line 18 were correct?
(A) Meteor activity would gradually increase to a single, intense peak, and then gradually decline. (B) Meteor activity would be steady throughout the period of the meteor shower.
(C) Meteor activity would rise to a peak at the beginning and at the end of the meteor shower.
(D) Random bursts of very high meteor activity would be interspersed with periods of very little activity.
(E) In years in which the Earth passed through only the outer areas of a meteor stream, meteor activity would be absent.

6. According to the passage, why do the dust particles in a meteor stream eventually surround a comet‟s original orbit?
(A) They are ejected by the comet at differing velocities.
(B) Their orbits are uncontrolled by planetary gravitational fields. (C) They become part of the meteor stream at different times.
(D) Their velocity slows over time. (E) Their ejection velocity is slower than that of the comet.

7. The passage suggests that which of the following is a prediction concerning meteor streams that can be derived from both the conventional theories mentioned in line 18 and the new computer-derived theory?
(A) Dust particles in a meteor stream will usually be distributed evenly throughout any cross section of the steam.
(B) The orbits of most meteor streams should cross the orbit of the Earth at some point and give rise to a meteor shower.
(C) Over time the distribution of dust in a meteor stream will usually become denser at the outside edges of the stream than at the center.
(D) Meteor showers caused by older meteor streams should be, on average, longer in duration than those caused by very young meteor streams.
(E) The individual dust particles in older meteor streams should be, on average, smaller than those that compose younger meteor streams.

8. It can be inferred from the last paragraph of the passage that which of the following must be true of the Earth as it orbits the Sun?

(A) Most meteor streams it encounters are more than 2,000 years old. (B) When passing through a meteor stream, it usually passes near to the stream‟s center.
(C) It crosses the Geminid meteor stream once every year.
(D) It usually takes over a day to cross the actual Geminid meteor stream.
(E) It accounts for most of the gravitational perturbation affecting the Geminid meteor stream.
9. Which of the following is an assumption underlying the last sentence of the passage?
(A) In each of the years between 1970 and 1979, the Earth took exactly 19 hours to cross the Geminid meteor stream.
(B) The comet associated with the Geminid meteor stream has totally disintegrated.
(C) The Geminid meteor stream should continue to exist for at least 5,000 years.
(D) The Geminid meteor stream has not broadened as rapidly as the conventional theories would have predicted.
(E) The computer-model Geminid meteor stream provides an accurate representation of the development of the actual Geminid stream.

In the world of modern medicine, the role of genetics is rapidly expanding. Genetic testing is becoming more common, and researchers are using genetic data to identify disease risk factors and develop new treatments. However, there are also concerns about the potential ethical implications of genetic research and the use of genetic information.
One potential issue is the use of genetic data in insurance and employment decisions. In some countries, insurance companies are allowed to use genetic information to determine coverage and premiums, and employers may use genetic information to make hiring and promotion decisions. Critics argue that this practice is unfair and could lead to discrimination against individuals who are genetically predisposed to certain conditions.
Another issue is the potential misuse of genetic information by law enforcement agencies. While DNA evidence has helped solve many crimes, there are concerns about privacy and civil liberties when it comes to genetic data. For example, law enforcement agencies may try to use genetic data to identify individuals who have not been convicted of a crime or to determine a suspect's race or ethnicity.
Despite these concerns, there are also potential benefits of genetic research. For example, genetic testing can help identify individuals who are at risk for certain conditions, which can lead to earlier intervention and better outcomes. Genetic research can also lead to the development of more targeted treatments that are tailored to an individual's genetic makeup.

Question (9): What is the main topic of the passage? A) The expansion of genetics in modern medicine B) The ethical implications of genetic research C) The benefits of genetic testing D) The role of genetic data in insurance and employment

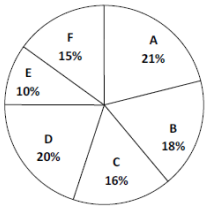
Question 10: What is the potential ethical concern with the use of genetic information in insurance and employment decisions? A) It could lead to discrimination against individuals who are genetically predisposed to certain conditions. B) It could result in higher insurance premiums for healthy individuals. C) It could lead to employers hiring individuals based solely on their genetic makeup. D) It could lead to insurance companies denying coverage to individuals with a family history of certain conditions.

Question 11: In which countries are insurance companies allowed to use genetic information to determine coverage and premiums? A) All countries B) Only developed countries C) Only developing countries D) It is not specified in the passage

Question 12: What is the potential misuse of genetic information by law enforcement agencies? A) It could be used to determine a suspect's race or ethnicity. B) It could lead to the wrongful conviction of innocent individuals. C) It could be used to identify individuals who have not been convicted of a crime. D) All of the above

Question 13: What is a potential benefit of genetic testing? A) It can help identify individuals who are at risk for certain conditions. B) It can lead to discrimination against individuals who are genetically predisposed to certain conditions. C) It can help insurance companies determine coverage and premiums. D) It can lead to employers hiring individuals based solely on their genetic makeup.

Directions (Q. 14-18): In the following pie-chart the percentage distribution of population of six cities is given. Total population of these six cities is 24 lakh. The given table shows the ratio of males to females and the percentage of adult population in these cities.



City	Male : Female	% Adult
A	4 : 3	60%
B	5 : 4	64%
C	5 : 3	72%
D	2 : 3	70%
E	1 : 1	75%
F	3 : 2	65%

14. What is the total number of male population in City D?
(1) 1.88 lakh (2) 1.92 lakh (3) 1.96 lakh (4) 2.04 lakh (5) 2.12 lakh

15. What is the number of persons in City C who are not adult?
(1) 107520 (2) 108410 (3) 109560 (4) 110800 (5) 121400

16. What is the number of females in city A who are adult?
(1) 74400 (2) 74500 (3) 75400
(4) 75500 (5) Can'tbe determined

17. What is the difference between the number of males and the number of females in City B?
(1) 42000 (2) 44000 (3) 45000 (4) 48000 (5) None of these

18. The number of adults in City E is what per cent of the number of males in City D?
(1) 82.5% (2) 87.75% (3) 92.5% (4) 93.75% (5) 95%

Directions: (19-23) Table given below shows total products sold by 6 sellers. Products are of only two types 'P' and 'Q'. Some data is missing in table. Students are expected to calculate the missing data according to questions. Study the data carefully and answer the following questions.

Sellers	Total Products Sold	'P' type sold(in absolute)	'Q' type sold(in %)
Ajay	580	–	60%
Vimal	–	360	52%
Shubham	–	520	–
Saket	920	–	–
Avdesh	–	636	40%
Rahul	1000	–	–

Note :- 1. Total Products = 'P' type + 'Q' type

19.Total Products sold by Avdesh and Rahul together is what percent more than total products sold by Saket and Vimal together?

A. 23.75%
B. 23.25%
C. 24.50%
D. 23.35%
E. 25%

20.'P' type product sold by Saket is 25% more than 'P' type product sold by Vimal. Find 'P' type product sold by Saket is what percent of 'Q' type product sold by Saket?

A. 95.74%
B. 75%
C. 65%
D. 50%
E. None of these

21.'Q' type product sold by Ajay is how much less than 'Q' type product sold by Shubham if total product sold by Shubham is 55% more than total products sold by Ajay.

A. 120
B. 60
C. 31
D. 150
E. None of these

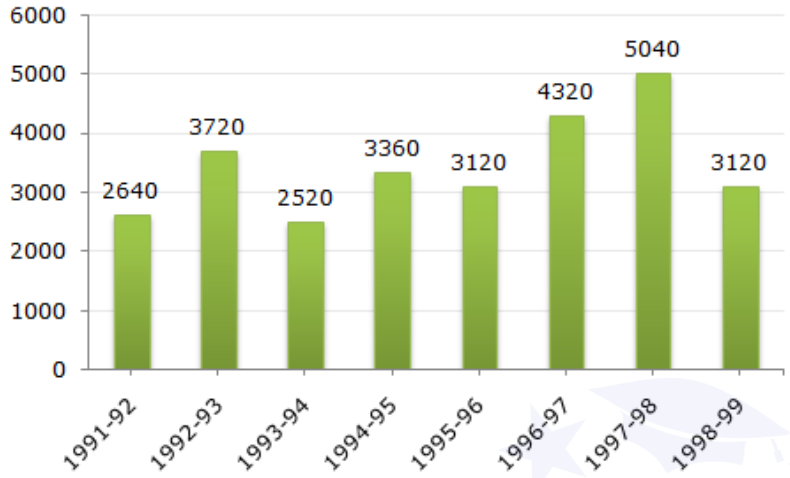
22.If ratio of 'Q' type product sold by Vimal to 'Q' type product sold by Rahul is 4 : 3, then, find the average number of 'P' type products sold by Ajay and Rahul together?

A. 220
B. 260
C. 255
D. 244
E. 241

23.If 'Q' type product sold by Shubham is 25% more than 'Q' type product sold by Avdesh then, find total product sold by Shubham is what percent more/less than total product sold by Avdesh?

A. 2%
B. 0%
C. -4%
D. -0.94%
E. None of these

Q (24-28)The bar graph given below shows the foreign exchange reserves of a country (in million US $) from 1991 - 1992 to 1998 - 1999.
Foreign Exchange Reserves of a Country. (In million US $)



24.The ratio of the number of years, in which the foreign exchange reserves are above the average reserves, to those in which the reserves are below the average reserves is?
a)2:6
b)3:4
c)3:5
d)4:4
e) none of these

25. The foreign exchange reserves in 1997-98 was how many times that in 1994-95?
A)0.7
B)1.2
C)1.4
D)1.5
E)1.3

26. For which year, the percent increase of foreign exchange reserves over the previous year, is the highest?
A)1992-93
B)1993-94
C)1994-95
D)1996-97
E) none of these

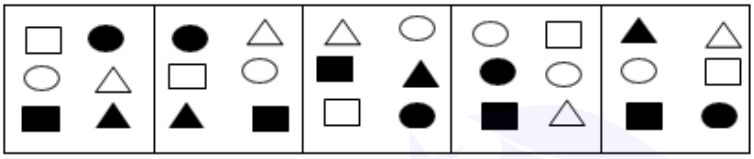
27.The foreign exchange reserves in 1996-97 were approximately what percent of the average foreign exchange reserves over the period under review?
A)95%

B)110%
C)115%
D)125%
E)none of these

28.What was the percentage increase in the foreign exchange reserves in 1997-98 over 1993-94?
A)100
B)150
C)200
D)620
E)none of these

Directions : In each of the following questions five figures are given. Four of them are similar in some way but one figure is not like the other four. Point out which figure does not belong to the group

.29.



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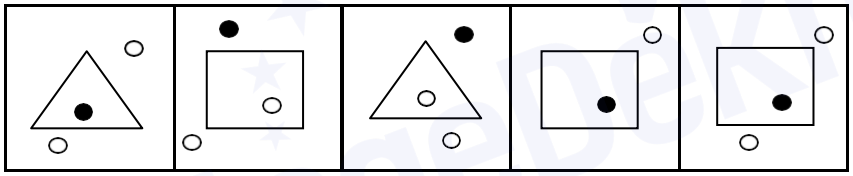

(a) (b) (c) (d) (e)

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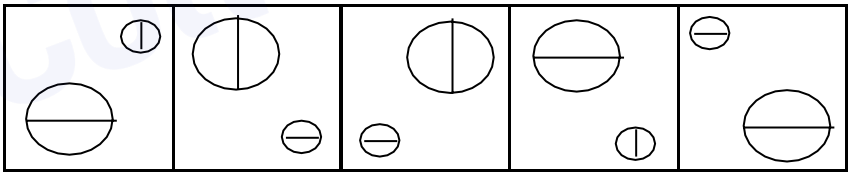

(a) (b) (c) (d) (e)

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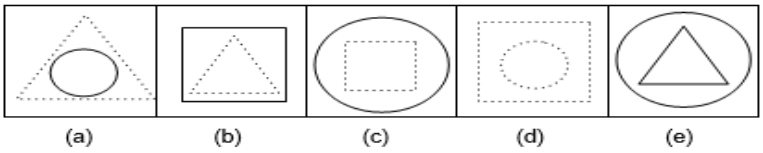

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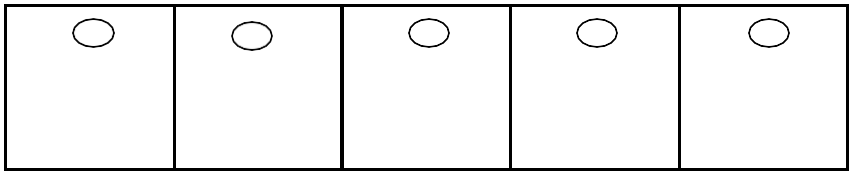

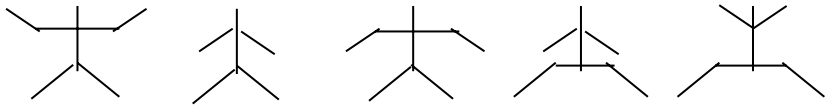

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Directions : In the following questions there are two sets of figures - the problem figures and the answer figures. The problem figures are presented in two units. The first unit contains two figures and the second unit one figure and a question mark. You are to find out which one of the answer figures marked (a) to (e) should be in place of the question mark.

