



IASBABA'S

60 DAYS PLAN

PRELIMS 2021

COMPILATIONS

CSAT - PART 1

www.iasbaba.com



Connect with Baba

HOTLINE



A dedicated Hotline to speak with the **Core Team members of IASbaba** on the telephone regarding 'any queries' related to UPSC Preparation/Strategy in general.

 **8882913399** from Monday-Friday between 10AM – 6PM

#ASKBABA

Get your Subject Specific-Doubts Cleared as part of the 60 Day Plan on a real-time basis.



PHONE-A-FRIEND

Speak with our Mental Health Expert and Counsellor about anything which is related to anxiety, depression, stress, etc.

 **8882913399** from Monday-Friday between 2PM – 4PM



Directions for the following 3 (three) items:

Read the following two passages and answer the items that follow. Your answers to these items should be based in the passage only.

Passage 1

The Dravidian language family, consisting of 80 varieties spoken by nearly 220 million people across southern and central India, originated about 4,500 years ago, a study has found. South Asia, reaching from Afghanistan in the west and Bangladesh in the east, is home to at least six hundred languages belonging to six large language families, including Dravidian, Indo-European and Sino-Tibetan.

The Dravidian language family, consisting of about 80 language varieties (both languages and dialects) is today spoken by about 220 million people, mostly in southern and central India, and surrounding countries. The Dravidian language family's four largest languages — Kannada, Malayalam, Tamil and Telugu — have literary traditions spanning centuries, of which Tamil reaches back the furthest, researchers said. Along with Sanskrit, Tamil is one of the world's classical languages, but unlike Sanskrit, there is continuity between its classical and modern forms documented in inscriptions, poems, and secular and religious texts and songs. "The study of the Dravidian languages is crucial for understanding prehistory in Eurasia, as they played a significant role in influencing other language groups"

Neither the geographical origin of the Dravidian language nor its exact dispersal through time is known with certainty. The consensus of the research community is that the Dravidians are natives of the Indian subcontinent and were present prior to the arrival of the Indo-Aryans (Indo-European speakers) in India around 3,500 years ago. Researchers said that it is likely that the Dravidian languages were much more widespread to the west in the past than they are today.

Q.1) Which of the following statement is correct as per the passage?

- a) South Asia, reaching from Afghanistan in the west and Myanmar in the east, is home to at least six hundred languages.
- b) Sanskrit is one of the world's classical languages but there is no continuity between its classical and modern forms.
- c) Kannada is the oldest of all the Dravidian languages.
- d) The Dravidian language is spoken in southern and central India only.

Q.1) Solution (b)

Along with Sanskrit, Tamil is one of the world's classical languages, but unlike Sanskrit, there is

continuity between its classical and modern forms documented in inscriptions, poems, and secular and religious texts and songs.

This statement makes it clear that Sanskrit is one of the world's classical languages but there is no continuity between its classical and modern forms unlike Tamil.

Q.2) What is the importance of studying Dravidian languages?

1. It is crucial for understanding prehistory in Eurasia.
2. It helps in knowing the culture of people who spoke Dravidian languages.

Choose the correct code:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None of the above

Q.2) Solution (a)

"The study of the Dravidian languages is crucial for understanding prehistory in Eurasia, as they played a significant role in influencing other language groups."

Statement 2 is not related to the passage

Passage 2

A fundamental principle of constructivist social theory is that people act toward objects, including other actors, on the basis of meaning that the objects have for them. States act differently toward enemies than they do toward friends because enemies are threatening and friends are not. Anarchy and the distribution of power are insufficient to tell us which is which. U.S. military power has a different significance for Canada than for Cuba, despite their similar "structural" positions, just as British missiles have a different significance for the United States than do Soviet missiles. The distribution of power may always affect states' calculations, but how it does so depends on the intersubjective understandings and expectations, on the "distribution of knowledge," that constitute their conceptions of self and other. If society "forgets" what a university is, the powers and practices of professor cease to exist; if the United States and Soviet Union decide they are no longer enemies, "the cold war is over." It is collective meanings that constitute the structures which organize our actions.

Q.3) What seems to be the main idea in the passage?

- a) Cold war is easy to end
- b) Distribution of power does affect the way states behave towards one another
- c) People act towards objects on the basis of what they think about them
- d) Anarchy helps us determine our friends and enemies

Q.3) Solution (c)

Main idea is central to the passage. Here the topic being talked about is constructivist social theory and the main idea is that people act towards the objects on the basis of what they think about them.

Q.4) The sum of first five consecutive even numbers A, B, C, D and E is 120. What is the product of A and B?

- a) 660
- b) 440
- c) 380
- d) 480

Q.4) Solution (b)

Let five consecutive even numbers be $A = X$, $B = X+2$, $C = X+4$, $D = X+6$, $E = X+8$

According to the question,

$$X+X+2+X+4+X+6+X+8 = 120$$

$$5X+20 = 120$$

$$X = 20$$

Therefore, $A = 20$ and $B = 20+2 = 22$

Product of A and B is $20*22 = 440$

Q.5) How many three digit numbers can be formed with the digits 0,1,2,3 (repetition of digits not allowed)?

- a) 16
- b) 18
- c) 14
- d) 20

Q.5) Solution (b)

So, first digit could be either 1, 2 or 3. Then remaining two digits could be anything. Therefore, no. of ways = $3 \times 3 \times 2 = 18$.

Q.6) The difference between two positive numbers is 160 and the ratio between them is 5:3. Find the product of the two numbers.

- a) 96000
- b) 144000
- c) 48000
- d) 72000

Q.6) Solution (a)

Let the two positive numbers be $5X$ and $3X$

Therefore, $5X - 3X = 160$

$2X = 160$

$X = 80$

Therefore product of two numbers = $5X \times 3X$

$$= (5 \times 80) (3 \times 80)$$

$$= 96000$$

Q.7) A two digit number is such that the product of the digits is 8. When 18 is added to the number, then the digits are reversed. The number is

- a) 16
- b) 24
- c) 42

d) 64

Q.7) Solution (b)

Let the ten's and unit digit be X and 8/X respectively.

Then, $(10X + 8/X) + 18 = 10 \times (8/X) + X$

$$\rightarrow 10X^2 + 8 + 18X = 80 + X^2$$

$$\rightarrow X^2 + 2X - 8 = 0$$

$$\rightarrow (X+4)(X-2) = 0$$

$$\rightarrow X = 2$$

So the number is 24

Directions for the following 3 (three) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

No conflict since the 1940s has been bloodier, yet few have been more completely ignored. Estimates of the death toll in Congo between 1998 and 2003 range from roughly 1m to more than 5m—no one counted the corpses. Taking the midpoint, the cost in lives was higher than that in Syria, Iraq, Vietnam or Korea. Yet scarcely any outsider has a clue what the fighting was about or who was killing whom. Which is a tragedy, because the great war at the heart of Africa might be about to start again.

To understand the original war, consider this outrageously oversimplified analogy. Imagine a giant house whose timbers are rotten. That was the Congolese state under Mobutu Sese Seko, the kleptocratic tyrant who ruled from 1965 to 1997. Next, imagine a cannonball that brings the house crashing down. That cannonball was fired from Rwanda, Congo's tiny, turbulent neighbour. Now imagine that every local gang of armed criminals comes rushing in to steal the family jewels, and the looting turns violent. Finally, imagine that you are a young, unarmed woman who lives alone in the shattered house. It is not a pleasant thought, is it?

Mobutu and his underlings looted the Congolese state until it could barely stand. When a shock struck, it collapsed. The shock was the Rwandan genocide of 1994. The perpetrators of that abomination, defeated at home, fled into Congo. Rwanda invaded Congo to eliminate them. Meeting almost no resistance, since no one wanted to die for Mobutu, the highly disciplined

Rwandans overthrew him and replaced him with their local ally, Laurent Kabila. Then Kabila switched sides and armed the genocidaires, so Rwanda tried to overthrow him, too. Angola and Zimbabwe saved him. The war degenerated into a bloody tussle for plunder. Eight foreign countries became embroiled, along with dozens of local militias. Congo's mineral wealth fuelled the mayhem, as men with guns grabbed diamond, gold and coltan mines. Warlords stoked ethnic divisions, urging young men to take up arms to defend their tribe—and rob the one next door—because the state could not protect anyone. Rape spread like a forest fire.

Q.8) In the passage "giant house whose timbers are rotten" refers to

- a) Congo between 1998 and 2003 where death toll raised from 1m to more than 5 m.
- b) Congolese state under Mobutu Sese Seko.
- c) Congolese state under Laurent Kabila.
- d) None of the above.

Q.8) Solution (b)

We can infer from the 2nd paragraph of the passage which says "Imagine a giant house whose timbers are rotten. That was the Congolese state under Mobutu Sese Seko, the kleptocratic tyrant who ruled from 1965 to 1997". Hence option b is the correct answer.

Q.9) According to the passage the cost in lives was higher in which of the following country?

- a) Syria
- b) Iraq
- c) Vietnam
- d) Congo

Q.9) Solution (d)

It is clear from the first paragraph of the passage that cost in lives was higher in Congo than in Syria, Iraq, Vietnam or Korea

Q.10) According to the author, why did Rwanda invade Congo?

- a) To take revenge against the perpetrators of Rwandan genocide.
- b) To replace Laurent Kabila as the new head of Congo.
- c) To loot Congo's mineral wealth.
- d) To impose their sovereignty over Congo.

Q.10) Solution (a)

The 3rd paragraph of the passage says that "Rwanda invaded Congo to eliminate them". Here 'them' refer to the perpetrators of Rwandan genocide. Hence option 'a' is the correct answer.

Directions for the following 3 (three) items:

Read the following two passages and answer the items that follow. Your answers to these items should be based in the passage only.

Passage 1

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grasslands under the plough in the nineteenth century. By the 1930s, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

Q.11) As we understand from the passage, today, soil erosion in America

- a) Causes humans to place new demands on the land.
- b) Is worse than it was in the nineteenth century.
- c) Happens so slowly that it is hardly noticed.
- d) Is worse in areas which have a lot of petroleum production.

Q.11) Solution (b)

After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production.

From this we can infer that option b is the correct answer.

Passage 2

Marcia says that all of her friends have a cell phone, but Marcia's mom doesn't want to buy her one. Marcia's mom doesn't want Marcia to play video games either. What is more, the Internet scares her. Marcia's mom says, "If Marcia has a cell phone, how do we know whom she is talking to? Video games are bad for you. The Internet is dangerous and uncontrolled. It's like having a gun in the house. We should just ban her from using the computer, and I'm not buying

her a cell phone until she is eighteen. This is the only way we can be sure that Marcia is safe."

Marcia's dad disagrees with Marcia's mom. Although he agrees that there are some dangers to it, he likes the Internet, and finds it to be very useful. "The trouble is," he says, "We just can't stop Marcia from using the Internet, as this would put her at a disadvantage. What is more, I like video games. I think that, when played in moderation, they are fun. Obviously, it is not good to play them without restraint or self-control. Finally, I think Marcia needs a cell phone. We can't take these things away."

Q.12) In paragraph 1, Marcia's mom says, "It's like having a gun in the house." She says this in order to

- a) support the idea that the Internet is dangerous
- b) reject the claim that guns can be safe if used responsibly
- c) encourage Marcia's dad to purchase a gun
- d) explain why the Internet is uncontrolled

Q.12) Solution (a)

To answer this question, it helps to use context. In paragraph 1, Mom says "The Internet is dangerous and uncontrolled. It's like having a gun in the house." Since Mom says that the Internet is dangerous immediately before she compares it to having a gun in the house, we can understand that Mom draws this comparison to illustrate how dangerous she thinks the Internet is. This makes (a) the correct choice. Mom is not arguing that guns can never be safe. Rather, she compares the Internet to guns to express how dangerous she finds the Internet. This makes (b) incorrect. Mom does not encourage Dad to buy a gun, so (c) is not the best choice. Mom compares having the Internet to having a gun in the house. She does this to explain how dangerous the internet is, not explain why the Internet is uncontrolled. This rules out (d).

Q.13) Marcia's mom can best be described as

- a) ridiculous
- b) careful
- c) cruel
- d) rude

Q.13) Solution (b)

To answer this question, it helps to use context. In paragraph 1, Mom says "The Internet is dangerous and uncontrolled. It's like having a gun in the house." Since Mom says that the Internet is dangerous immediately before she compares it to having a gun in the house, we can

understand that Mom draws this comparison to illustrate how dangerous she thinks the Internet is. This makes (a) the correct choice. Mom is not arguing that guns can never be safe. Rather, she compares the Internet to guns to express how dangerous she finds the Internet. This makes (b) incorrect. Mom does not encourage Dad to buy a gun, so (c) is not the best choice. Mom compares having the Internet to having a gun in the house. She does this to explain how dangerous the internet is, not explain why the Internet is uncontrolled. This rule out (d).

Q.14) A forester wants to plant 44 apples tree, 66 banana trees and 110 mango trees in equal rows (in terms of number of trees). Also, he wants to make distinct rows of tree (i.e. only one type of tree in one row). The number of rows (minimum) that required is

- a) 2
- b) 5
- c) 10
- d) 11

Q.14) Solution (c)

In such case, we first need to find the HCF of 44, 66 and 110

HCF = 22

Then, the required numbers of rows = $\{(44/22) + (66/22) + (110/22)\} = 10$

Q.15) Three times the first of three consecutive odd integers is 3 more than twice the third. What is the third integer?

- a) 7
- b) 9
- c) 13
- d) 15

Q.15) Solution (d)

Let the three consecutive odd integers be X, X+2 and X+4

Then, according to the question

$$3X = 2(X+4) + 3$$

$$X = 11$$

Therefore, third integer = $X+4 = 15$

Q.16) Consider the following quantities.

Quantity A: The number of multiples of 9 between 200 and $X+200$

Quantity B: The number of multiples of 5 between 100 and $X+100$

Where X is a positive integer

Then

- a) Quantity A is greater.
- b) Quantity B is greater.
- c) Quantities A and B are equal
- d) It is impossible to determine which quantity is greater.

Q.16) Solution (d)

As difference between the two end of finding multiples is 'X' in both the cases, we cannot conclusively say that which one will be greater. Here, we are not using the end numbers.

Suppose, if 'X' is just '2' then Quantity A will be zero whereas Quantity B will also be 0.

Whereas if 'X' is just '12' then Quantity A will be 1 and Quantity B will also be 2.

So, we cannot determine which quantity will be greater.

Q.17) In a store there are 345 L mustard oil, 120 L olive oil and 225 L coconut oil. What will be the capacity of the largest container to measure the above three types of oil?

- a) 10 L
- b) 12 L
- c) 15 L
- d) 18 L

Q.17) Solution (c)

Required capacity of the largest container is the H.C.F of 345 , 120, 225 = 15

Therefore, the required capacity of the container is 15 L

Q.18) How many 3-digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?

- a) 15
- b) 18
- c) 20
- d) 25

Q.18) Solution (c)

Since each desired number is divisible by 5, so we must have 5 at the unit place. So, there is 1 way of doing it.

The tens place can now be filled by any of the remaining 5 digits (2, 3, 6, 7, 9). So, there are 5 ways of filling the tens place.

The hundreds place can now be filled by any of the remaining 4 digits. So, there are 4 ways of filling it.

Therefore, required number of numbers = $(1 \times 5 \times 4) = 20$.

Directions for the following 2 (two) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

Most human beings are awake during the day and sleep all night. Owls live the opposite way. Owls are nocturnal. This means that they sleep all day and stay awake at night. Because owls are nocturnal, this means they must eat at night. But finding food in the dark is difficult. To help them, they have special eyes and ears.