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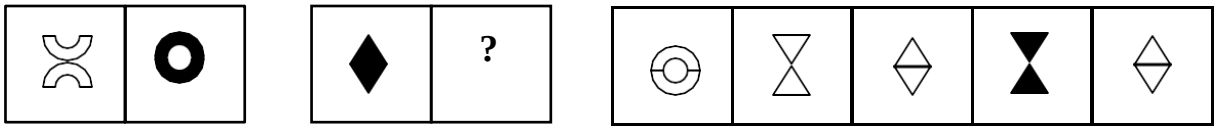

(a) (b) (c) (d)

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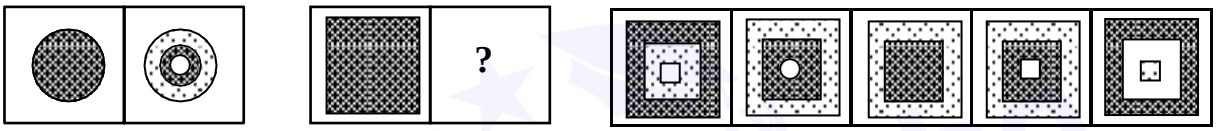

(a) (b) (c) (d)

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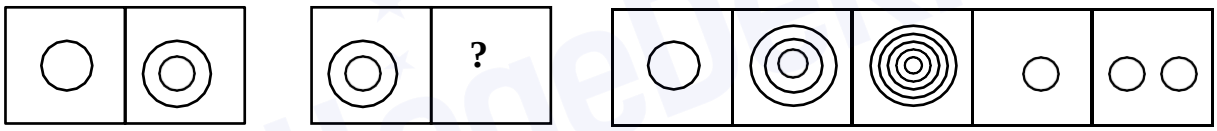

(a) (b) (c) (d)

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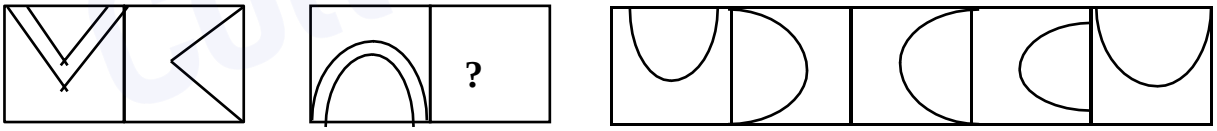

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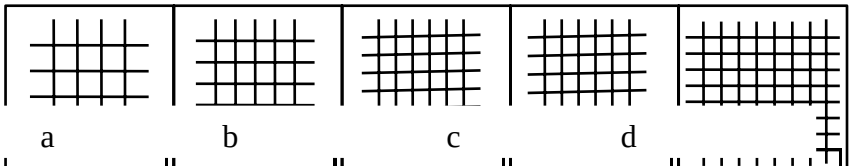
38.



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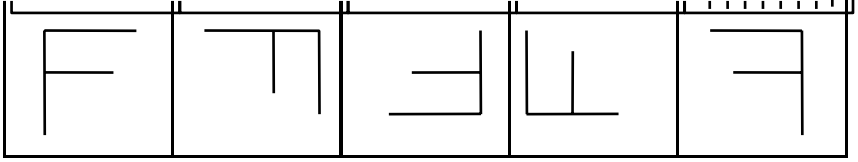

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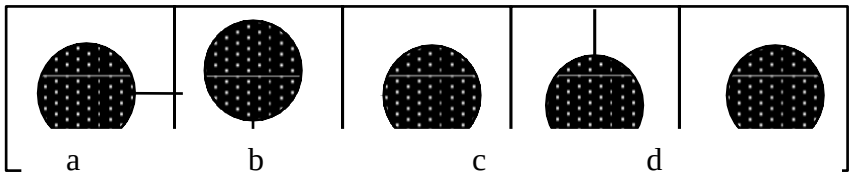

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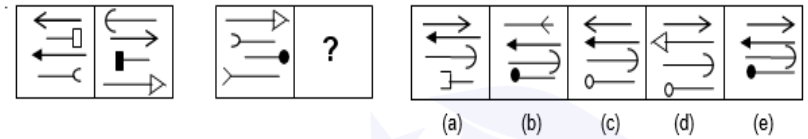
43.



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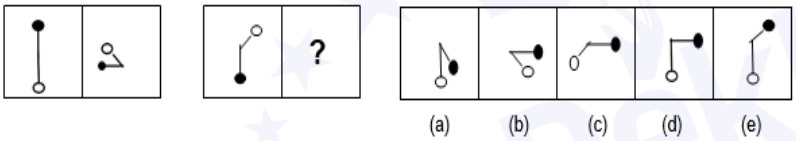

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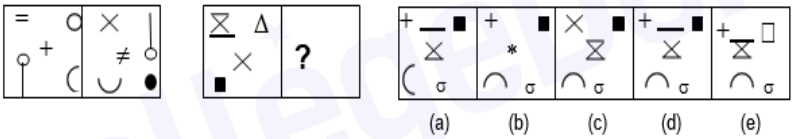

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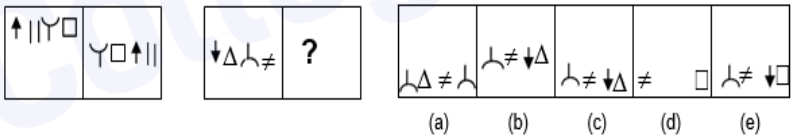

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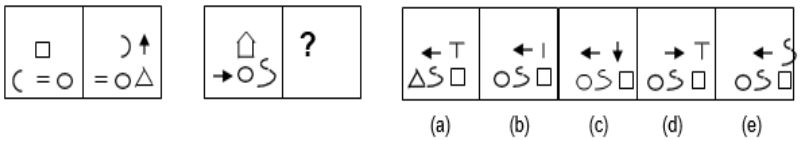
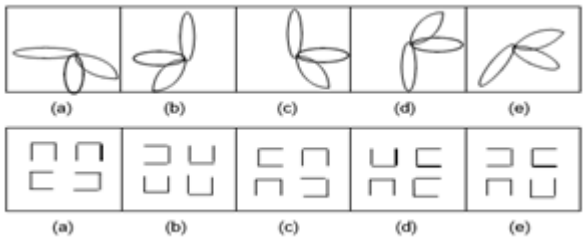
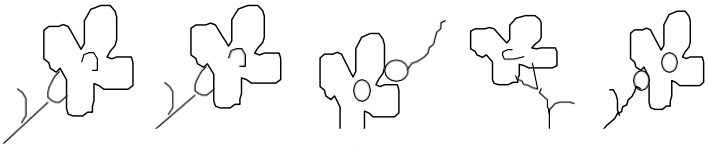




Directions: For Qns.16-20: In each question below one figure is given on the left hand side (L.H.S.) and four figures on the right hand side (R.H.S.). Identify the figure on the right hand side which is nearest in shape on the figure on left had side.

48.



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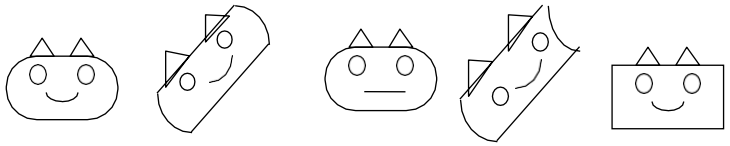

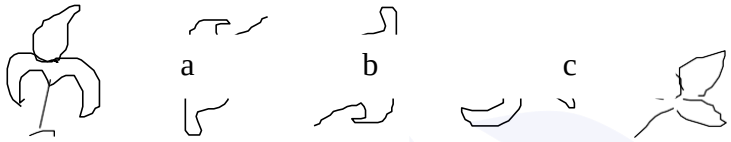

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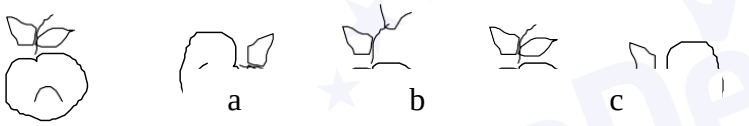

51.

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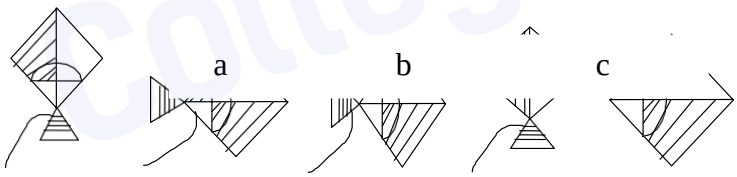


53. A bag contains 1 rupee, 50-paise and 25-paise coins in the ratio of 8:5:3. If the total amount of money in the box is Rs. 112.5, the number of 50-paise coins is:

a. 25
b. 50
c. 80
d. 30
e. 42

54. DIRECTIONS for the question: *Solve the following question and mark the best possible option*

575.9/? + 274.87% of 495.8 + √255.9 = 25.009% of 5583.9

A) 24
B) 28
C) 48
D) 44
E) None of these

55. If today is Sunday, what will the day on 7775th day from today?
a. Monday
b. Tuesday
c. Wednesday
d. Thursday
e. Friday
56. Tanuj takes a big cube whose sides are 4 cm each and cuts them equally into smaller cubes having sides which are 1 cm each. How many smaller cubes will he get?
a. 32
b. 64
c. 128
d. 48
e. 96
57. The position of how many digits in the number 523169 will remain unchanged if the digit within the number is written in ascending order from left to right?
a. 3
b. 4
c. 0
d. 1
e. 2
58. Mantra's faulty compass shows West as North-east, north as south-east. What direction shall it actually be when it shows south-west.
a. N-E
b. W
c. S-E
d. E
e. S-W
59. If Vishal is to the south of Virat and Vani is to the east of Virat, which direction is Vani with respect to Vishal?
a. E
b. N-W
c. S-E
d. S
e. N-E
60. ? % of 5199.87 – $(37.93)^2$ + $(15.9)^2$ = $(35.91)^2$ - 39.9
A) 37
B) 40
C) 56
D) 60
E) 47
61. 156.02% of 450 + 133.01% of 599.98 = 375.02% of ?
A) 300

B) 425
C) 475
D) 400
E) 525

62.How much does an ordinary wall clock go or lose per 24 hours if its hands coincide every 64 minutes?

a. Lose 8(⅔)
b. Lose 28 (1/7)
c. Lose 17 (8/13)
d. Lose 32 (⅗)
e. Lose 32 (8/11)

63.125 small identical cubes have been put together to form a large cube. How many such small cubes shall be needed to cover this large cube completely?

a. 276
b. 248
c. 28
d. 244
e. 218

64.An English calendar for a leap year repeats itself after a gap of at least how many years?

b. 7
c. 12
d. 28
e. 96
f. 8

65.2 men, A & B run a 4 km race on a circular-shaped course of ¼ km. If their speeds are in the ratio of 5:4, how often does the winner pass the other?

g. 4 times
h. Thrice
i. Once
j. Twice
k. Five times

66. A train can cross a tunnel in 24 seconds. Another train can cross the same tunnel in 40 seconds. If length of tunnel is 120 m andratio of their speed is (faster to slower) 4 : 3 then after how much time both train will cross each other if both trains are running towards each other in opposite direction. (Length of faster train is 75% of that of slower train)
A) 40 sec.
B) 18 sec.
C) 36 sec.
D) 24 sec.
E) 32 sec.

67.Which of the following years will have the same calendar exactly as 2009?

a. 2011
b. 2016

c. 2013
d. 2015
e. 2014

68. An ordinary cube of side 8 cm each is painted on all its sides and later cut into identical smaller cubes having sides 2 cm each. How many of such smaller cubes shall not be coloured at all?

a. 16
b. 12
c. 20
d. 6
e. 8

69.Five classmates, namely, Ikky, Ginny, Honey, Jinny, Kenny get their exam results. Further, it is noted that I scored more than K. J scored less than G. However, who gets more marks than Kenny and Jinny, find out who among the following scored the lowest marks?

f. H
g. I
h. K
i. G
j. H & I

Directions (70 - 75): The first line (A) and last line (F) of the following question is fixed. Arrange the other four lines in a logical sequence.

71. (A) The European Union is finding it difficult to control its instincts to bully others.
(B) India believed there was evidence to show that the tests were not conducted properly and decided to act firmly.
(C) It has banned 700 drugs of India and must have been surprised when India did not take it lying down: It called off talks with the EU.
(D) India's pharmaceutical industry is one of the worlds most advanced and it is unlikely to be seriously affected by the EU fracas.
(E) The drugs had reportedly failed the test conducted by GVK Bioscience Limited's India facility.
(F) India's total pharmaceutical trade with the EU comes to about $1 billion. The volume of business has been on the decline during the last two years. No wonder that the pharmaceutical sector is not overtly disturbed by the EU ban.

a) CBDE
b) CBED
c) CEBD
d) CEDB

72. **(A) For India, the Chinese collapse might actually provide an opportunity. As the Governor of RBI has pointed out, India has a low current account deficit (CAD), the fiscal deficit is manageable, inflation is moderating and short-term foreign currency liabilities are low.**
(B) The fall of the rupee has been largely offset by a slump in crude prices, which should further ease pressure on the CAD.
(C) Despite a downward revision by global rating agencies in the growth forecast, growth is still fairly robust compared to other major economies.
(D) Progress on key reform measures such as the GST and Land Bills, and a step-up in infrastructure spending, could boost industry.
(E) A cheaper rupee will also help revive exports.

(F) A strategically timed interest rate cut can help revive consumer and investor sentiment.

a) CEDB
b) CBED
c) CBDE
d) CEBD

73. **(A) Indradhanush implies two formidable features: It vanquishes the enemy totally and, once launched, it cannot be called back.**
(B) To that extent, it is a major reform package after the nationalization of banks in the 1970s.
(C) Private sector heads have been roped in to steer them and new capital infusion has been promised as well.
(D) It is not known whether sufficient attention was paid to these qualities when the NDA government announced Indradhanush, a seven-point programme, aimed at reforming State-run banks.
(E) It does address key issues like creation of a Bank Board Bureau for appointments, performance-based pay, policy and governance.
(F) But, it is missing out on one essentiality — out-of-the-box solutions. Non-performing assets (NPAs) are a major drag on public sector banks (PSBs).

a) DBCE
b) DEBC
c) DECB
d) DBEC

74. **(A) The Liberal Democrats are back at the seaside for their first annual conference after two seismic events.**
(B) There is no silver lining around the loss of 49 out of 57 MPs, coming after years of attrition in local government.
(C) The combination of shock and aftershock define the challenge facing Tim Farron, named over the summer as successor to Nick Clegg.
(D) As for the other – the extraordinary elevation of Jeremy Corbyn as Labour leader – the Liberal Democrats are interested observers.
(E) The party was at the epicenter of one – May's general election, when its parliamentary base was devastated.
(F) The task here is slow reconstruction from the ground up, combined with the job, no easier, of defining what purpose the Liberal Democrats usefully serve.

a) BDEC
b) BEDC
c) DECB
d) EDCB

75. **(A) India's decision to remove Iran from the list of countries in the restricted visa category is another indication of New Delhi's resolve to reinvigorate its engagement with the Gulf country.**
(B) But India, under pressure from western nations, voted against Iran at the International Atomic Energy Agency over its nuclear programme and subsequently cut energy imports.
(C) Iran used to be India's second largest supplier of oil.
(D) But more important, it is part of a series of steps India has taken to deepen partnership with Iran since an interim agreement was reached between Tehran and six world powers (P5+1) in November 2013 over its nuclear programme.

(E) The move will primarily liberalize the visa approval process for Iranian citizens, paving the way for enhanced people-to-people cooperation.
(F) The interim agreement offered India a window of opportunity to revisit its Tehran policy.

a) EBCD
b) EDCB
c) ECDB
d) EDBC

76. A builder appoints three construction workers Akash, Sunil and Rakesh on one of his sites. They take 20, 30 and 60 days respectively to do a piece of work. How many days will it take Akash to complete the entire work if he is assisted by Sunil and Rakesh every third day?

1. 10 days
2. 15 days
3. 25 days
4. 30 days
5. 45 days

77. To complete a piece of work, Samir takes 6 days and Tanvir takes 8 days alone respectively. Samir and Tanvir took Rs.2400 to do this work. When Amir joined them, the work was done in 3 days. What amount was paid to Amir?

1. Rs. 300
2. Rs. 400
3. Rs. 800
4. Rs. 500
5. Rs. 100

78. Dev completed the school project in 20 days. How many days will Arun take to complete the same work if he is 25% more efficient than Dev?

1. 10 days
2. 12 days
3. 16 days
4. 15 days
5. 5 days

79. Sonal and Preeti started working on a project and they can complete the project in 30 days. Sonal worked for 16 days and Preeti completed the remaining work in 44 days. How many days would Preeti have taken to complete the entire project all by herself?

1. 20 days
2. 25 days
3. 55 days
4. 46 days
5. 60 days

80. Time taken by A to finish a piece of work is twice the time taken B and thrice the time taken by C. If all three of them work together, it takes them 2 days to complete the entire work. How much work was done by B alone?

1. 2 days
2. 6 days
3. 3 days
4. 5 days
5. Cannot be determined

81.To reach school half an hour early, Meera has to increase her speed to 7/4 of her usual speed. How much time does she take every day to reach the school?

a. 54 min
b. 66.67 min
c. 67.50 min
d. 70 min

82. Two friends Amar and Brijesh start from two different points and walk towards each other in a straight line. After meeting each other somewhere on the way, they finish their travel in 324 hours and 225 hours respectively. What is the ratio of speed of Amar to that of Brijesh?

a. 15:18
d. 18:15
c. 225:324
d. 324:225

83. Two cities Alipur and Balipur are 72 km apart. Arun and Varun who stay at Alipur start riding on bicycle to Balipur. Arun travels at a speed of 17 kmph while Varun's speed is 2 kmph more than Arun. Varun was riding faster, so he reaches Balipur early and returns immediately. On his way back he meets Arun at Chandipur . How far is Chandipur from Balipur?

a. 4 km
b. 10 km
c. 15 km
d. 36 km

84. A dog sees a cat 80 m away. The cat runs at a speed of 5 m/s while the dog chases it at a speed 2 m/s more than that of cat. Before the dog is able to catch the cat, how much distance has it already run?

a. 50 m
b. 100 m
c. 130 m
d. 200 m

85. Ramesh says, "Driving at an average speed of 60 kmph, I reach office 10 minutes early. However, if I drive at a speed 10 kmph lesser than the earlier, I get late by half an hour". Find the distance between Ramesh's office and home.

a. 60 km
b. 80 km
c. 90 km
d. 100 km

86. **A man covers a distance of 240 Km by train with the speed of 48 Km/h, a distance of 60 Km by bus with the speed of 12 Km/h and a distance of 20 Km by bicycle with the speed of 5 km/h to reach head quarter of a bank from his home. Find the average speed of the man throughout the journey.**
A.25.15 Km/h
B.22.85 Km/h
C.15.65 Km/h
D.21.25 Km/h

E.18.75 Km/h

87. Statements:
Some Hen are Peacock.
Some Peacock are Crow.
No Crow is parrot.
Conclusions:
I. All Hen being parrot is a possibility.
II. At least some peacock is parrot.
A. Neither I nor II follow.
B. I and II follow.
C. Only I follow.
D. Either I or II follow.
E. Only II follow.
88. Statements:
All River are water.
Some Water are Salt.
All Sea is salt.
Conclusions:
I. All River are Salt.
II. Some Salt is Water.
A. Neither I nor II follow.
B. I and II follow.
C. Only I follow.
D. Either I or II follow.
E. Only II follow.
89. Statements:
No A is C.
All B is C.
No B is D.
Conclusions:
I. Some C is definitely not D.
II. All B is not A.
A. Neither I nor II follow.
B. I and II follow.
C. Only I follow.
D. Either I or II follow.
E. Only II follow.
90. Statements:
All Ring are Bracelet.
All Bracelet are Stone.
No Stone is Bangle.
Conclusions:
I. All Ring are Bangle.
II. All Bracelet are not Stone.
A. Neither I nor II follow.
B. I and II follow.
C. Only I follow.

D. Either I or II follow.
E. Only II follow.

91. A Turkish human rights activist denied (1) / terrorism charges on Wednesday, declaring (2) / "I have no idea why we're here," at the trial of 11 activists, that (3) / had become a flashpoint in Ankara's tensions with Europe (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

92. She has not been (1) / charged but was hold (2) / for two days and barred from (3) / using Facebook for 180 days (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

93. Deliveries of food aid (1) / to Myebon's Muslims have been (2) / delayed and are only allowed after (3) / inspections to Buddhist community representatives (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

94. Swaraj said that she told (1) / the top U.S. diplomat that some (2) / level of diplomatic presence were (3) / necessary to keep open channels of communication (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

95. He said that militant (1) / group were a threat to (2) / everyone in the region, (3) / including Pakistan itself (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

96. The EU draft law gave (1) / regulators, powers to force banks to (2) / split off trading activities but got bogged up (3) / over the criteria used to do so (4).
A. 1
B. 2
C. 3
D. 4
E. No Error

97.-104.
You have to consider the statement & the following assumptions & decide which of the assumptions is implicit in the statement.

1) If only assumption I is implicit.
2) If only assumption II is implicit.
3) If either assumption I or II is implicit.
4) If neither assumption I nor II is implicit.
5) If both the assumptions I & II are implicit.

97. The police in India have to cope with tremendous stress & strain while having to maintain security & order.

Assumptions:-
I. In other countries, the police will not be having stress & strain while doing their duty.
II. The police are anticipated to do their duties without stress or strain.

98. Statement:-
"Tenders are invited from reputed contractors for pre-qualification."-The tender notice of a public sector company.
Assumptions:-
I. The company seeks to do quality business.
II. The company expects contractual & competitive rates for its work.

99. Statement:-
The state government 'C' is committed to restrict smoke levels on the roads of the metropolis as per the desired parameters.

Assumptions:-
I. It is possible to determine the smoke levels.
II. A committed government can carry forward welfare measures for its people.

100. Statements:-
It has been felt that at a time when the airline faces tough competition & is passing through critical economic conditions, the remaining higher posts should be opened for outside professionals instead of filling them up with insider applicants.

Assumptions:-
I. The internal applicants only aspire for promotion without contributing much to the organisation.
II. It is most likely that problems of the airline would be solved by experienced professionals.

101. Statements:-
Highly brilliant & industrious students do not always excel in the written examination.

Assumptions:-
I. The written examination is good mainly for mediocre students.
II. The brilliant & industrious students cannot always write good answer in the exam.

102. Mrs Liba was staying at one of the finest resorts in a foreign land. It was quite a posh hotel with sophisticated guests checking in at the hotel. On one of the nights when she was staying there, she heard a knock on the door. As she opened, a strange man was standing there, but he quickly

apologised to her for waking her up. He said that he mistook the room for his own and was sorry for disturbing her. Mrs Liba smiled and closed the room. Immediately afterwards, she called the security and the man was caught and arrested.
What can you infer from the above statement?

(a) She was quite angry at the man disturbing her at odd hours and she wanted to teach him a lesson.
(b) Mrs Liba was scared that this man might be drunk because of which he forgot his own room and needed help.
(c) Mrs Liba thought why would he knock if he thought it was his own room so she called the security to check him.
(d) Mrs Liba did not like the way he looked and called the security to check him.

103. The beauty industry has been doing a lot of good business at the time of inflation and recession in the Indian market. Besides beauty, even education and restaurant business are flourishing when other markets seem to be going down the drain.
What can we infer from the above statement?
(a) During recession, people won't stop being beautiful, learning and eating.
(b) Every industry is unique in the market and recession does not affect every industry
(c) A low in the market would not stop people to take care of their personal choices.
(d) Special rebates are provided in the above industries which pose as exceptions.

104. These days, new publishers have completely stopped using paper-which is made from trees-for publishing books. instead, they are more keen to deliver and have the books printed as eBooks, that is, post them online. Thinking on ecological terms and avoiding waste, they have turned to software copies rather than using and reusing paper
What is the conclusion drawn from the above statement?
(a) Internet posting is cheaper and takes lesser time than publishing on paper.
(b) Cutting of trees has a negative impact on the ecosystem.
(c) Recycled paper is also an option besides using new paper.
(d) The author is sensitive towards wastage and wants to control it.

105-110.

There are eight persons named E, L, O, P, X, M, F and Q on different posts viz. Engineer, Principal, Teacher, Bank, Manager, Guard, Counsellor, Marketing Head and Doctor. Each one of them has different hobbies like watching T.V., Cooking, Playing cricket, Dancing, Singing and Reading books.

Two persons have reading books as their hobbies and two have hobbies cricket. The rest have different hobbies. Engineer likes dancing Q loves playing cricket while X sings' is a Counsellor and P likes cooking is a Doctor while the one who likes cooking is a Principal is a Teacher is a Guard and likes playing cricket and M like reading books. The person who likes cricket is Marketing Head.

105. 1. Who is a Bank Manager?
1. L
2. M
3. P

4. E
5. Other than the given options

106. . What is the hobby of F?
1. Dancing
2. Watching TV
3. Reading books
4. Singing
5. Other than the given options

107. What is the hte profession of Q?
1. Bank Manager
2. Engineer
3. Guard
4. Marketing Head
5. Other than the given options

108. Dancing is the hobby of who among the following?
1. X
2. L
3. M
4. P
5. Other than the given options

109. What is the profession of P?
1. Doctor
2. Teacher
3. Engineer
4. Principal
5. Other than the given options

110-115.

There are six National parks viz. Corbett, Gir, forest, Keoladeo, Kanha, Kaziranga and Manas have six different animals viz.
Elephant, Tiger, Rhinoceros, Deer, Wild Ass and Lion but not necessarily in the same order. These parks are in six different states namely Assam, Manipur, Kerala, Gujarat, MP and UP but not necessarily in the same order. Tiger is not in Gir. Lion is in the park which is in MP but neither in Kanha nor in Keoladeo. Kaziranga is in UP but it does not have Tiger or Wild Ass. Deer is in the park which is in Assam. Neither Corbett nor manas are in Manipur Kerala's National park have no Tiger. Gir forest is neither in Kerala's National park has no Tiger. Gir forest is neither in Kerala nor in M.P Corbett park is neither in Assam nor in Kerala. The elephant is in the park which is in Manipur Deer is neither in Corbett in Gir forest. Manas park has neither in Corbett nor in Gir forest. Manas Park has neither Wild Ass nor Deer. Keoladeo is not in Assam. Corbett park has no lion.

110. Which of the following animals is in Manas Park?
1. Tiger
2. Deer
3. Lion
4. Wild Ass
5. Cannot be determined

111. 'Rhinoceros' is in which park?
1. Gir forest
2. Corbett
3. Kanha
4. Keoladeo
5. Kaziranga

112. 'Wild Ass' is in which of the following states?
1. U.P
2. Kerala
3. Assam
4. Manipur
5. Gujarat

113. Gujarat's national park is-
1. Kaziranga
2. Manas
3. Gir forest
4. Corbett
5. Other than the given options

114. 'Keoladeo' park is in which of the following states?
1. Kerala
2. U.P
3. M.P

4. Assam
5. Gujarat

115. . Which of the following is matched correctly?
1. Gir forest - Wild Ass - Gujarat
2. Corbett - Tiger - M. P
3. Keoladeo - Deer - Assam
4. Manas - Lion - M.P
5. Kaziranga - Elephant- U.P

116-121.

There are seven teams, owners L, M, N, O, P Q and R. All of them have different teams, viz, Mumbai Indians, Delhi Daredevils, Kolkata Knight Riders, Kings XI Punjab, Chennai Super kings, Pune Worries and Rajasthan Royals
, but not necessarily in the same order. Each of the teams has one caption, viz- Sangkara, Flintoff, Akram, Stain, Watson, Fleming and V. Richards but not necessarily in the same order. Captains belong to three different countries, viz, Sri Lanka, Africa and Australia. Atleast two captains are from one country.

O has team named Delhi Daredevils, the captain of this team is Akram. N and Q selected the captain from Sri Lanka. N has Pune worries but doesn't have captain either Flintoff or Stain. The one who has team Rajasthan Royals has captain from Australia only with O. P has Mumbai Indians and Captain of Mumbai Indian is Stain, who is not from Srilanka. Watson is captain of that team which is owned by Q. Fleming is the caption of Rajasthan Royal but neither his owner is M nor he belongs to Africa. R owns Kings XI Punjab. Fleming is not from Africa or Srilanka. The one who owns Chennai Super King has no captain from Africa, from where there are three captains. V. Richards is not the captain of Kolkata Knight Riders and Belongs to Africa.