Owls have very large eyes. These eyes absorb more light than normal. Since there is little light during the night, it is helpful to be able to absorb more of it. This helps owls find food in the dark.

Owls also have very good hearing. Even when owls are in the trees, they can hear small animals

moving in the grass below. This helps owls catch their prey even when it is very dark. Like owls, mice are also nocturnal animals. Mice have an excellent sense of smell. This helps them find food in the dark.

Being nocturnal helps mice to hide from the many different animals that want to eat them. Most of the birds, snakes, and lizards that like to eat mice sleep at night—except, of course, owls!

Q.19) Based on the information in paragraph 2, it can be understood that an animal with small eyes:

- a) must be diurnal
- b) has trouble seeing in the dark
- c) can see very well at night
- d) is likely to be eaten by an owl

Q.19) Solution (b)

In paragraph 2 we learn that "Owls have very large eyes. These eyes absorb more light than normal. Since there is little light during the night, it is helpful to be able to absorb more of it." Using this information, we can understand that an animal that has small eyes has trouble seeing in the dark. This is because small eyes are able to absorb less light than large ones. Choice (b) is correct. (a) is incorrect because animals like mice do not have large eyes. Nonetheless, they are nocturnal. They are still able to find food in the dark using their sense of smell. (c) is incorrect because small eyes do not absorb as much light, making it harder to see at night. Therefore an animal with small eyes probably does not see well at night. If an animal has small eyes, this does not necessarily mean that it is likely to be eaten by an owl. After all, many animals that have small eyes (like fish, birds, etc.) are not likely to be eaten by an owl. Therefore choice (d) is incorrect.

Q.20) According to the passage, owls can find food in the dark using their sense of

- 1. Sight
- 2. Sound
- 3. Smell

Choose the correct code

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only

- d) 1,2 and 3

Q.20) Solution (b)

In paragraph 2 we learn that "Owls have very large eyes." This helps them "find food in the dark." This supports option (1). In paragraph 3 we learn that "Owls also have very good hearing." This helps them "catch their prey even when it is very dark." This supports option (2). In paragraph 4 we learn that "Like owls, mice are also nocturnal animals. Mice have an excellent sense of smell." This helps them "find food in the dark." However, the question asks about owls, not mice. The passage does not provide information to support the idea that owls can find food in the dark using their sense of smell. This eliminates option (3). Therefore (b) is correct.

Q.21) A certain number of horses and an equal number of men are going somewhere. Half of the owners are on their horses' back while the remaining ones are walking along leading their horses. If the number of legs walking on the ground is 70, how many horses are there?

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

Q.21) Solution (d)

Let number of horses = number of men = X

Then, number of legs = $4X + 2 \times (X/2) = 5X$

So, $5X = 70$ or $X = 14$

Q.22) Two bus tickets from city A to B and three tickets from city A to C cost Rs. 77 but three tickets from city A to B and two tickets from city A to C cost Rs. 73. What are the fares for cities B and C from A?

- a) 17 Rs and 15 Rs
b) 13 Rs and 17 Rs
c) 17 Rs and 13 Rs
d) 15 Rs and 17 Rs

Q.22) Solution (b)

Let Rs x be the fare for city B from city A and Rs y be the fare for city C from city A.

Then, $2x + 3y = 77$ (1) and $3x + 2y = 73$ (2)

Multiplying (1) by 3 and (2) by 2 and subtracting, we get: $5y = 85$ or $y = 17$.

Putting $y = 17$ in (1), we get: $x = 13$.

Directions for the following 3 (three) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

Dryland farming refers to the agricultural technique where the cultivation of crops is dependent on natural rainfall. Dryland farming, while accounting for 73 per cent of the cultivated area in India contributes only about 42 per cent of the food grains produced. This is primarily because this form of cultivation has not been accorded the level of priority it deserves, either by agricultural scientists, or by the government. Dryland farming is cultivation of land which derives water only through rains. Hence, an understanding of rainfall patterns and land characteristics is crucial for optimizing use of available water for Dryland crops. The Planning Commission is yet to detail a concrete target-oriented approach towards boosting productivity of Dryland Farming Areas of India. It is now feared that food imbalances would persist unless cultivation of oilseeds, pulses and coarse grains is stepped up in dry areas.

Significantly enough, the few Dryland projects sponsored by the Central Government, have yielded encouraging results. Schemes to popularize the use of seeds of improved varieties, fertilizer drills and plant protection measures were launched. It is also true that while the required knowledge and methodology for Dryland farming are available in the country, these have not reached the farmer at the grassroots level. This is because of the lack of extension services in the States. State Governments have not shown much interest in promoting Dryland farming, which they seem to consider as the exclusive responsibility of the Centre. Agricultural experts believe this form of cultivation holds great promise in increasing the country's food grains output. It needs to be borne in mind that even after full exploitation of the irrigation potential available, 50 per cent of India's cultivable land would still depend upon rains. In this context, greater attention has to be paid to the less developed regions so that agricultural prosperity is evenly distributed and the consequent increase in purchasing power of the farming community plays a supportive role for industrial advance. The chances of good crops increase with the usage of proper fertilizers and pesticides. The farmers need to be educated regarding the benefits of fertilizers. Studies have revealed that enthusiasm in adoption of better quality fertilizers and pesticides has slackened because farmers cannot be convinced that investment in costly inputs could be profitable in dryland regions also. It has been proved that intercropping

combinations with improved seeds, fertilizers and soil management are the most profitable and stable means of increasing yield and crop intensities for Dryland agriculture.

In purely geographic terms, India holds 13 per cent of the world's semi-arid areas and quite a sizeable population resides in these regions. As such, the thrust of its agricultural program has necessarily been on preserving soil moisture and preventing wastage of pond water. Tillage and planting operations, establishing optimum plant population levels, scientific weed control and efficient use of fertilizers are equally significant. Scientists have also devised contingency plans for dryland to meet the challenges of aberrant weather. These plans call for instant change of crops. It would be necessary to set up buffer banks to make available alternative crop seeds. As rain water has to seep into the soil through the surface, the land has to be kept open for receiving more and more moisture. Leveled and weeds free land: It should also be free of weeds, and leveled, wherever necessary, so that the maximum amount of rain water seeps into the soil.

Q.23) The purpose of Dryland farming in India is to – give the significant reason(s) using the options below.

1. Tillage and planting operations.
2. Establishing optimum plant population levels.
3. Scientific weed control and efficient use of fertilizers.
4. India holds semi-arid areas and sizeable populations.

Select the correct answer using the codes below:

- a) 1 and 2 only
- b) 3 only
- c) 4 only
- d) All of above

Q.23) Solution (c)

Option 'c' is the correct answer because India holds 13 percent of world's semi-arid areas where quite a sizeable population resides. That is why preservation of soil moisture is significant reason to balance food persist.

Q.24) According to the passage - Dryland farming thus needs to be given a complete scientific orientation and obtaining better results in a regime where there is too little utilization of irrigation potential. According to these lines what would is/are the expectation(s) can be helpful achieving significantly is/are

1. Increased production would bring down prices
2. The government's burden of food grains subsidy would be reduced
3. Public distribution system would become redundant
4. Food balance would persist.

Select the correct answer using the codes below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) All of above
- d) None of above.

Q.24) Solution (c)

Option 'c' is the correct answer because Dry land farming thus needs to be given a complete scientific orientation and obtaining better results in a regime where there is too little utilization of irrigation potential. Increased production would bring down the prices and all expectations given above. India holds one of largest population and it is a need to transform the Dry lands regions into farming to cover the food imbalance.

Q.25) According to the passage lack of the extension services in the states, what is the very important thing(s) is/are not been done. (Select the valid reason of lacking).

1. Education of farmers at grassroots levels.
2. Lack of Encouragement of dry land farming by state government.
3. Lacking of sponsorship
4. Popularizing of schemes.