116. Who among the following is from Africa?
1. Sangkara
2. Akram
3. Stain
4. Flintoff
5. Both 3) and 4)

117. Which of the following captains are from Srilanka?
1. V. Richards and Stain
2. Akram, Fleeming and Virat
3. Sangkara and Watson
4. Flintoff and Stain
5. None of these

118. Who among the following has captain from Africa?
1. Q and R
2. P,R and M

3. R and L
4. O and N
5. None of these

119. How many captains are from Sri Lanka?
1. Two
2. Three
3. One
4. More than two
5. Can't say

120. Which of the following combination is true?
1. L- Rajasthan Royals- Fleming- Sri Lanka
2. O-Pune warriors- Akram- Africa
3. P-Africa-Stain-Mumbai Indians
4. R-Kings XI Punjab- Watson- Africa
5. M- Flintoff - Srilanka - Kolkata Knight Riders

121.Which of the following statements is not true?
1. Stain is the captain of Mumbai Indians which is owned by Q.
2. N is from Sri Lanka and has team Pune Warriors.
3. Rajasthan Royals has captain Fleming who is from Africa and owned by L.
4. Both 1) and 3)
5. None of these

122. Deepika tells Shraddha “Your mother’s father’s own son is the husband of my sister.” How is Deepika related to Shraddha?a) Sister-in-law
b) Cousin
c) Aunt
d) Data inadequate
e) None of these

123. Pointing to the lady in the photograph, Mrinalini said, “Her son’s father is the only son-in-law of my mother”. How is Mrinalini related to the lady.a) Sister
b) Mother
c) Cousin
d) Aunt
e) None of these

124. Anil, introducing a girl in a party, said, she is the wife of the grandson of my mother. How is Anil related to the girl?a) Father
b) Grandfather
c) Husband
d) Father-in-law
e) None of these

125. The post office is to the east of the school while my house is to the south of the school. The market is to the north of the post office. If the distance of the market from the post office is equal to the distance of my house from the school, in which direction is the markedt with respect to my school?
(A) South-west
(B) North-east
(C) North
(D) East

126. A direction pole was situated on the crossing. Due to an accident the pole turned in such a manner that the pointer which was showing East, started showing South. One traveller went to the wrong direction thinking it to be West. In what direction actually he was travelling?
(A) North
(B) South
(C) East
(D) West

127. After walking 6 km, I turned right and covered a distance of 2 km, then turned left and covered a distance of 10 km. In the end, I was moving towards the north. From which direction did I start my journey?
(A) North
(B) South
(C) East
(D) West
128.Rasik walks 20 m North. Then he turns right and walks 30 m. Then he turns right and walks 35 m. Then he turns left and walks 15 m. Then he again turns left and walks 15 m. In which direction and how many metres away is he from his original position?
(A) 15 metres West
(B) 30 metres East
(C) 30 metres West
(D) 45 metres East

129. There are four towns P, Q, R and T. Q is to the South-west of P, R is to the east of Q and south-east of P, and T is to the north of R in line with QP. In which direction of P is T located?
(A) North-east
(B) North
(C) South-east
(D) East

130. **1. What should come in place of the question mark (?) in the following number series?**
20, 80, ?, 1800, 9900, 59400
A 160
B 360

C 540
D 800
E 120

131. **What should come in place of the question mark (?) in the following number series?**
111, 89, 122, 100, 133, ?
A 159
B 111
C 123
D 135
E 99

132. **What will come in place of the question mark (?) in the following series?**
18, 69, 22, 65, 31, 56, 47, 40, ?
A 59
B 61
C 53
D 63
E 72

133.What will come in place of the question mark (?) in the following series?
69, 89, 111, 135, 161, ?
A 187
B 183
C 194
D 189
E None of these

134. **What should come in place of the question mark (?) in the following number series?**
11, 36, 72, ?, 185, 266
A 111
B 101
C 121
D 100
E 98

135. **What will come in place of the question mark (?) in the following series?**
23, 25, 28, 33, 40, 51, ?
A 78
B 10
C 103
D 98
E None of these

136. In each of the following questions, one term in the number series is wrong. Find out the wrong term.
8, 27, 125, 343, 1331

(A) 8
(B) 343
(C) 1331
(D) none of these

137. In each of the following questions, one term in the number series is wrong. Find out the wrong term.
56, 72, 90, 110, 132, 150
(A) 150
(B) 110
(C) 90
(D) 72

138. In each of the following questions, one term in the number series is wrong. Find out the wrong term.
121, 143, 165, 186, 209
(A) 143
(B) 165
(C) 186
(D) 209

139. In each of the following questions, one term in the number series is wrong. Find out the wrong term.
5, 10, 17, 24, 37
(A) 37
(B) 24
(C) 17
(D) 10

140. In each of the following questions, one term in the number series is wrong. Find out the wrong term.
3, 8, 15, 24, 34, 48, 63
(A) 24
(B) 34
(C) 48
(D) 63

141-145. Study the following arrangements of numbers, symbols and letters carefully, follow the instructions and answer the questions.
7 F G 3 % O 1 H @ 5 I Q 9 0 * Z U # Y X 6 E W @ B 2 A $ % 9
141. How many consonants are there in the given series which are immediately preceded by a vowel and immediately followed by a digit?
a.Two
b.Three
c.One
d.None
e.More than three

142. **Which of the following element is fifth to the right of eleventh element from the left end?**
a.Z
b.U
c.*
d.4
e.#

143. **How many vowels are there in the given series which are immediately proceeded by a digit but not immediately followed by a consonant?**
a.Two
b.Three
c.One
d.More than three
d.None

144.If all the digits are removed from the above series, then which element is twelfth from the right end?
a.Q
b.U
c.#
d.Z
e.None of these

145. **If Four of the following five are alike in a certain way and thus form a group. Which is the one that does not belong to that group?**
a.O1%
b.ZU*
c.B2@
d.$%9
e.YX#

146-151.
Directions : Study the following information carefully and answer the questions given beside.

A survey was conducted among the tourists who visited North India. It was found that the number of tourists who visited any two among the three cities Hrishikesh, Somnath and Kasi is the same. The number of tourists who visited all the three cities is the same as the number of tourists who visited, none of the three, which in turn is equal to 1/3rd of the number of tourists who visited only Kasi. The number of tourists who visited only Hrishikesh is the same as half the number of tourists who visited only Kasi and is the same as the number of tourists who visited only Somnath. Half of the tourists who visited Somnath visited at least one of the other two cities.

146. What percentage of the tourists who visited Hrishikesh visited the other two cities also?

A

$33\frac{1}{3}\%$

B

$69\frac{1}{3}\%$

C

$66\frac{2}{3}\%$

D

$44\frac{1}{2}\%$

E

$12\frac{1}{2}\%$

147. If 200 tourists did not visit any of the three cities, then how many tourists were surveyed?

A

2200

B

1500

C

2250

D

1750

E

1680

148. What percentage of the total number of tourists surveyed, visited exactly one among three cities?

A

$69\frac{1}{7}\%$

B

$68\frac{4}{7}\%$

C

$56\frac{5}{11}\%$

D

$62\frac{1}{5}\%$

E

$54\frac{6}{11}\%$

149. What percentage of the tourists who visited at least one of the cities has visited exactly two cities?

A

$9\frac{21}{31}\%$

B

$10\frac{21}{31}\%$

C

$6\frac{21}{31}\%$

D

$11\frac{21}{31}\%$

E

$15\frac{21}{31}\%$

150. If 30 tourists visited both Hrishikesh and Somnath, then how many tourists has visited Kasi?

A 170
B 175
C 108
D 165
E 176

151-155.

A company has planned a trip. The company has 4200 employees. 72% of the employees registered for the trip. The ratio of male and female employees registered for the trip is 7: 5. Out of them, 75% of the employees have chosen the company transport services for the trip and rest decided to use their own vehicle. On the trip day, 25% of those who have chosen for company transport, went on the trip by their own vehicles for some reasons. The ratio of male and female employees who came by their own transport is 5: 4. Initially, the company had booked 57 buses with 40 seat capacity in each.

151. What is the number of female employees who registered for the trip?

A

1080

B
1260
C
1320
D
1180
E
None of these

152.
Find the difference between the total number of male and female employees who came to the trip by their own transport?
A
155
B
135
C
147
D
138
E
None of these

153. How many buses are actually used for the trip?
A
43
B
40
C
45
D
38
E
36

154. The number of employees who went to the trip by their own transport in spite of registering for the company transport is what percent of the number of employees who did not register for the trip?
A
35.23%
B
50.67%
C
56.43%
D

48.21%
E
None of these

155. Find the ratio of the number of female employees who registered for the trip and number of female employees who came to the trip by their own transport?
A
9 : 5
B
11 : 6
C
15 : 7
D
13 : 9
E
None of these

156. In a mixture of 40 litres, the ratio of milk and water is 4:1. How much water must be added to this mixture so that the ratio of milk and water becomes 2:3.
(a) 20 litres
(b) 32 litres
(c) 40 litres
(d) 30 litres

157. The students in three batches at Made Easy are in the ratio 2 : 3 : 5. If 20 students are increased in each batch, the ratio change to 4:5:7. The total number of students in the three batches before the increase were.
(a) 10
(b) 90
(c) 100
(d) 150

158. If Rs. 58 is divided among 150 children such that each girl and each boy gets 25 p and 50 p respectively. Then how many girls are there?
(a) 52
(b) 54
(c) 68
(d) 62

159. Mr. Hamilton invested an amount of Rs. 13,900 divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508, what was the amount invested in Scheme B?
a) Rs. 6400
b) Rs. 6500

c) Rs. 7200
d) Rs. 7500
e) None of these

160. Rambo took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If he paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?
a) 3.6
b) 6
c) 18
d) Data inadequate
e) None of these

161. $7X^2 - 33X + 20 = 0$;
$7Y^2 - +9Y - 10 = 0$
1) if x > y
2) if x < y
3) if x ≥ y
4) if x ≤ y
5) if x = y or relation cannot be established between 'x' and 'y

162. $X^2 = 289$;
Y = (2197)^1/3
1) if x > y
2) if x < y
3) if x ≥ y
4) if x ≤ y
5) if x = y or relation cannot be established between 'x' and 'y

163. $5X^2 - 52X + 96 = 0$;
$5Y^2 + 3Y - 36 = 0$
1) if x > y
2) if x < y
3) if x ≥ y
4) if x ≤ y
5) if x = y or relation cannot be established between 'x' and 'y

164-166 **Direction: Read the question and answer accordingly.**

164. Choose the word meaning SIMILAR to the word: TENET
A) Credo
B) Skepticism
C) Unbelief
D) Reality

165. Choose the word meaning SIMILAR to the word: PUGNACIOUS
A) Laid-Back

B) Bellicose
C) Mellow
D) Lax

166. Choose the word meaning SIMILAR to the word: POACH
A) Calm
B) Frenzy
C) Order
D) Harmony

167-169. **Direction: In each question below, four words printed in bold type are given. These are numbered (A), (B), (C) and (D). One of these words printed in bold might either be wrongly spelt or inappropriate in the context of the sentence. Find out the word that is inappropriate or wrongly spelt, if any. The number of the word is your answer. If the words printed in bold are correctly spelt and appropriate in the context of the sentence then mark (E), i.e. 'All Correct', as your answer.**

167. 1) On 18 February next year, a NASA **spacecraft (A)** will **plummet (B)** through the Martian **atmosphere (C)**, fire its retro-rockets to break its fall and then lower a six wheeled rover **persevarence (D)** to the surface.
A.spacecraft
B.plummet
C.atmosphere
D.persevarence
E.All correct

168. Since the Berlin Wall fell in 1989, border walls have **multiplied (A)**, notes science **journalist (B)** Jessica Wapner in her **compeling (C)**, **dispiriting (D)**, global survey
A. multiplied
B. journalist
C. compeling
D. dispiriting
E. All correct

169. A **heterogenity** of memories **triggered** by the same memory material, stirring up a **plethora** of emotional **extensions** of the work.
A. Extensions
B. Heterogenity
C. Plethora
D. Triggered
E. all are correct

170. **Which of the following is the correct meaning of the Phrase** – *Every cloud has a silver lining***?**
(a) A period of misfortune

(b) To Visit Casually
(c) Adverse conditions do not last forever
(d) From a higher position to a lower one

171. **What does the Phrase** *Let the cat out of the bag* **mean?**
(a) To reveal the secret carelessly or by mistake
(b) In a strange situation
(c) Leave something alone if it might cause trouble
(d) None of the Above

172. **Which of the following is the correct meaning of the Phrase** – *To break the ice***?**
(a) To start a conversation
(b) To continue at one's occupation until death
(c) To attract attention
(d) To perform the most difficult part

173. 1. In a class 25% students got Munch,100/3% of remaining got dairy milk and out of remaining, ratio between students who got Five stars to students who got Snickers is 5 : 3. If difference between number of student who got daily milk and students who got snickers is 15, then find total number of students in the class?
(a) 250
(b) 280
(c) 220
(d) 260
(e) 240

174. Ankit spends 40% of his monthly salary on food. Out of remaining, he spends 35% on furniture, 40% on rent and remaining on Books. Find the amount Ankit spend on books and furniture together if Ankit's salary is 25% less then David's salary which is equal to Rs 16,000 per month.
(a) 2880
(b) 3600
(c) 4320
(d) 6400
(e) 7200

175. On a day, Sita typed an essay of 6000 words in 40 min. Next day, she typed the same essay with speed 12% faster than the previous day speed. Find the time she took to type the essay on next day?

(a) $\frac{310}{7}$ min

(b) $\frac{250}{7}$ min

(c) 40 min

(d) 30 min

(e) $\frac{125}{7}$ min

176. **Arjun kapoor and Anil Kapoor appear for a test. For each correct answer is awarded 1 mark and for each wrong answer 1/2 mark is deducted. Arjun kapoor answers some questions and gets 10% of his answers wrong. He secures a score of 85% which is 6 marks more than the pass marks. Anil Kapoor also answers some questions and gets 20% of his answers wrong. He gets a score of 70% which is 3 marks less than the pass mark. No marks are awarded or deducted for the unanswered questions. What is the pass mark?**

A 64
B 51
C 45
D 25
E None of these

177. Fresh sugarcane contains 84% water and dried sugarcane contains 28% water. How many kilograms of dried sugarcane can be obtained from 90 kg of fresh sugarcane?

A 20
B 35
C 47
D 72
E None of these

178. In Kolkata consisting of three localities Salt Lake, South Kolkata and Rajarhat the population of the three localities Salt Lake, South Kolkata and Rajarhat are in the ratio 9 : 8 : 3. In Salt Lake, 80% of the people are literate, in South Kolkata, 30% of the people are illiterate. If 90% people in Rajarhat are literate. Find the percentage literacy in these three localities in Kolkata.