Select the correct answer using the codes below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) 2 and 4 only
- d) Neither 1 nor 2

Q.25) Solution (a)

Option 'a' is the correct answer because according to the paragraph, central government sponsored for popularizing the schemes, but the state government has not shown much interest in promoting Dry land farming, the most important lacking part is the extension

services for farmers at grassroots level. When the grassroots farmers get education how the costly inputs will make profits in long terms then only there is hope to use the dry lands for farming, because it will not work out without farmer's involvement. No matter how much they sponsored or put scientists or develop projects, without grassroots farmers involvement is it not possible and that's why Education of farmers at grassroots levels are very important.

Q.26) First bunch of bananas has $\frac{1}{4}$ times the bananas in the second bunch and again as many bananas as in the second bunch. If the second bunch has 3 bananas less than the first bunch, what is the number of bananas in the first bunch?

- a) 9
- b) 12
- c) 15
- d) 20

Q.26) Solution (c)

Let the number of bananas in the second bunch be X.

Then, the number of bananas in the first bunch = $X + \frac{1}{4}X = \frac{5}{4}X$

So,

$$\frac{5}{4}X - X = 3$$

$$5X - 4X = 12$$

$$X = 12$$

$$\text{Number of bananas in first bunch} = \frac{5}{4} \times 12 = 15$$

Q.27) Rahul goes to a party with his friends.16 persons shake hands with one another in a party. In total how many shake hands took place?

- a) 124
- b) 120
- c) 165
- d) 170

Q.27) Solution (b)

$$\begin{aligned} \text{Total possible ways} &= {}^{16}C_2 \\ &= (16 \times 15) / (2 \times 1) = 120 \end{aligned}$$

Directions for the following 3 (three) items:

Read the following two passages and answer the items that follow. Your answers to these items should be based in the passage only.

Passage 1

Vivekananda realizes that mankind is passing through a crisis. The tremendous emphasis on the scientific and mechanical ways of life is fast reducing man to the status of a machine. Moral and religious values are being undermined. The fundamental principles of civilization are being ignored. Conflicts of ideals, manners and habits are pervading the atmosphere. Disregard for everything old is the fashion of the day. Vivekananda seeks the solutions of all these social and global evils through education. With this end in view, he feels the dire need of awakening man to his spiritual self-wherein, he thinks, lies the very purpose of education.

Vivekananda points out that the defect of the present-day education is that it has no definite goal to pursue. A sculptor has a clear idea about what he wants to shape out of the marble block; similarly, a painter knows what he is going to paint. But a teacher, he says, has no clear idea about the goal of his teaching. Swamiji attempts to establish, through his words and deeds, that the end of all education is man-making. He prepares the scheme of this man-making education in the light of his overall philosophy of Vedanta. According to Vedanta, the essence of man lies in his soul, which he possesses in addition to his body and mind. In true with this philosophy, Swamiji defines education as 'the manifestation of the perfection already in man.' The aim of education is to manifest in our lives the perfection, which is the very nature of our inner self. This perfection is the realization of the infinite power which resides in everything and every-where-existence, consciousness and bliss (Satchidananda). After understanding the essential nature of this perfection, we should identify it with our inner self. For achieving this, one will have to eliminate one's ego, ignorance and all other false identification, which stand in the way. Meditation, fortified by moral purity and passion for truth, helps man to leave behind the body, the senses, the ego and all other non-self-elements, which are perishable. He thus realizes his immortal divine self, which is of the nature of infinite existence, infinite knowledge and infinite bliss.

Q.28) According to the passage what is PERFECTION?

- a) Things are proper at top to bottom.
- b) There is no scope for undone things
- c) It is an expression of mankind

d) Nature of inner-self and realization of infinite power.

Q.28) Solution (d)

Option 'd' is correct answer because as mentioned 'The aim of education is to manifest in our lives into perfection, which is the very nature of our inner self. This perfection is the realization of the infinite power which resides in everything and everywhere as in consciousness and bliss (Satchidananda)

Q.29) According to the paragraph what is the purpose of Education?

1. Obtain the clear goal of teaching.
2. To understand that the end of all education is man making
3. Education should be free learning
4. Education is everything.

Select the correct answer using the codes below:

- a) 2 only
- b) 3 and 4 only
- c) Neither 1 and 2 nor 3 and 4
- d) All of above

Q.29) Solution (a)

Option 'a' is the correct answer because as mentioned in the passage painter knows what to paint, sculptor know what shape he wants to make but how many teachers know clearly what to teach for man making. So, the system should be able to make good man in all aspects.

Passage 2

A German proverb proclaims that a man is what he eats. It could equally have insisted that he is also what he does not eat. Indeed, a man is also what he wears, speaks, believes, worships, smells, the music he listens to, how he dances and the colours that entice him. This list can multiply, and multiply differently for different people. Human diversity is rich and immense.

India's own diversity is among the richest: countless culinary habits, dress, customs and musical traditions; more than 200 different dialects and languages; religious and doctrinal diversity, the ritual-oriented Vedic practices, the teachings of Buddha, Mahavira, Zarathustra, the Torah, and

Guru Nanak, the religiosity in the Puranas, Islam, Syriac-Christianity, the great varieties of animism and atheism.

Q.30) What is the author talking about in the passage?

- a) Diversity of humans as a whole as well as India's own diversity.
- b) India's rich diversity only.
- c) Religious and doctrinal diversity of India.
- d) The greatness of Indian traditions.

Q.30) Solution (a)

In the first paragraph the author talks about the diversity of humans as whole and in the second paragraph he talks about India's diversity. Hence option 'a' is correct.

Q.31) There is a huge escalator in Bengaluru International Airport with 500 steps moving with a speed of 20steps/min. Arun walks at a speed of 25steps/min. How long it will approximately take him to go up the escalator if he is also walking?

- a) 11mins
- b) 15mins
- c) 19mins
- d) 25mins

Q.31) Solution (a)

Net relative speed when both escalator and Arun is moving = 45steps/min

Time required to reach to the top = $500/45 \sim 11$ mins

Q.32) In a 100 m race, A beats B by 10 m and C by 20 m. In a race of 180 m, B will beat C by

- a) 20 m
- b) 30 m
- c) 40 m
- d) 60 m

Q.32) Solution (a)

A : B = 100:90

$$A : C = 100:80$$

$$B/C = (B/A) (A/C) = (90/100) (100/80) = 9/8$$

When B runs 9 m, C runs 8 m

$$\text{When B runs 180 m, C runs} = \frac{8}{9}(180)$$

Therefore, B beats C by $(180-160)$ m = 20 m

Q.33) In a 200 metres race A beats B by 35 m or 7 seconds. What is the A's time over the course?

- a) 40 second
- b) 45 second
- c) 33 second
- d) 30 second

Q.33) Solution (c)

B runs 35 m in 7 sec.

Therefore, B covers 200 m in $(7 \times 200)/35 = 40$ sec

B's time over the course = 40 sec

Therefore, A's time over the course = $(40-7) = 33$ sec

Q.34) A bag contains 50 paisa, 25 paisa and 10 paisa coins in the ratio 5:9:4, amounting to Rs 206. Find the number of coins of 50 paisa.

- a) 200
- b) 160
- c) 150
- d) 300

Q.34) Solution (a)

According to the question coin ration is

5:9:4

Now the value ratio will be

5x50:9x25:4x10

250:225:40

50:45:8

This value amounts to Rs 103, given amount is 206

So, 100:90:16

Clearly value of 50 paise coins is 100 Rs which means the number of 50 paise coins will be 200

Q.35) Shankar covers a distance of 30 km by autorikshaw in 35 min. After debording the rickshaw, he took rest for 20 min and covers another 10 km by a taxi in 20 min. Find his average speed for the whole journey

- a) 24 km/hr
- b) 32 km/hr
- c) 18 km/hr
- d) 22 km/hr

Q.35) Solution (b)

Total distance covered = (30+10) = 40 km

Total time taken = (35+20+20) = 75 min = 5/4 hr

We know that,

Average speed = Total distance covered/Total time taken = $40/(5/4) = 32$ km/hr

So, the average speed for the whole journey is 32 km/hr

Directions for the following 2 (two) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

There are many barriers of female employment in the course of the country's economic development and modernization. Women's illiteracy stands in the way of women's employment in business and commerce, agriculture and industries, both traditional and modern.