A 77.5%
B 77.0%
C 75.5%
D 75.0%
E None of these

179. Virat prepares a budget to visit New York. However, he spends 12% of his budget on the first 10% days of his travel when he stays in the city. He knows that he has to spend another 35% of days in city itself, after which he would travel to the country side. What should be the

minimum decrease in spending in country side as a percentage of his spending in city so as to complete his travel on the initial budget itself?

A 33.33%
B 30.3%
C 25%
D 32.23%
E None of these

180. In ΔABC, ∠ABC = 70°, ∠BCA = 40°. O is the point of intersection of the perpendicular bisectors of the sides, then the angle ∠BOC is

A 100°
B 120°
C 130°
D 140°

181. Two circles C_1 (Inner circle) and C_2 (Outer circle) touch each other internally at P. Line PCA intersects the circle C_1 and C_2 at C and A respectively and line PDB intersects the circle C_1 and C_2 at D and B respectively. If ∠BDC = 120°, then the value of ∠ABP is equal to

A 60°
B 80°
C 100°
D 120°

182. Length of two chords AB and AC of a circle are 12 cm and 5 cm and ∠BAC = 90°. Find the radius of the circle.

A 14
B 13
C 16
D 23

183. Two circles intersect each other at the points A and B, A straight line parallel to AB intersects the circles at C, D, E and F. If CD = 4.5 cm, then the measure of EF is

A
1.50 cm
B
2.25 cm
C
4.50 cm
D
9.00 cm

184. N is the foot of the perpendicular from a point P of a circle with radius 7 cm, on a diameter AB of the circle. If the length of the chord PB is 12 cm, the distance of the point N from the point B is

A

$6\frac{5}{7}$ cm

B

$12\frac{2}{7}$ cm

C

$3\frac{5}{7}$ cm

D

$10\frac{2}{7}$ cm

185. If 64 identical small spheres are made out of big sphere of diameter 8 cm, then what is surface area of each small sphere ?

A

π cm^2

B

2π cm^2

C

4π cm^2

D

8π cm^2

186. A cylinder is surmounted by a cone at one end, a hemisphere at the other end. The common radius is 3.5 cm, the height of the cylinder is 6.5 cm and the total height of the structure is 12.8 cm. The volume V of the structure lies between

A

370 cm^2 and 380 cm^2

B

380 cm^2 and 390 cm^2

C

390 cm^2 and 400 cm^2

D

None of these

187. Three planets revolve round the Sun once in 200, 250 and 300 days, respectively in their own orbits. When do they all come relatively to the same position as at a certain point of time in their orbits?

A

After 3000 days

B

After 2000 days

C

After 1500 days

D

After 1200 days

188. The sum of two numbers is 232 and their HCF is 29. What is the number of such pairs of numbers satisfying the above condition?

A
One

B
Two

C
Four

D
None of these

189. Find the least number which when divided by 20, 25, 35 and 40 leaves remainders 14, 19, 29 and 34 respectively.

A 1256
B 1394
C 1056
D 956

190. The sum of all interior angles of a regular polygon is twice the sum of all its exterior angles. The number of sides of the polygon is

A 10
B 8
C 12
D 6

191. Among the angles 30°, 36°, 45°, 50° one angle cannot be an exterior angle of a regular polygon. The angle is

A 30°
B 36°
C 45°
D 50°

192. The ratio of the angles of a quadrilateral is 5 : 4 : 3 : 8. The smallest angle of a triangle is one-fourth the largest angle of the quadrilateral and the largest angle of the triangle 38° more than the second largest angle of the triangle. What is the second largest angle of the triangle?

A 35°
B 53°
C 43°
D 34°

193-197.

Directions: Read the following information carefully and answer the questions given beside.

A@B means A is not greater than B.

A!B means A is greater than B.

A*B means A is not less than B.

A%B means A is less than B.

A#B means A is neither greater nor less than B.

193.
Statements : M!H , K%M, G#H

Conclusions : H#K , M*G
A Only conclusion I follows
B Only conclusion II follows
C Either conclusion I or conclusion II follows
D Both conclusion I and II follow
E Neither conclusion I nor conclusion II follows

194. Statements : E@F , D%E , T*F

Conclusions : D%F , T*E
A Only conclusion I follows
B Only conclusion II follows
C Either conclusion I or conclusion II follows
D Both conclusion I and conclusion II follow
E Neither conclusion I nor conclusion II follows

195. Statements: T#Y , Y%L, G*L

Conclusions: L!T , G*T
A Only conclusion I follows
B Only conclusion II follows
C Either conclusion I or conclusion II follows
D Both conclusion I and conclusion II follow
E Neither conclusion I nor conclusion II follows

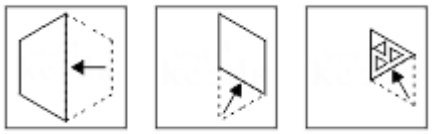
196. Statements : G!U , L@U, M*G

Conclusions : M#U , M!U

A Only conclusion I follows
B Only conclusion II follows
C Either conclusion I or conclusion II follows
D Both conclusion I and conclusion II follow
E Neither conclusion I nor conclusion II follows

197. Statements : Z!U , P*W , W@U

Conclusions : Z!W , P%U
A Only conclusion I follows
B Only conclusion II follows
C Either conclusion I or conclusion II follows
D Both conclusion I and conclusion II follow
E Neither conclusion I nor conclusion II follows

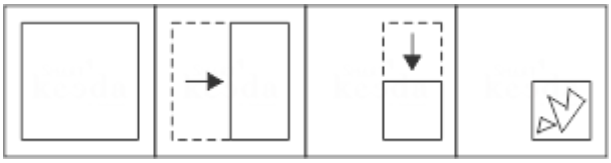
198. 

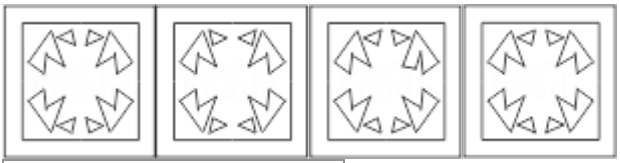
A 

B 

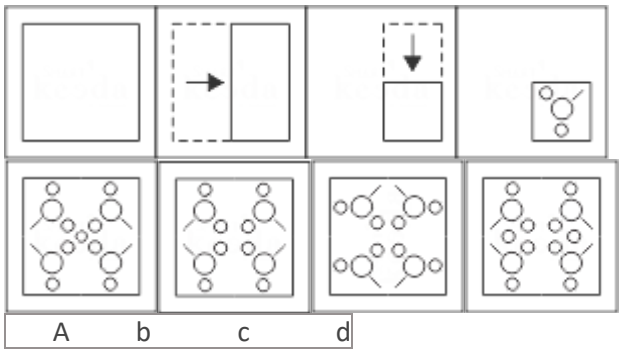
C 

D 

199. 



200.



Solutions

Q1 Ans- c.

Definition: The habit of estimating something as worthless

2. B
3 C
4 D
5 A
6 A
7 D
8 C
9 E

Solutions

9. A) The expansion of genetics in modern medicine
10. A) It could lead to discrimination against individuals who are genetically predisposed to certain conditions.
11. D) It is not specified in the passage
12. D) All of the above
13. A) It can help identify individuals who are at risk for certain conditions.

solutions:-

14. 2; total(D)= 2400000*20/100=480000
Male(D)=480000/5*2=192000
15. 1; total(C)= 2400000*16/100=384000
Non adults =384000*28/100=107520
16. 5
17. 4; total(B)=2400000*18/100=432000
Male (B) =43000/9*5=240000

Female(B)= 432000-240000=192000

Difference= 240000- 192000 =48000

18. 4; adult(E)=75/100 (2400000*20/100) =180000
Male(D)= 2/5(2400000*20/100) =192000
Req. %= 180000/192000*100=93.75%

Solutions

19. D. 23.35%

$$\text{Total Products sold by Avdesh} = \frac{636}{60} \times 100 = 1060$$

$$\text{Total Products sold by Rahul} = 1000$$

$$\text{Total Products sold by Saket} = 920$$

$$\text{Total Products sold by Vimal} = \frac{360}{48} \times 100 = 750$$

$$\text{Required \%} = \frac{(1060 + 1000) - (920 + 750)}{100} \times 100$$

$$= \frac{2060 - 1670}{1670} \times 100 = \frac{390}{1670} \times 100 = 23.35\%$$

20. A. 95.74%

$$'P'\text{type product sold by Saket} = \frac{125}{100} \times 360 = 450$$

$$\text{Required \%} = \frac{450}{920 - 450} \times 100 = \frac{450}{470} \times 100 = 95.74\%$$

21 C. 31

$$\text{Total Products sold by Shubham} = \frac{155}{100} \times 580 = 899$$

$$'Q'\text{type product sold by Shubham} = 899 - 520 = 379$$

$$'Q'\text{type product sold by Ajay} = 580 \times \frac{60}{100} = 348$$

$$\text{Required difference} = 379 - 348 = 31$$

22. E. 241

$$'Q'\text{type product sold by Vimal} = \frac{360}{48} \times 100 = 750, \quad 750 \times \frac{52}{100} = 390$$

$$'Q'\text{type product sold by Rahul} = \frac{1000}{4} \times 3 = 750$$

$$'P'\text{type product sold by Rahul} = 1000 - 750 = 250$$

$$'P'\text{type product sold by Ajay} = \frac{580 \times 40}{100} = 232$$

$$\text{Required Average} = \frac{250 + 232}{2} = 241$$

23 D. -0.94%

$$'Q'\text{type product sold by Avdesh} = \frac{636}{60} \times 40 = 424$$

$$'Q'\text{type product sold by Shubham} = 424 \times \frac{5}{4} = 530$$

$$\text{Total product sold by Avdesh} = 636 + 424 = 1060$$

$$\text{Total product sold by Shubham} = 530 + 520 = 1050$$

$$\text{Required \%} = \frac{1050 - 1060}{1060} \times 100 = -0.94\%$$

Solution

24. Average foreign exchange reserves over the given period = 3480 million US $.

The country had reserves above 3480 million US $ during the years 1992-93, 1996-97 and 1997-98, i.e., for 3 years and below 3480 million US $ during the years 1991-92, 1993-94, 1994-95,

1995-56 and 1998-99 i.e., for 5 years.
Hence, required ratio = 3: 5.

25. Required ratio = $\frac{5040}{3360}$ = 1.5

26. There is an increase in foreign exchange reserves during the years 1992 - 1993, 1994 - 1995, 1996 - 1997, 1997 - 1998 as compared to previous year (as shown by bar-graph).
The percentage increase in reserves during these years compared to previous year are:
For 1992 - 1993 = $\frac{(3720 - 2640)}{2640}$ x 100 % = 40.91%.
For 1994 - 1995 = $\frac{(3360 - 2520)}{2520}$ x 100 % = 33.33%.
For 1996 - 1997 = $\frac{(4320 - 3120)}{3120}$ x 100 % = 38.46%.
For 1997 - 1998 = $\frac{(5040 - 4320)}{4320}$ x 100 % = 16.67%.
Clearly, the percentage increase over previous year is highest for 1992 - 1993.
27. Average foreign exchange reserves over the given period
= (2640 + 3720 + 2520 + 3360 + 3120 + 4320 + 5040 + 3120)/ 8 million US $
= 3480 million US $.
Foreign exchange reserves in 1996 - 1997 = 4320 million US $.
Required percentage = $\frac{4320}{3480}$ x 100 % = 124.14% 125%.
28. Foreign exchange reserves in 1997 - 1998 = 5040 million US $.
Foreign exchange reserves in 1993 - 1994 = 2520 million US $.
Increase = (5040 - 2520) = 2520 US $.
Percentage Increase = $\frac{2520}{2520}$ x 100 % = 100%.

~~29.d~~	~~30.d~~	~~31.e~~	~~32.e~~	~~33.b~~	34. b	35. d	36. b	37. b
~~38.d~~	~~39.e~~	~~40.e~~	~~41.c~~	~~42.e~~				
43. d	44. d	45. b	46. c	47. b				

48.The design given in option (a) is most similar to the sample design. Answer is (a).
49.The design given in option (a) should be considered as the most similar to the sample design, as in option (b) the mouth is different and in option (c) and option (d), the face is different.
Answer is (a).

50.The design given in option (c) is most similar to the sample design. Answer is (c).

51.The design given in option (d) should be considered as the most similar to the sample design, as in option (a) the mouth is different, in option (b), one leaf is missing and in option (c) the mouth is missing. Answer is (d).

52.The design given in option (b) should be considered as the most similar to the sample design, as in options (a) and (c) two quarters instead of one are hatched

and in option (d) and option (d), the design is incomplete. Answer is (b).