Even on the political scene, their small representation in legislative assemblies shows how marginal women are in the whole political process. Due to immense poverty of the majority of the Asian population, the opportunity of education, participation in social and civic life are thus restricted to women belonging to the upper and middle layers of society. One factor is the decline in household industry. Since household industries constituted the largest traditional non-agricultural source of women's employment, women were the greatest victims of the economic transformation. Within the category of household industry, those activities performed by women - such as hand weaving, oil-processing, and rice pounding, faced stiff competition from factory production. Technological changes have a dampening effect on the demand for unskilled labor. Since the majority of the women in the industrial sector are unskilled, they are the main victims of this change.

The problem of violence and atrocities against women in India is one important problem relating to women which cannot be ignored.

Women in the Asian society have been victims of humiliation, torture and exploitation for as long as we have written records of social organization and family life. Today, though women are being gradually recognized as important, powerful and meaningful contributors to the life of men; but some of the cruel practices thrive even today. In spite of the legislative measures adopted in favor of women in our society after Independence, the spread of education and women's gradual economic independence, countless women still continue to be victims of violence and extreme cruelty. The term 'atrocities against women' refers to as 'a cruel and wicked act against a woman which causes her emotional or physical injury or both'.

The Police Research Bureau, Delhi has referred to 'crime against women' under two categories; crimes under the Asian Penal Code, and crimes under the local and special laws.

The Bureau has identified seven crimes in the first category and four crimes in the second category of crimes. The seven crimes under the IPC are: rape, kidnapping and abduction, homicide for dowry, torture (physical and mental), molestation, eve-teasing and importation of girls up to 21 years of age, while the four crimes under the local and special laws are: commission of sati, dowry prohibition, immoral traffic, and indecent representation of women. There is a need to raise voice and fight against atrocities against women. Further, for each reported rape, many unreported rapes and for each reported eve-teasing many unreported eve-teasing cases occurs.

The number of reported cases of atrocities against women in India has increased in recent years. The increase in the number of reported not only indicates increased reporting but it only indicates an increased awareness about gender parity and women's rights.

Q.36) What is the purpose of referring the two categories for 'crime against women'?

1. It is helpful to identify the issue and its immediate solutions.
2. Immediate and quick action can be taken and rescue the victim.
3. Major physical crimes which needs immediate actions by IPC.
4. It is need of education and long term process which highly requires teaching under the moral methods by local and special laws.

Select the correct answer using the codes below:

- a) 1 and 2 only
- b) 3 and 4 only
- c) All of above
- d) None of above.

Q.36) Solution (a)

Option 'a' is the correct answer because option 'c' and 'd' are not correct and Option 'b' is about the names categories. According to the passage these categories are made because need of identifying issues and their immediate actions.

Q.37) Which statement(s) is/are not made by the writer according to the passage?

1. The number of reported cases of atrocities against women in India has decreased in recent years.
2. There is a need to raise voice and fight against atrocities against Women.
3. Further, for each reported rape, many unreported rapes and for each reported eve-teasing many unreported eve-teasing cases occurs.
4. Women are not confident and efficient to face and report the crimes against her nowadays.

Select the correct answer using the codes below:

- a) 1 only
- b) 2 and 3 only
- c) 4 only
- d) None of above

Q.37) Solution (c)

Option 'c' is the correct answer as mentioned above in passage.

Q.38) A train passes station platform in 36 sec and a man standing on the platform in 20 sec. if the speed of train is 54 km/hr, what is the length of platform?

- a) 120 m
- b) 240 m
- c) 320 m
- d) None of these

Q.38) Solution (b)

Speed = $54 \times \frac{5}{18} = 15$ m/sec

Length of the train = $15 \times 20 = 300$ m

Let the length of platform be 'X' m

Then, $(X+300)/36 = 15$

On solving, $X = 240$ m

Q.39) A man takes 6 hours 15 minutes in walking a distance and riding back to starting place. He could walk both ways in 7 hours 45 minutes. The time taken by him to ride back both ways is

- a) 4 hours 20 min
- b) 4 hours 30 min
- c) 4 hours 45 min
- d) 4 hours 50 min

Q.39) Solution (c)

Time taken in walking both the ways = 7 hours 45 minutes----- (1)

Time taken in walking one way and riding back = 6 hours 15 minutes----- (2)

By the equation $(2) \times 2 - (1)$, we have,

Time taken by the man in riding both ways

= 12 hours 30 minutes - 7 hours 45 minutes

= 4 hours 45 minutes.

Q.40) A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going in 10 sec. The speed of the train is

- a) 45 km/hr
- b) 48 km/hr
- c) 50 km/hr
- d) 54 km/hr

Q.40) Solution (c)

The speed of the train relative to man = $(125/10)$ m/s

= $(25/2) \times (18/5)$ km/hr

= 45 km/hr

Let the speed of the train be X km/hr. Then relative speed = $(X-5)$ km/hr

Therefore, $X-5 = 45$

$X = 50$ km/hr

Q.41) In an arts college, each student studies exactly one language. Three-fifths of the students take Sanskrit, and one-fourth of the remaining students take Hindi. If all of the other take Hindi, what per cent of the students take Hindi?

- a) 10
- b) 15
- c) 25
- d) 30

Q.41) Solution (d)

We know that $3/5$ th can be written as 60% or similarly, $1/4$ th could be written as 25% for any real number.

Number of students studying Sanskrit = 60%

Number of students studying Hindi = 25% of remaining 40% which is nothing but 10% of total

So, number of students studying Hindi is remaining 30%.

Q.42) A boat running downstream covers a distance of 16 km in 2 hours while for covering the same distance upstream, it takes 4 hours. What is the speed of the boat in still water?

- a) 4 km/hr
- b) 6 km/hr
- c) 8 km/hr
- d) 10 km/hr

Q.42) Solution (b)

Rate of downstream = $16/2 = 8$ km/hr

Rate of upstream = $16/4 = 4$ km/hr

Therefore, speed in still water = $(8+4)/2 = 6$ km/hr

Q.43) A wheel that has 6 cogs is meshed with a larger wheel of 12 cogs. If the smaller wheel has made 22 revolutions, then find the number of revolutions made by the larger wheel.

- a) 15
- b) 11
- c) 18
- d) 17

Q.43) Solution (b)

As number of cogs increase, the revolutions made decrease. Hence, this is a problem related to indirect proportion

Let the number of wheels be X.

More cogs, less revolutions

Given: 6 cogs meshed with wheel of 12 cogs and smaller wheel made 22 revolutions

Therefore,

$$12:6 :: 22:X$$

$$12 \times X = 6 \times 22$$

$$X = 11$$

Q.44) A man's speed with the current is 15 km/hr and the speed of the current is 2.5 km/hr. The man's speed against the current is

- a) 8.5 km/hr
- b) 9 km/hr
- c) 10 km/hr
- d) 12 km/hr

Q.44) Solution (c)

Man's rate in still water = $(15 - 2.5)$ km/hr = 12.5 km/hr.

Man's rate against the current = $(12.5 - 2.5)$ km/hr = 10 km/hr.

Q.45) Aryan starts walking from a place at 8 am at a speed of 10 kmph. At 10 am Sanju starts from the same place walking in the same direction at a speed of 15 kmph. When will Sanju meet Aryan?