53. 1 rupee=100 paise
112.5*100=8x*100+5x*50+25*3x
11250= 1125x
X=10
50paise coins= 5x=5*10=50
54) *576/? +275/100 × 496 + √256*
≈ 25/100 × 5584576/? + 1364 + 16
≈ 1396576/?≈ 1396 − 1380?
≈576/16?
≈ 36
55. =7775/7
=reminder is 5
Therefore 7775th day is Friday
56. total number of cubes is 4^3
=64
57. =4
58. =east
59. =north east
60. *?/100 × 5200 − (38)2 + (16)2 ≈ (36)2 − 4052×? = 1256 + 118852×? = 2444? = 2444/52? = 47*
61
156/100 × 450 + 133/100 × 600 ≈ 375/100 ×?? =
1500/3.75? =400
62 the universal rule Is hands of any accurate clock coincide after every 65 minutes 5/11 of a minute i.e. 65 5/11
Error = 65 5/11 – 64 minutes = 16/11 min
Now total min perday =24*60=1440 min
Since error is 16/11 min
Means 1 min =(16/11*1/64)*1440
=360/11 =32 8/11
63=7*7*7*- 5*5*5
=218
64. 28
65 Both need to complete 4000/250= 16 rounds
A completes 5 rounds on sma time B completes 4
=16/5 , three times pass the runner
66

$$\therefore \text{Let length of faster train} = \frac{75x}{100} \times 0.75x\ \text{m}$$

ATQ

$$\Rightarrow \frac{\left(\frac{120 + 0.75X}{24}\right)}{\left(\frac{120 + X}{40}\right)} = \frac{4}{3}$$

⇒ *480 + 4x = 600*

+3.75x

$\Rightarrow x = \frac{120}{0.25} \times 480 \text{ m}$

$\therefore \text{Required time} = \frac{480 + 0.75 \times 480}{\underset{\text{Speed of Slower train}}{\underset{\Downarrow}{\frac{600}{40}}} + \underset{\text{Speed of Faster train}}{\underset{\Downarrow}{\frac{480}{24}}}}$

$= \frac{840}{35} = 24 \text{ sec.}$

67 year odd days 2009 to 2014 is 7
Therefore, same calender year is 2015
68 (n-2)^3= (4-2)^3= 8
69. (j)
70-75
70. c
71. b
72. c
73. d
74. b
76. Solution:
Total work done by Akash, Sunil and Rakesh in 1 day = {(1/20) + (1/30) + (1/60)} = 1/10
Work done along by Akash in 2 days = (1/20) × 2 = 1/10
Work Done in 3 days (1 day of all three together + 2 days of Akash's work) = (1/10) + (1/10) = 1/5
So, work done in 3 days = 1/5
Time taken to complete the work = 5×3 = 15 days
77. Solution:
Total work done by Samir and Tanvir = {(1/6) + (1/8)} = 7/24
Work done by Amir in 1 day = (1/3) – (7/24) = 1/24
Amount distributed between each of them = (1/6) : (1/8) : (1/24) = 4:3:1
Amount paid to Amir = (1/24) × 3 × 2400 = Rs.300
78. Solution:
Let the days taken by Arun to complete the work be x
The ratio of time taken by Arun and Dev = 125:100 = 5:4
5:4 :: 20:x
⇒ x = {(4×20) / 5}
⇒ x = 16
79.Solution
Let the work done by Sonal in 1 day be x
Let the work done by Preeti in 1 day be y
Then, x+y = 1/30 ——— (1)
⇒ 16x + 44y = 1 ——— (2)
Solving equation (1) and (2),
x = 1/60
y = 1/60
Thus, Preeti can complete the entire work in 60 days

80. Solution:
Time taken by A = x days
Time taken by B = x/2 days

Time Taken by C = x/3 days
⇒ {(1/x) + (2/x) + (3/x) = 1/2
⇒ 6/x = 1/2
⇒ x = 12
Time taken by B = x/2 = 12/2 = 6 days
81.Solution
We know, Distance travelled is same both times.
∴ D = D
∴ S x T = $\frac{7S}{4}$ x (T-30)
∴ 4T = 7T - 210
∴ T = 70 min
82.

Tip:
If two bodies start moving towards each other at the same time from points A and B and on crossing each other, if they take X and Y hours in reaching B and A respectively, then -
Speed of A : Speed of B = $\sqrt{Y} : \sqrt{X}$

Using the above standard formula -
X = 324 hours
Y = 225 hours
Speed of A : Speed of B = $\sqrt{Y} : \sqrt{X} = \frac{\sqrt{Y}}{\sqrt{X}} = \frac{\sqrt{225}}{\sqrt{324}} = \mathbf{\frac{15}{18}}$

83. We know, time for both is same
∴ T = T
∴ $\frac{z}{17} = \frac{144-z}{19}$
∴ z = 68 km
∴ Distance between B and C = 72 - z = 72 - 68 = 4 km

Now, if it is asked to calculate total distance travelled by Varun before meeting Arun, do as follows -
Distance travelled by Varun before meeting Arun = AB + BC = 72 + 4 = 76 km

84. Let distance travelled by cat before dog catches it be D
We know, time for which Dog and Cat ran is same
∴ T = T
∴ $\frac{D}{5} = \frac{D+80}{7}$
∴ D = 200 m

85.

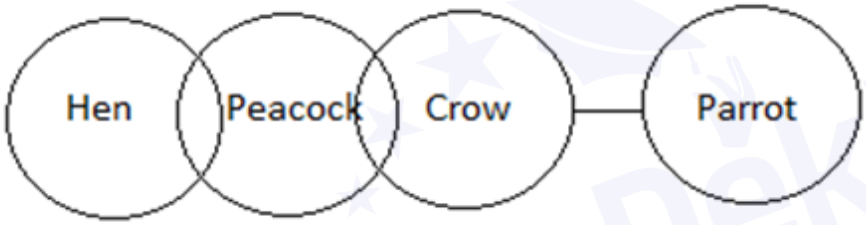
time = T = $\frac{D}{S}$

$\therefore \frac{D}{50} - \frac{D}{60} = \frac{40}{60}$

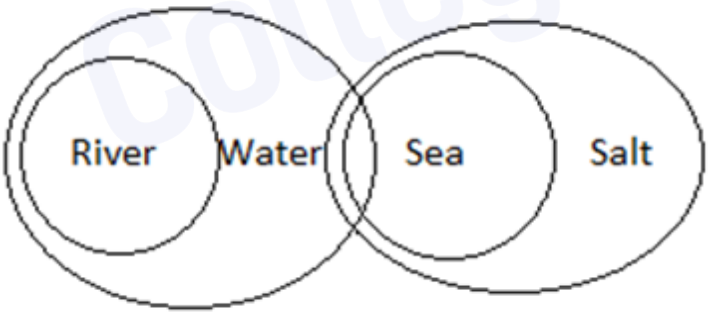
$\therefore$ D = 80 km

86. Time taken by the man to cover 240 Km by train = 240/48 = 5 hours
Time taken by the man to cover 60 Km by bus = 60/12 = 5 hours
Time taken by the man to cover 20 Km by bicycle = 20/5 = 4 hours
We know that
Average speed = Total distance/Total time
= (240 + 60 + 20)/(5 + 5 + 4)
= 320/14
= 22.85 Km/h

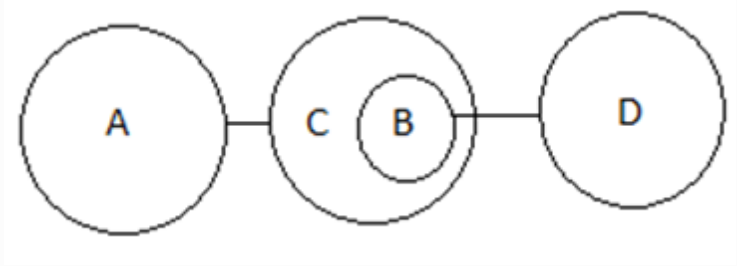
87. Solution:



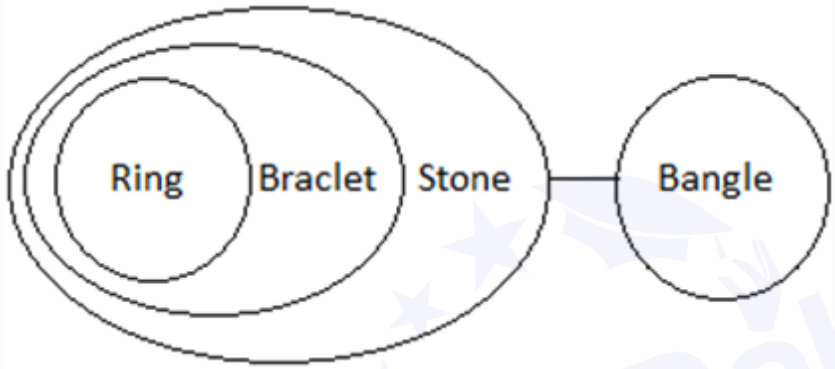
88. Ans. E.
Solution:



89. Ans. B.
Solution:



90. Ans. A.
Solution:



91. *Answer:* **Option – E**
Solution: The given sentence is correct and does not require any changes. Hence, Option – E is the proper response.
92. *Answer:* **Option – B**
Solution: The error lies in the second part of the sentence. Since it is a past event, the past tense of 'hold,' i.e., 'held' be used. Hence, the correct answer is Option – B.
93. *Answer:* **Option – D**
Solution: The error lies in the fourth part of the sentence. 'To' is used to express motion, whereas 'by' is used to identify the agent performing an action, which in this case is, inspection. 'To' must be replaced by 'by.' Hence, the correct answer is Option – D.
94. *Answer:* **Option – C**
Solution: The error lies in the third part of the sentence. The subject is 'some level' which is singular, hence 'were' can't be used. It must be replaced with 'was' to make the sentence grammatically correct. Hence, the correct answer is Option – C.
95. *Answer:* **Option – B**
Solution: The error lies in the second part of the sentence. The sentence can be corrected in two ways; by either changing 'group' into its plural form, or by changing 'were' into 'was.' Hence, the correct answer is Option – B.
96. *Answer:* **Option – C**
Solution: The error lies in the third part of the given sentence. The correct phrasal verb should

be 'bogged down' and not 'bogged up.' 'Bogged down' means burdened or impeded by something. The fourth part may appear to be incorrect, but it is not. It conveys the meaning that the regulators got impeded owing to the criteria which were used to split off trading activities. Thus, Option – C is the correct answer.

97. Explanation:-
Assumption I is not implicit because, the statement is based only on what happens in India.
Assumption II is implicit because of the concern shown in the statement.
Hence, only assumption II is implicit.

98. Explanation:-
Assumption I is implicit because, the word 'reputed contractors' suggests that, the company wants to do quality business.
Assumption II is implicit because, it is a universal assumption as the principal reason of inviting tenders.
Hence, option (5), both I & II is implicit.

99. Explanation:-
The government has promised to bring down the smoke level because it is possible to determine the level. Hence, I is implicit. Assumption II is implicit because eliminating pollution is also a welfare measure.
Hence, Both Assumption I & II are implicit.

100. Explanation:-
The intention of internal applicants can't be assumed from the given statement. Assumption II is implicit, that is why they want to recruit outside professionals.
Hence, Only Assumption II is implicit.

101. Explanation:-
What we are being told about brilliant students does not have anything to do with mediocre students. Hence Assumption I is not implicit. But Assumption II is implicit. This must be the reason why the brilliant students do not always excel.
Hence, Assumption II is implicit.

102. Ans. (C)

103. Ans. (A)

104. Ans. (B)

105-109

Person	Post	Hobby
E	Doctor	Reading book
L	Engineer	Dancing
O	Guard	Playing Cricket
P	Principal	Cooking
X	Teacher	Singing
M	Bank Manager	Reading book
F	Counsellor	Watching TV
Q	Marketing Head	Playing Cricket

110-115.

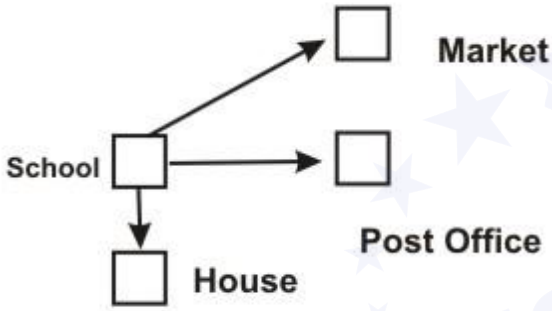
National Park	State	Animal
Corbett	Gujarat	Tiger
Gir forest	Manipur	Elephant
Keoladeo	Kerala	Wild ass
Kanha	Assam	Deer
Kaziranga	UP	Rhinoceros
Manas	MP	Lion

116-121.

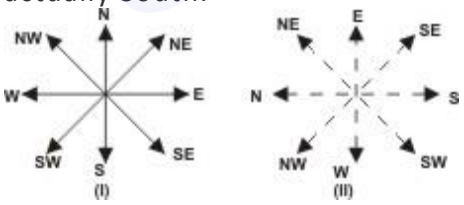
Owner	Country	Captain	Team

L	Australia	Fleming	Rajasthan Royals
M	Africa	Flinto off	Kolkata Knight Riders
N	Sri Lanka	Sangkara	Pune Warriors
O	Australia	Akram	Delhi Daredevils
P	Africa	Stain	Mumbai Indians
Q	Sri Lanka	Watson	Chennai Super Kings
R	Africa	V.Richards	Kings XI Punjab

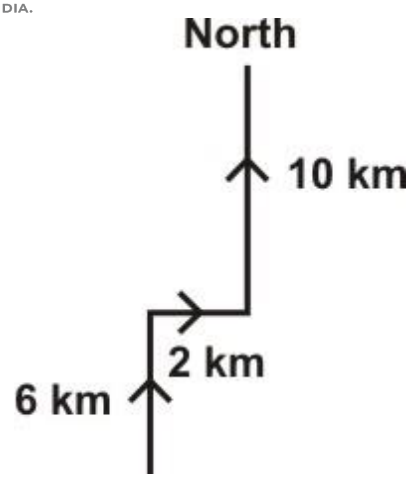
122.c
123.e
124.d
125. Ans: B
The positions of various places as shown in the diagram.
Clearly, the market is to the north east of school.



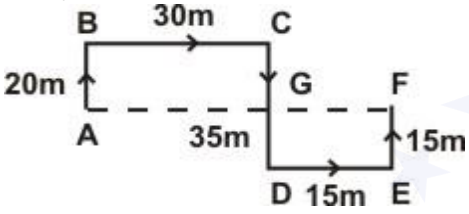
126. Ans: B
The actual positions of the directions are as shown in (I) while the changed positions of the pointer can be described by (II).
Clearly, the direction of West shown by the pointer in wrong position (Fig. II) is actually South.



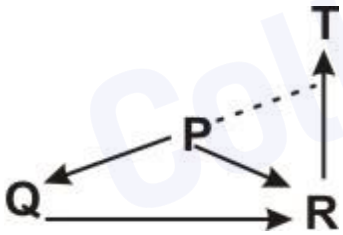
127. Ans: B
Clearly, the route is as shown in the adjoining diagram. Thus, the man started his journey from the South and moved northwards.



128. Ans: D
The movements of Rasik from A to F are as shown in Figure.
Since CD = AB + EF, so F lies in line with A.
Rasik's distance from original position A = AF = (AG + GF)
= (BC + DE) = (30 + 15) m = 45 m.
Also, F lies to the east of A.