- a) 11 am
- b) 12 pm
- c) 2 pm
- d) 3 pm

Q.45) Solution (c)

This is a question related to relative speed, since both of them are moving in the same direction the resultant speed will be the difference of the two speeds, i.e. $15 - 10 = 5$ kmph

At 10 am Aryan would have travelled 20 km since his speed is 10 kmph

Therefore, Sanju meets Aryan after $20/5 = 4$ hours i.e. at 2 pm

Directions for the following 2 (two) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

The Criminal Investigation Department often makes use of fingerprints in identifying culprits. This procedure is based on the accepted truth that the fingerprints of no two individuals are the same. A glance at the five fingers of our own hand convinces us of the differences that exist among them. No two individuals are the same, not even identical twins. Everyone is different from the other in one way or another.

Noticeable differences may exist in size, weight, age appearance, colour, voice, smile, etc. There are other differences which are not easily observable. Differences exist in the mental make-up, psychological actions, understanding capacity, attitudes, abilities, interests, etc.

Every individual is a separate entity having his or her own identity. It speaks highly of the Creator who has not created human beings like the modern machine-made goods. Every individual has been created separately and differently from the rest.

Individual differences exist because of heredity, family background, education,, environment, etc. Whatever the causes or reasons, we must accept the fact that there are individual differences both perceptible and non-perceptible. Consequently, two individuals cannot be expected to react to a situation or a problem in the same way. There are as many opinions as there are men. It is bound to be so. One should not be surprised to get different opinions from different people on the same issue.

Individual differences affect the actions, reactions and performances of people. In a family of three children, the eldest may do extremely well at studies, and the parents expect the same kind of performance from the others. It is certainly unjust and unfair as each of them is different in several ways. Very often we wonder why a person reacts the way he or she does. We consider that person to be strange, abnormal or stupid. Yet, that person may be quite normal and intelligent. These differences in reactions can be understood only if individual differences are kept in mind. In fact, this concept helps people understand each other better. It results in respect and appreciation for each other's views.

It is understood that each one is a separate individual with his or her own identity. No one is expected to be a carbon copy of another. We may imitate or hero-worship, but it would be wrong to identify ourselves with someone else. We are different and must remain so in our thoughts, words and actions.

Q.46) What are the causes for individuals differences?

- a) Every individual has different fingerprints.

- b) Every individual wears different clothes and has different hairstyles and appearance.
- c) Every individual has a different background, educational environment and heredity.
- d) Every individual is the offspring of different parents.

Q.46) Solution (c)

Kindly refer to the 1st sentence of the 4th paragraph of the passage in which it is clearly stated that Individual differences exist because of heredity, family background, education, environment, etc.

Q.47) Find the incorrect statement on the basis of the given passage.

- a) It is unjust and unfair to think all the children of the same person to be identical.
- b) Two sons of the same parents will react to situation in the same way if they are identical twins.
- c) The procedure of the CID is based on the truth that the fingerprints of no two individuals are the same.
- d) No one is expected to be a carbon copy of another.

Q.47) Solution (b)

It is clearly the statement given as option 'b' which is incorrect here as it speaks exactly opposite to what is stated in the passage.

Q.48) A motorbike leaves point A at 1 pm and moves towards point B at a uniform speed. A car leaves point B at 2 pm and moves towards point A at a uniform speed which is double that of the motorbike. They meet at 3:40 pm at a point which is 168 km away from A. What is the distance, in km, between A and B?

- a) 364
- b) 378
- c) 380
- d) 415

Q.48) Solution (b)

Let the distance travelled by car be X km

Distance travelled by bike = 168 km

Speed of car is double the speed of the bike

$$X/(3:40-2:00) = 2 * X/(3:40-1:00)$$

$$X/100 = 2(168/160)$$

$$X = 210$$

Hence, the distance between A and B is $X + 168 = 378$ km

Q.49) 2 cars facing each other are at a distance of 500 m from each other. Each car moves forward by 100 m at a speed of 50 m/s and then moves backwards by 50 m at a speed of 25 m/s. How long will they take to collide?

- a) 14 sec
- b) 13 sec
- c) 11 sec
- d) 10 sec

Q.49) Solution (a)

If we observe the series carefully running from time = 2 sec [time= distance/speed i.e. 100/50] and hence,

Moving forward:

At 2 sec each car will move to a distance of 100 m

Moving backwards:

At 4 sec each car will move to a distance of 50 m

Moving forward:

At 6 sec each car will move to a distance of 150 m

Moving backwards:

At 8 sec each car will move to a distance of 100 m

Moving forward:

At 10 sec each car will move to a distance of 200 m

Moving backwards:

At 12 sec each car will move to a distance of 150 m

Moving forward:

At 14 sec each car will move to a distance of 250 m and in all 500 m that is the point they must collide.

Q.50) In an examination, a student had to obtain 40% of the maximum marks to pass. He got 130 marks and failed by 30 marks. The maximum marks of the examination were?

- a) 280
- b) 400
- c) 340
- d) 390

Q.50) Solution (b)

Let the maximum marks be M

Then marks required to pass= $0.4M$

The student failed by 30 Marks

So, the passing marks = $130+30= 160$

Now $0.4M=160$

Hence, $M= 400$

Directions for the following 2 (two) items:

Read the following two passages and answer the items that follow. Your answers to these items should be based in the passage only.

Passage 1

Nationalism, of course is a curious phenomenon which at a certain stage in a country's history gives life, growth and unity. But at the same time, it has a tendency to limit one because one thinks of one's country as something different from the rest of world. One's perceptive changes

and one is continuously thinking of one's own struggles and virtues and failing to the exclusion of other thoughts. The result is that the same nationalism which is the symbol of growth for a people becomes a symbol of the cessation of that growth in mind. Nationalism, when it becomes successful sometimes goes on spreading in an aggressive way and becomes a danger internationally. Whatever line of thought you follow, you arrive at the conclusion that some kind of balance must be found. Otherwise something that was good can turn into evil. Culture which is essentially good becomes not only static but aggressive. It is something that breeds conflict and hatred when looked at from a wrong point of view. Apart from the political and economic problems of the age, perhaps, that is the greatest problem today because behind it there is tremendous search for something which it cannot find. We turn to economic theories because they have an undoubted importance. It is folly to talk of culture or even of god. When human beings starve and die. Before one can talk about anything else one must provide the normal essentials of life to human beings. That is where economies come in. Human beings today are not in mood to tolerate this suffering and starvation and inequality when they see that the burden is not equally shared. Others profit while they only bear the burden.

Q.51) The greatest problem in the middle of the passage refers to the question

- a) how to mitigate hardship to human beings
- b) how to contain the dangers of aggressive nationalism
- c) how to share the economic burden equally
- d) how to curb international hatred

Q.51) Solution (b)

Nationalism, when it becomes successful sometimes goes on spreading in an aggressive way and becomes a danger internationally. Whatever line of thought you follow, you arrive at the conclusion that some kind of balance must be found.....Hence option b is the correct answer.

Passage 2

In the United States between 2001 and 2014, higher income was associated with greater longevity and differences in life expectancy across income groups increased over time. However, the association between life expectancy and income varied substantially across areas; differences in longevity across income groups decreased in some areas and increased in others. The differences in life expectancy were correlated with health behaviors and local area characteristics.

Q.52) Apart from income, which of the following factors too contribute towards greater longevity and difference in life expectancy?

1. Health behavior
2. Local area characteristics
3. Education qualification

Which of the following options are correct?

- a) Only 1 & 2
- b) Only 1 & 3
- c) Only 2 & 3
- d) All 1, 2 and 3

Q.52) Solution (a)

There is no discussion about the role of education in the life span.

Q.53) On a straight road, car X and car Y are traveling at different constant rates. If car X is now 2 km ahead of car Y, how much time from now will car X be 4km ahead of car Y?

Statement I: Car X is traveling at 45 km/hr and car Y is traveling at 30 km/hr.

Statement II: 6 minutes ago, car X was 1/2 km ahead of car Y

- a) Statement I alone is sufficient, but statement II alone is not sufficient.
- b) Statement II alone is sufficient, but statement I alone is not sufficient
- c) Both statements together are sufficient, but neither statement alone is sufficient
- d) Each statement alone is sufficient

Q.53) Solution (d)

The car X is 2 km ahead of car Y. To make this difference 4km, car X has to travel 2km more than car Y.