129. Ans: A
Clearly, the arrangement according to the given directions is as shown. So, T lies to the north east of P.



130. B. 360
The series the following pattern:
20×4 = 80
80×4.5 = 360
360×5 = 1800
1800×5.5 = 9900
9900×6 = 59400

131. B. 111

The series follows the following pattern:
111 – 22 = 89
89 + 33 = 122
122 – 22 = 100
100 + 33 = 133
133 – 22 = 111

132. E. 72
The numbers at the odd places follow the pattern,
$18 + 2^2 = 22$, $22 + 3^2 = 31$, $31 + 4^2 = 47$, $47 + 5^2 = 72$
The numbers at the even places follow the pattern
$69 – 2^2 = 65$, $65 – 3^2 = 56$, $56 – 4^2 = 40$

133. D. 189
The series follows the pattern:
69 + 20 = 89, 89 + 22 = 111, 111 + 24 = 135, 135 + 26 = 161, 161 + 28 = 189

134. C. 121
The series follows the following pattern:
$11 + 5^2 = 36$
$36 + 6^2 = 72$
$72 + 7^2 = 121$
$121 + 8^2 = 185$
$185 + 9^2 = 266$

135. E. None of these
The series follows the pattern:
23 + 2 = 25, 25 + 3 = 28, 28 + 5 = 33, 33 + 7 = 40, 40 + 11 = 51, 51 + 13 = 64

136. Ans: D
The numbers are cubes of prime numbers i.e. 2^3, 3^3, 5^3, 7^3, 11^3. Clearly, none is wrong.
137. Ans: A
The numbers are 7 x 8, 8 x 9, 9 x 10, 10 x 11, 11 x 12, 12 x 13.
So, 150 is wrong and must be replaced by (12 x 13) i.e. 156.

138. Ans: C
Each term of the series is increased by 22 to obtain the next term.
So, 186 is wrong and must be replaced by (165 +22) i.e. 187.

139. Ans: B
The sequence is +5, +7,....
So, 24 is wrong and should be replaced by (17 + 9) i.e. 26.

140. Ans: B

The difference between consecutive terms of the given series are respectively 5, 7, 9, 11 and 13.
Clearly, 34 is a wrong number and must be replaced by (24 + 11) i.e. 35.

141-145.
Q-141 c, IQ9
Q-142 a, Z
Q-143 a, 5IQ,6EW
Q-144 d, Z
Q-145 d, $%9

146. Correct Option: A
Following the common explanation, we get

To find what percent of a + x + y + g is g.

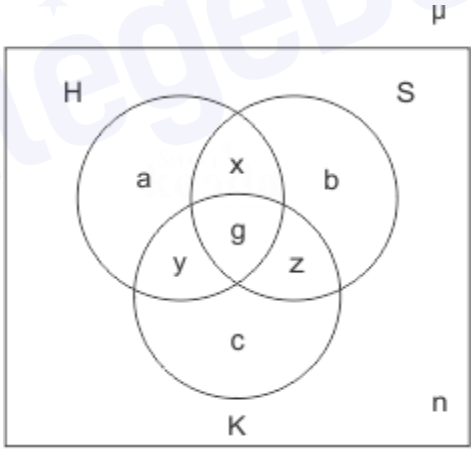
i.e., $\frac{3g}{2} + \frac{g}{4} + g + \frac{g}{4} = 3g$

The reqd. % = $\frac{100g}{3g} = 33\frac{1}{3}\%$

Hence, option A is correct.

Common explanation :

Let us represent the given information in the following Venn diagram.



H – Hrishikesh

S – Somnath

K – Kasi

It is given that the number of tourists who visited any two among the three is the same.

x = y = z

Let x = y = z m ...(1)

The number of tourists who visited all the three cities = g = the number of tourists who visited none of the three = n

→ (1/3) x number of tourists who visited only Kasi i.e c/3

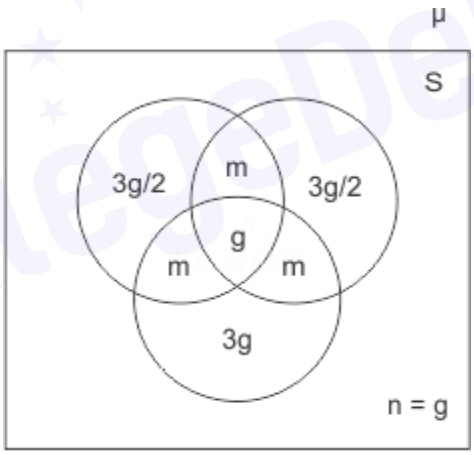
$g = n = \frac{c}{3}$ ...(2)

and also it is given that $a = b = \frac{c}{2}$ ...(3)

Half of the tourists who visited Somnath visited at least one of the other two.

b = x + z + g ...(4)

The Venn diagram can be drawn as follows:



And $\frac{3g}{2}$ = 2 m + g (since b = x + z + g)

→ $2m = \frac{3g}{2} - g = \frac{g}{2}$ → g = 4 m

$\mu = a + b + c + x + y + z + g + n$

$= \frac{3g}{2} + \frac{3g}{2} + 3g + \frac{3g}{4} + g + g = \frac{35g}{4} = \mu$

147. Correct Option: D
Following the common explanation, we get

It is given that,

$n = 200$

$\rightarrow g = 200$

$\mu = \frac{35 \times 200}{4} = 1750$

Hence, option D is correct.

148. Correct Option: B

The total number of tourists surveyed $= \frac{35g}{4}$

The number of tourists who visited exactly one among the three cities $= a + b + c = 6g$

The reqd. $\% = \frac{6g \times 100}{35g/4} = 68\frac{4}{7}\%$

Hence, option B is correct.

149. Correct Option: A
Following the common explanation, we get

The number of tourists who visited at least one of the three cities

$= \mu - n = \frac{35g}{4} - g = \frac{31g}{4}$

The number of tourists who visited exactly two cities

$= x + y + z = \frac{3g}{4}$

The reqd. % = $\frac{3g}{4} \times 100 \times \frac{4}{31g} = \frac{300}{31} = 9\frac{21}{31}\%$

Hence, option A is correct.
150. Correct Option: C
Following the common explanation, we get

Given x + g = 30

$\rightarrow \frac{g}{4} + g = 30$

$\rightarrow \frac{5g}{4} = 30$

$\rightarrow g = 24$

The number of tourists who visited Kasi = c + y + z + g

$= 3g + \frac{g}{4} + \frac{g}{4} + g = \frac{9g}{2} = 108$

Hence, option C is correct.
151-155.
151. Correct Option: B
Total number of employees in the company = 4200

72% of the employees registered for the trip.

So, the number of employees registered for the trip

$= 4200 \times \frac{72}{100} = 3024$

The ratio of male and female employees registered for the trip is 7 : 5.

∴ The number of female employees registered for the trip

$= 3024 \times \frac{5}{12} = 1260$

Hence, option B is correct.

152. Correct Option: C

Total number of employees in the company = 4200

72% of the employees registered for the trip.

So, the number of employees registered for the trip

$= 4200 \times \frac{72}{100} = 3024$

Out of them, 75% of the employees have chosen the company transport services for the trip.

Then, the number of employees registered for the company transport

$= 3024 \times \frac{75}{100} = 2268$

So, the number of employees did not registered for the company transport

$= 3024 \times \frac{25}{100} = 756$

25% of them went to the trip by their own transport for some reasons.

Then, the number of employees went to the trip by their own in spite of registering for the company transport

$= 2268 \times \frac{25}{100} = 567$

So, the total number of employees went to trip by their own transport = 756 + 567 = 1323

The ratio of male and female employees who came by their own transport is 5 : 4.

So, the reqd. difference $= \frac{1323 \times (5-4)}{9} = 147$

Hence, option C is correct.
153Correct Option: A
Total number of employees in the company = 4200

72% of the employees registered for the trip.

So, the number of employees registered for the trip

$= 4200 \times \frac{72}{100} = 3024$

Out of them, 75% of the employees have chosen the company transport services for the trip.

Then, the number of employees registered for the company transport

$= 3024 \times \frac{75}{100} = 2268$

25% of them went to the trip by their own transport for some reasons.

Then, the number of employees went to the trip by their own in spite of registering for the company transport

$= 2268 \times \frac{25}{100} = 567$

So, the actual number of employees went to the trip by company transport = 2268 – 567 = 1701

Initially, the company had booked 57 buses with 40 seats capacity in each.

∴ The number of buses actually used for the trip

$= \frac{1701}{40} = 42.525 \approx 43.$

Hence, option A is correct.

154. Correct Option: D
Total number of employees in the company = 4200

72% of the employees registered for the trip.

So, the number of employees registered for the trip

$= 4200 \times \frac{72}{100} = 3024$

Then, the number of employees did not register for the trip = 4200 – 3024 = 1176

Out of them, 75% of the employees have chosen the company transport services for the trip.

Then, the number of employees registered for the company transport

$= 3024 \times \frac{75}{100} = 2268$

25% of them went to the trip by their own transport for some reasons.

Then, the number of employees went to the trip by their own in spite of registering for the company transport

$= 2268 \times \frac{25}{100} = 567$

$\therefore$ The reqd. $\% = \frac{567}{1176} \times 100\% = 48.21\%$

Hence, option D is correct.
155. Correct Option: C
Total number of employees in the company = 4200

72% of the employees registered for the trip.

So, the number of employees registered for the trip

$= 4200 \times \frac{72}{100} = 3024$

The ratio of male and female employees registered for the trip is 7 : 5.

The number of female employees registered for the trip

$= 3024 \times \frac{5}{12} = 1260$

Out of them, 75% of the employees have chosen the company transport services for the trip.

Then, the number of employees registered for the company transport

$= 3024 \times \frac{75}{100} = 2268$

So, the number of employees did not registered for the company transport

$= 3024 \times \frac{25}{100} = 756$

25% of them went to the trip by their own transport for some reasons.

Then, the number of employees went to the trip by their own in spite of registering for the company transport

$= 2268 \times \frac{25}{} = 567$

100

So, the total number of employees went to trip by their own transport = 756 + 567 = 1323

The ratio of male and female employees who came by their own transport is 5 : 4.

So, the number of female employees went to trip by their own transport

$= 1323 \times \frac{4}{9} = 588$

∴ The required ratio = 1260 : 588 = 15 : 7

Hence, option C is correct.

156Ans 1. (c)
SolutionsLet water is x
4 x : x = milk : water
32: 8 = 4x : x (since total 40 liters)

$\text{Now } \frac{32}{8+x} = \frac{2}{3}, x = 40 \text{ Liters}$

157. Ans 5.(c)
let students are 2x: 3r: 5x now According to the given condition
2x+20 : 3x+20 : 5x + 20 = 4 : 5 : 7
x = 10
20:30:50 = 2:3:5 and after adding 20
40:50:70

158. Ans 8.(c)
Let the number of girls and boys are x and y then
0.25x + 0.5 = 58 ….(i)
also
x + y = 150 ….(ii)
from (i) and (ii) we get
0.5x + y = 116
x + y = 150
So, 0.5x = 34, x = 68, y = 82

159. 1. Option A
Let the sum invested in scheme A be Rs. x and that in scheme B be Rs. (13900 – x)
Then, [x × 14 × 2 / 100] ÷ [{(13,900 - x) × 11 × 2 } / 100] = 3508

28x – 22x = 350800 – (13900 × 22)

6x = 45000

x = 7500

So, sum invested in Scheme B = Rs. (13900 – 7500) = Rs.6400

160. Option B

Let rate = R% and time = R years

Then, [1200 × R × R / 100] = 432

12 r^2 = 432

R^2 = 36
R = 6

Ans. 16.

161. Solution :

==> $7X^2-28X-5X+20=0$
==>X=28/7 ; 5/7 = 4 ; 5/7

==>$7Y^2+14Y-5Y-10=0$
==>Y= -14/7 ; 5/7 = -2 ; 5/7

Ans : x ≥ y
162. Solution :

==> X = +/- 17
==>Y = +13

Ans : x = y or relation cannot be established between 'x' and 'y'.

163. Solution :

==> $5X^2-40X-12X+96=0$
==>X = 40/5 ; 12/5 = 8 ; 12/5

==> $5Y^2+15Y-12Y-36=0$
==> Y = -15/3 ; 12/5 = -3 ; 12/5

Ans : x ≥ y

164. Option A
Explanation: Tenet – a principle or belief, especially one of the main principles of a religion or philosophy.
165. Option B
Explanation: Pugnacious – eager or quick to argue, quarrel, or fight.
166. Option D
Explanation: Poach – to trespass, especially on another's game preserve, in order to steal animals or to hunt.

167. 1) Answer: D
The correct spelling is 'perseverance'. All the options are already having the correctly spelt words.
Therefore, option D is the correct answer to this question.

168. Answer: C
The correct spelling is 'compelling'. All the options are already having the correctly spelt words.
Therefore, option C is the correct answer to this question.

169. Answer: B
In place of heterogenity it should be heterogeneity which means the quality or state of being diverse in character

170. Correct Answer: Option C – Adverse conditions do not last forever

171. Correct Answer: Option A – To reveal the secret carelessly or by mistake

172. Correct Answer: Option A – To start a conversation
173.

Ans. e

Sol.

Let total number of students in class be 'x'

Students, who got munch $= \frac{x}{4}$

Students, who got dairy milk

$= \left(x - \frac{x}{4}\right) \times \frac{1}{3}$

$= \frac{x}{4}$

Students, who got five stars

$= \left(x - \left(\frac{x}{4} + \frac{x}{4}\right)\right) \times \frac{5}{8}$

$= \frac{5x}{16}$

Students, who got Snickers

$= \left(x - \left(\frac{x}{4} + \frac{x}{4}\right)\right) \times \frac{3}{8}$

$= \frac{3x}{16}$

$\frac{x}{4} - \frac{3x}{16} = 15$

$\frac{4x-3x}{16} = 15$

$$x = 240$$

174.

Ans. c

Sol.

Ankit's monthly salary $= \frac{75}{100} \times 16000$

$= 12000$

Required amount $= 12000 \times \frac{60}{100} \times \frac{(35+25)}{100}$

$= 4320$

175.

Ans. b

Sol.

$$\text{Speed of Sita} = \frac{6000}{40} = 150 \text{ words/min.}$$

Speed of Sita on next day

$$= 150 \times \frac{112}{100}$$

$= 168$ words/min

Time taken to type essay next day

$$= \frac{6000}{168}$$

$$= \frac{250}{7} \text{ min.}$$

176. Correct Option: C

Let Arjun kapoor attempt x questions, he gets 10% of the answers wrong.