From statement I, the relative speed of car X is $45 - 30 = 15$ km/hr

So, the time required is $(2/15)*60 = 8$ min

Hence, statement I alone is sufficient.

From statement II, if 6 minutes ago, car X was 1/2 km ahead of car Y and now it is 2 km ahead of Y, it means X gained 1.5 km in 6 minutes.

Since the cars are moving at constant speeds, so car X will gain 2 km in 8 minutes.

Hence, statement II is also sufficient.

Therefore, both the statements are individually sufficient.

Q.54) The ratio of metal 1 and metal 2 in Alloy A is 3:4. In Alloy B same metals are mixed in the ratio 5:8. If 26 kg of Alloy B and 14 kg of Alloy A are mixed then find out the ratio of metal 1 and metal 2 in the new Alloy.

- a) 3:2
- b) 2:5
- c) 2:3
- d) 5:3

Q.54) Solution (c)

Alloy A contains Metal 1 and Metal 2 in the ratio 3:4

Likewise, Alloy B contains Metal 1 and Metal 2 in the ratio 5:8

Therefore, Metal 1 in Alloy A will be $(3/7)*14 = 6\text{kg}$ and Metal 2 in Alloy A will be $(4/7)*14 = 8\text{ kg}$

Similarly, Metal 1 in Alloy B will be $(5/13)*26 = 10\text{ kg}$ and Metal 2 in Alloy B will be $(8/13)*26 = 16\text{ kg}$

Required ratio = $(6+10):(8+16) = 16:24 = 2:3$

Q.55) In a 500 m race, the ratio of the speeds of two contestants A and B is 3:4. A has a start of 140 m. Then, A wins by:

- a) 60m
- b) 40m
- c) 20m
- d) 10m

Q.55) Solution (c)

To reach the winning post, A will have to cover a distance of $(500 - 140)\text{m}$, i.e., 360 m.

While A covers 3 m, B covers 4 m. While A covers 360 m, B covers $(4/3)*360 = 480\text{ m}$.

Thus, when A reaches the winning post, B covers 480 m and therefore remains 20 m behind.

Directions for the following 2 (two) items:

Read the following passage and answer the items that follow. Your answers to these items should be based in the passage only.

The Indian middle class consist of so many strata that it defies categorisation under a single term class, which would imply a considerable degree of homogeneity. Yet two paradoxical features characterise its conduct fairly uniformly; extensive practice and intensive abhorrence of corruption. In the several recent surveys of popular perceptions of corruptions, politicians of course invariably and understandably top the list, closely followed by bureaucrats, policemen, lawyers, businessmen and others. The quintessential middle class, if teachers do not figure high on this priority list, it is not for lack of trying, but for lack of opportunities. Over the years, the sense of shock over acts of corruption in the middle class has witnessed a steady decline, as its ambitions for a better material life have soared but the resources for meeting such ambitions have not kept pace. What is fascinating however is the intense yearning of this class for a clean corruption less politics and society, a yearning that has again and again surfaced with any figure public or obscure, focus on his mission of eradicating corruption. Even the repeated failure of this promise on virtually every man's part has not subjected it to the law of diminishing returns.

Q.56) The intense Middle Class intensely yearns for

- a) better material resources
- b) better material resources
- c) clean honest society
- d) law of increasing returns

Q.56) Solution (c)

What is fascinating however is the intense yearning of this class for a clean corruption less politics and society...Hence option 'c' is the correct answer.

Q.57) Teachers are not high on the list of corruption because they do not have

- a) courage
- b) opportunities
- c) support
- d) ambition

Q.57) Solution (b)

Self- explanatory

Q.58) The salaries A, B, C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries?

- a) 3 : 3 : 10
- b) 10 : 11 : 20
- c) 23 : 33 : 60
- d) Cannot be determined

Q.58) Solution (c)

Let A = 2k, B = 3k and C = 5k.

A's new salary = $(115/100) * 2k = 23k/10$

B's new salary = $(110/100) * 3k = 33k/10$

C's new salary = $(120/100) * 5k = 6k$

Therefore, the new ratio = $[(23k/10) : (33k/10) : 6k] = 23:33:60$

Q.59) What is the speed of the train?

Statement I: The train crosses a signal pole in 18 seconds.

Statement II: The train crosses a platform of equal length in 36 seconds.

Statement III: Length of the train is 330 metres.

- a) Statement I and II only are sufficient
- b) Statement II and III only are sufficient
- c) Statement I and III only are sufficient
- d) Statement III and either Statements I or II are sufficient

Q.59) Solution (d)

Let the speed of the train be x metres/sec.

Time taken to cross a signal pole = Length of the train/Speed of the train

Time taken to cross a platform = (Length of the train + Length of the Platform)/Speed of the train

Length of train = 330 m.

Statements I and III give, $18 = 330/x \implies x = 330/18 = 55/3$ m/sec

Statements II and III give, $36 = 2*(330/x) \implies x = 55/3$ m/sec

Therefore, option d is correct.

Q.60) A person covered a distance from P to Q at a speed of 40 kmph. On the return journey, he covered three-fifths of the distance in two-third of the time he took to cover from P to Q. At what speed should he travel to complete the remaining journey from Q to P, in the remaining time?

- a) 45 km/hr
- b) 48 km/hr
- c) 54 km/hr
- d) 61 km/hr

Q.60) Solution (b)

Let the time taken to cover the distance from P to Q be 't' hours and the distance between P and Q = 40t km

It is given that the person covered $\frac{3}{5}$ of 40t distance in $\frac{2t}{3}$ hours

So, he has to cover $\frac{2}{5}$ of 40t i.e. 16t in $\frac{1t}{3}$ hours

Speed = $16t * \frac{3}{1t} = 48$ kmph [Speed = Distance/Time]

Hence, option b is correct.

Q.61) A & B can make paintings in 6 days; B & C can make those paintings in 10 days. If A, B & C together can finish the work in 4 days, then A & C together will do it in

- a) $4\frac{2}{7}$ Days

- b) $2\frac{1}{8}$ Days
- c) $2\frac{2}{5}$ Days
- d) $4\frac{3}{8}$ Days

Q.61) Solution (a)

We are given that, A, B and C together complete the work in 4 days

We can write (A+B+C)'s 1 day work = $1/4$

Similarly, (A+B)'s 1 day work = $1/6$ days and (B+C)'s 1 day work = $1/10$

Since the work is divided in combination and we are asked to find out the combined work of (A + C), so we can find out,

$$\begin{aligned} (A + C)'s \text{ 1 day work} &= [2 (A+B+C)'s \text{ 1 day work}] - [(A+ B)'s \text{ 1 day work} + (B+C)'s \text{ 1 day work}] \\ &= 2(1/4) - [(1/6) + (1/10)] \\ &= 7/30 \end{aligned}$$

Hence, A & C together can complete the work in $30 / 7$ days = $4\frac{2}{7}$ Days

Q.62) A student has to score 35% marks to get through in an exam, if he gets 40 marks and fails by 30 marks, then the maximum marks set for the examination is

- a) 150
- b) 200
- c) 300
- d) 350

Q.62) Solution (b)

Let the maximum marks be X.

According to the question,

$$35\% \text{ of } X = 40+30$$

$$35X/100 = 70$$

X = 200

Q.63) A can complete a piece of work in 18 days, B in 20 days and C in 30 days, B and C together start the work and forced to leave after 2 days. What is the time taken by A alone to complete the remaining work?

- a) 15 days
- b) 18 days
- c) 20 days
- d) 25 days

Q.63) Solution (a)

(B+C)'s 2 days work = $2 \times (1/20 + 1/30) = 2 \times (3+2/60) = 1/6$ part.

Remaining work = $1 - 1/6 = 5/6$ part

A's one day's work = $1/18$ part

Time taken to complete the work = $(5/6) / (1/18)$ days

Hence, Time taken to complete the work = $(5/6) \times 18 = 15$ days.