Arjun kapoor's score = $0.9x - (0.1x) \times \frac{1}{2} = 0.85x$

0.85x = 0.85z, where z is the total number of marks as well as total number of marks possible.

So, x = z ⇒ x = 100% of z

Similarly let Anil Kapoor attempt y questions

Anil kapoor's score = $0.8y - (0.2y) \times \frac{1}{2} = 0.7y$

0.7y = 0.7z ⇒ y = 100% of z

Now, 0.85z = P + 6, where P is pass mark …….. (i)

Also, 0.7z = P – 3 …….. (ii)

From (i) and (ii), we get

0.15z = 9 ⇒ z = 60

Putting the value of z in (ii), we get

0.7 × 60 = P – 3 ⇒ p = 42 + 3 = 45

Hence, option (C) is correct.

177. Correct Option: A
The quantity of pulp (the part that is not water) in 90 kg of fresh sugarcane

$= \frac{16}{100} \times 90$ kg.

This is also the quantity of pulp in the dried sugarcane formed.

Dried sugarcane have 72% pulp

$\frac{16}{100} \times 90 = \frac{72}{100}$

(Quantity of dried sugarcane formed) $= \frac{72}{100} \times X$ (Say)

⇒ X = 20

Hence, option (A) is correct.

178. Correct Option: A

Let the population of Salt Lake = 9x,

The population of South Kolkata = 8x, and

The population of Rajarhat = 3x

The total population of these three localities = 9x + 8x + 3x = 20x

The number of literate in Salt Lake = 80% of 9x = 7.2x

The number of literate in South Kolkata = 70% of 8x = 5.6 x

The number of literate in Rajarhat = 90% of 3x = 2.7x

The total number of literate in these three localities = 7.2x + 5.6x + 2.7x = 15.5x

Hence. Required percentage = $\frac{15.5\ x}{20x} \times 100 = 77.5\%$

Therefore, option (A) is correct.

179. Correct Option: B
Budget spent on 10% of days = 12%

So, in 1% of days = $\frac{12}{10}$

35% remaining days in city = $\frac{12}{10} \times 35 = 42$

Overall budget spent on 45% of days in city = 54%

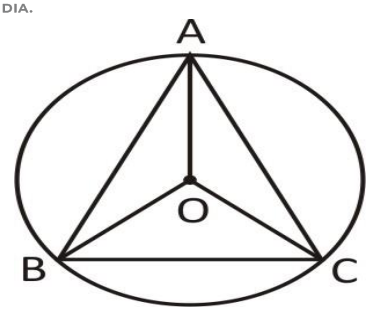
Days remaining = 55%, Budget remaining = 46%

In 1% of day remaining, he can spend = $\frac{46}{55}$ of budget

Therefore, % decrease required = $\frac{\frac{12}{10} - \frac{46}{55}}{\frac{12}{10}} \times 100 = 30.33\%$

Hence, option (B) is correct.

180. Correct Option: D



OA=OB=OC=Circum-radius

InΔABC, we know that

∠ABC+∠BCA+∠BAC=180°

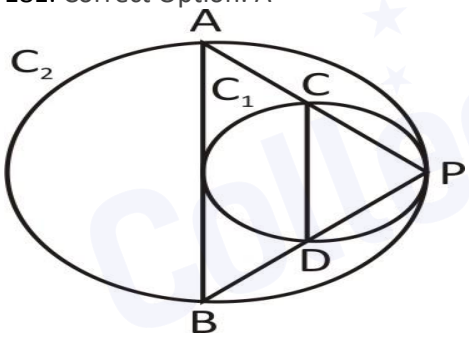
∠BAC=180°–70°–40°=70°

Note : The angle subtended by an arc of a circle at the centre is double the angle subtended by it at any point on the remaining part of the circle.

∴ ∠BOC = 2 × ∠BAC = 2 × 70° = 140°

Hence, option D is correct.

181. Correct Option: A



∠BDC=120°

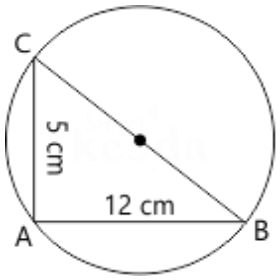
∴∠CDP=180°–∠BDC=180°–120°=60°

CD||AB

∴ ∠ABP = ∠CDP = 60°

Hence, option A is correct.

182. Correct Option: B



As, BC is the diameter of circle,
by using Pythagoras theorem

BC $= \sqrt{(CA^2 + AB^2)}$

$= \sqrt{(12^2 + 5^2)}$

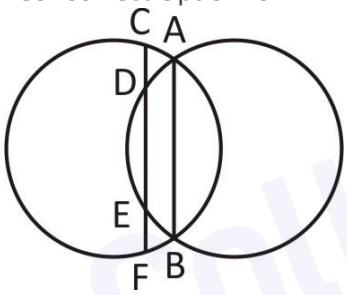
$= \sqrt{(144 + 25)}$

$= \sqrt{169}$

$= 13$

Hence, option B is correct.

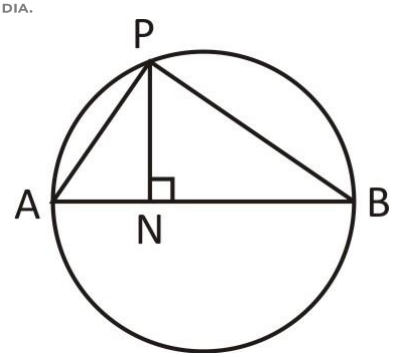
183. Correct Option: C



Clearly,CD=EF=4.5cm

Hence, option C is correct.

184. Correct Option: D



Radius=7cm

⇒Diameter,AB=14cm

PB=12cm

∠APB=90°

[∵ angle in the semi circle]

In ΔAPB, By pythagoras theorem

$AP=\sqrt{(AB^2 - PB^2)}=\sqrt{(14^2 - 12^2)}= \sqrt{52}$

Let, AN=xcm⇒ NB=(14–x) cm

In ΔAPN, By pythagoras theorem

$PN^2 = AP^2 - AN^2 = 52 - x^2$ ...(i)

Again, In ΔPNB, By pythagoras theorem

$PN^2 = PB^2 - NB^2 = 144 - (14 - x)^2$ ...(ii)

From Equation (i) and (ii),

$52 - x^2 = 144 - 196 + 28x - x^2$

$28x = 104$

$X = 26 / 7$

$\therefore NB = 14 - \frac{26}{7} = \frac{72}{7} = 10\frac{2}{7}$ cm

Hence, option D is correct.

185. Correct Option: C

Given that, diameter of big sphere = 8 cm

∴ radius of big sphere (R) = 4 cm

Let radius of each small sphere = r

We know that,

$$\text{Volume of each small sphere} = \frac{\text{Volume of big sphere}}{\text{Number of small sphere}}$$

$$\Rightarrow \frac{4}{3}\pi r^3 = \frac{\frac{4}{3}\pi R^3}{64}$$

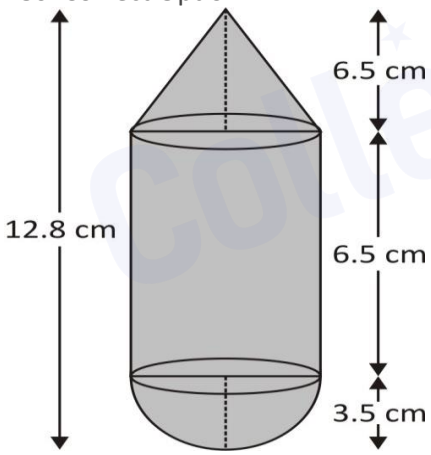
$$\Rightarrow r^3 = \frac{(4)^3}{64} = 1$$

$$\Rightarrow r = 1 \text{ cm}$$

Now, surface area of each small sphere = $4\pi r^2 = 4\pi(1)^2 = 4\pi \text{ cm}^2$

Hence, option C is correct.

186. Correct Option: A



Given that, Total height of the structure (H) = 12.8 cm and height of cylinder (h_1) = 6.5 cm

Common radius (r) = 3.5 cm

∴ height of hemisphere (h_2) = radius = 3.5 cm

and height of cone (h_3) = H – h_1 – h_2 = 12.8 – 6.5 – 3.5 = 2.8 cm

Now, Volume of the structure = Volume of cylinder + Volume hemisphere + Volume of cone

$= \pi r^2 h_1 + \frac{2}{3}\pi r^3 + \frac{1}{3}\pi r^2 h_3$

$= \pi r^2 (h_1 + \frac{2}{3}r + \frac{1}{3}h_3)$

$= \frac{22}{7} \times (3.5)^2 (6.5 + \frac{2}{3} \times 3.5 + \frac{1}{3} \times 2.8)$

$= \frac{22}{7} \times 12.25\ (6.5 + 2.33 + 0.93)$

$= \frac{22}{7} \times 12.25 \times 9.76 = 375.76\ cm^3$

Hence, option A is correct.

187. Correct Option: A
Given that, three planets revolves the Sun once in 200, 250 and 300 days, respectively in their own orbits.

∴ Required time = LCM of (200, 250 and 300) = 3000 days

Hence, after 3000 days they all come relatively to the same position as at a certain point of time in their orbits.

Hence, option A is correct.

188. Correct Option: B
Let the two numbers be 29x and 29y

∴ 29x + 29y = 232 ⇒ x + y = 8

⇒ Co-primes of (x, y) = (1, 7) (3, 5)

Since, once such pair is (29 × 1 and 29 × 7) = 29 and 203

Hence, the other pair is (29 × 3 and 29 × 5) = 87 and 145.

Hence, option B is correct.

189. Correct Option: B
Here, (20 – 14) = 6, (25 – 19) = 6, (35 – 29) = 6 and (40 – 34) = 6.

Required number = (L.C.M. of 20, 25, 35, 40) - 6

∴ Required number = 1400 – 6 = 1394.

Hence, option B is correct.

190. Correct Option: D
Let the number of sides of a polygon be n. Then,

Sum of interior angles = (2n – 4) × 90°

Sum of exterior angles = 360°

∴ (2n – 4) × 90° = 2 × 360°

2n – 4 = 8

2n = 12

n = 6

Hence, option D is correct.

191. Correct Option: D
Sum of exterior angles of a regular polygon = 360°

But, (360º / 50º) = 7.2 ≠ a whole number

Clearly, the angle 50° doesn't completely divide 360° which means we can't get a total of 360° by adding 50° to n times.

On the other hand the rest of the angles satisfy the condition.

For instance:

30° + 30° + ... + 12 times = 360°
36° + 36° + ... + 10 times = 360°
45° + 45° + ... + 8 times = 360°

Therefore, it's clear that 50° can't be an angle of a regular polygon.

Hence, option D is correct.

192. Correct Option: B
∴ Sum of the angles of quadrilateral = 5x + 4x + 3x + 8x = 360°

or, $20x = 360°$

$\therefore x = 18$

The largest angle of the quadrilateral $= 8 \times 18° = 144°$

$\therefore$ Smallest angle of the triangle

$= 144° \times \frac{1}{4} = 36°$

If the 2nd largest angle of the triangle be y°, then the largest angle of the triangle = (y + 36)°

$\Rightarrow y° + (y + 36)° + 38° = 180°$

$\therefore 2y = 106°$

$\therefore y = 53°$

Hence, Option B is correct.

193-197.

193. Correct Option: E
Decoded version of signs:

@ - ≤
! - >
* - ≥
% - <
# - =

Statements: M > H , K < M, G = H

Conclusions: H = K , M ≥ G

From statements I and II, we get:

K < M > H

Here, we get the opposite signs between H and K, thus no relationship can be established between them.

Hence conclusion I does not follow.

From statements I and III, we get:

M > H = G

Thus M ≥ G is not a true relationship from the above equation.

Hence conclusion II does not follow.

194. Correct Option: D
Decoded version of signs:

@ - ≤
! - >
* - ≥
% - <
# - =

Statements: E ≤ F , D < E , T ≥ F

Conclusions: D < F , T ≥ E

From statements I and II, we get:

D < E ≤ F

Thus D < F is the true relationship.

Hence conclusion I follows.

From statements I and III, we get:

T ≥ F ≥ E

Thus T ≥ E is the true relationship.

Hence conclusion II follows.

Hence option D is correct.

195. Correct Option: A
Decoded version of signs:

@ - ≤

! - >
* - ≥

% - <

- =

Statements: T = Y , Y < L, G ≥ L

Conclusions: L > T , G ≥ T

From statements I and II, we get:

T = Y < L

Thus L > T is the true relationship.

Hence conclusion I follows.

From statements I, II and III, we get:

G ≥ L > Y = T

Thus G ≥ T is not a true relationship.

Hence conclusion II does not follow.

Hence option A is correct.

196. Correct Option: B
Decoded version of signs:

@ - ≤

! - >

* - ≥

% - <

- =

Statements: G > U , L ≤ U, M ≥ G
Conclusions: M = U , M > U

From statements I, II and III, we get:

M ≥ G > U ≥ L

Thus M > U is the true relationship.

Hence conclusion I does not follow.

But conclusion II definitely follows.

Hence option B is correct.

197. Correct Option: A
Decoded version of signs:

@ - ≤
! - >
* - ≥
% - <
# - =

Statements: Z > U , P ≥ W , W ≤ U

Conclusions: Z > W , P < U

From statements I and III, we get:

Z > U ≥ W

Z > W is the true relationship.

Hence conclusion I follows.

From statements II and III, we get:

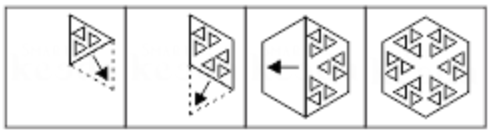
P ≥ W ≤ U

Thus due to opposite sign between P and U no relationship can be established between them.

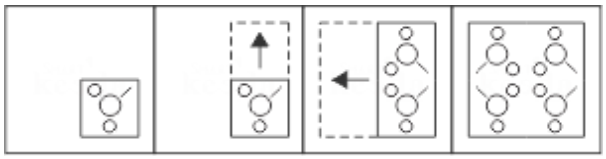
Hence conclusion II does not follow.

Hence option A is correct.

198. Correct Option: B



Hence, option B is correct.
199 ans D
200. Correct Option: B



Hence, option B is correct.