Q.64) Manju can complete a job in 5 days. Manju is twice as fast as Ajay while Ajay is thrice as fast as Nandu. If all of them work together, in how many days would the job get completed?

- a) 3 days
- b) 5 days
- c) 9 days
- d) 12 days

Q.64) Solution (a)

Manju can do a piece of work in 5 days, Ajay can do the same work in 10 days and Nandu can do the same work in 30 days.

So together they can do the piece of work in 1 day

= $(1/5) + (1/10) + (1/30)$

$$= 10/30 = 1/3$$

In a day they finish 1/3rd of the work

Hence, together they will finish the piece of work in 3 days

Q.65) Amar does 80% of a work in 20 days. He then calls in Baskar and they together finish the remaining work in 3 days. How long Baskar alone would take to do the whole work?

- a) 23 days
- b) 30 days
- c) $37\frac{1}{2}$ Days
- d) 42 days

Q.65) Solution (c)

Whole work is done by Amar in $(20 \times \frac{5}{4}) = 25$ days.

Now, $(1 - \frac{4}{5})$ i.e., $\frac{1}{5}$ work is done by Amar and Baskar in 3 days.

Whole work will be done by Amar and Baskar in $(3 \times 5) = 15$ days

Amar's 1 day's work = $\frac{1}{25}$

(Amar + Baskar)'s 1 day's work = $\frac{1}{15}$

So, Baskar's 1 day's work = $\frac{1}{15} - \frac{1}{25} = \frac{2}{75}$

Therefore, Baskar alone would do the work in $75/2$ days, which is equal to $37\frac{1}{2}$ Days

Q.66) Twenty women can do a work in sixteen days. Sixteen men can complete the same work in fifteen days. What is the ratio between the capacity of a man and a woman?

- a) 3 : 4
- b) 4 : 3
- c) 5 : 3
- d) 1 : 2

Q.66) Solution (b)

(20 x 16) women can complete the work in 1 day.

So, 1 woman's 1 day's work = $1/320$

(16 x 15) men can complete the work in 1 day.

So, 1 man's 1 day's work = $1/240$

So, required ratio = $(1/240) : (1/320)$

$$= 1/3 : 1/4$$

$$= 4 : 3$$

Q.67) How many seconds will a train 100 m in length, travelling at the rate of 60 km an hour, take to pass another train 75 m long, proceeding in the same direction at the rate of 42 km an hour?

- a) 30 seconds
- b) 35 seconds
- c) 40 seconds
- d) 45 seconds

Q.67) Solution (b)

Relative speed of trains = $60 - 42 = 18$ km/hr

$$18 \frac{5}{18} = 5 \text{ m/s}$$

$$\text{Time} = \frac{100 + 75}{5} = 35 \text{ seconds}$$

Q.68) The ratio of the speeds of the train and the man is 6:1. The length of the train is 650m and crosses a pole in 1 minute 5 seconds. In how much time will the man cross the 240m long platform?

- a) 1 min 24 sec
- b) 2 min 30 sec

- c) 2 min 24 sec
- d) 3 min 20 sec

Q.68) Solution (c)

Speed of the train = $6X$ m/s, speed of the man = X m/s

Length of the train = 650m, time taken to cross a pole = 1 minute 5 seconds = 65 seconds.

$$S = D/T$$

$$6X = 650/65$$

$$X = 10/6 = 5/3$$

Speed of the man = $5/3$ sec

Man can cross the 240m platform in $240/(5/3) = 144$ sec = 2 min 24 sec

Study the following 2 (two) passages and answer the questions that follow. Your answers to these questions should be based on the passage only.

Passage 1

Arjun Raj's film is under fire from the country's self-appointed moral police. They contend that the film is a violation of the Indian cultural mores and cannot be allowed to influence the Indian psyche. According to them, such films ruin the moral fabric of the nation, which must be protected and defended against such intrusions at all cost, even at the cost of cultural dictatorship.

Q.69) Based on the information in the above passage, it can be inferred that

- a) the assumption underlying the moral police's critique of Fire is that the Indian audience is vulnerable to all types of influence
- b) the assumption underlying the moral police's critique of Fire is that the Indian audience is impressionable and must be protected against 'immoral' influences
- c) the moral police think it has the sole authority to pass judgement on films screened in India
- d) None of the above

Q.69) Solution (b)

According to the paragraph, the moral police think that the movies are bound to affect the judgment of Indian audience and hence they need to censor the movie to preserve their already existing judgment and protect them from the influence of such a work.

Option b correctly summarizes the inference

Passage 2

The dominant modern belief is that the soundest foundation of peace would be universal prosperity. One may look in vain for historical evidence that the rich have regularly been more peaceful than the poor, but then it can be argued that they have never felt secure against the poor; that their aggressiveness stemmed from fear; and that the situation would be quite different if everybody were rich.

Q.70) It can be inferred from the above passage

- a) That a lot of aggression in the world stems from the desire of the haves to defend themselves against the have-nots.
- b) Universal prosperity as a fool-proof measure of peace can no longer be accepted.
- c) Both a and b
- d) Neither a nor b

Q.70) Solution (a)

The option b is opposite to what the argument is conveying.

Option a can be inferred. According to the argument, a lot of aggression has stemmed because the rich want to defend themselves against the poor. In other words, the aggression has stemmed from the desire of the haves to defend themselves against the have-nots.

Read the following two (2) passages and answer the questions that follow the passage. Your answer to these questions should be based on passage only.

Passage 1

In the world, ever-expanding and developing at an exponential rate in all aspect (although for only few), growth, expansion, sustainability, connection etc. are the buzz words. This race behind numbers always amazes me.

There is a quote of Mother Teresa, "we can do no great things - only small things with great

love.” There is no element of doubt about the accomplishment of such an inspiring soul. But then, why do we need such a stressful journey in order to achieve big things. There must be a way of achieving what we want without compromising the quality of life, without compromising the real purpose of life which is nothing but happiness. We see people throwing big words in order to make themselves visible in their journey. In my experience, i believe that if we are doing our work with purity & honesty, having faith, the whole universe conspires for us and the resources comes to your doorstep at the right time. I will corroborate my words with this real example. In the initial phase of raising funds for Paryavaran Mitra, we were looking for a figure around \$40,000. We approached selected potential donors with a very plain non-fancy proposal but absolutely pure heart and determination to slog-in on field. But as I said, to our surprise, we were able to raise \$125,000. The point I am trying to make is that universe took care of the expansion when the intention was pure. So, all we need to do is to take one step at a time and leave the rest on the almighty.

Secondly, most of us try to work harder for the growth & happiness of our family and may be close friends. As the prevailing definition of happiness is directly linked with materialistic prosperity, the journey seems to become never ending one. Again based on my experience of journey from MIT to Gandhi Ashram, i could definitely say that we all will rationally agree that materialistic gains will never give sustainable happiness to anyone. So, given the fact that we were blessed to have received good education/skills enabling us to secure jobs in best possible organisations of our interest, we all could achieve that level of decent & healthy lifestyle with ease keeping the necessary balance between work and life. After all, work is just a part of life, not the heart of life. So, there is no point of living a life where we have resources at our disposal, but don't have time to enjoy them.

Third, but most important, the purest and strongest relationship made by almighty is relationship between mother and child. We all see that there is no place for numbers in this relation yet it is the most important aspect in any living being's life since day one of its existence. If mothers are not there we won't exist. All she cares is about her child. Then, why can't we using similar philosophy, live a life which is more social, caring and inclusive as its main ingredient and sustainable happiness as the biggest outcome. I sincerely believe that we all have potential to do great things and yet live a fully balanced happy and healthy life. For me living example of such a life is of Virenbai, founder – Manav Sadhna. He created this organisation which is serving thousands of underprivileged kids of slum communities on a daily basis from last three decades. Yet he completely balances his personal life with his consulting work for self-reliance, loads of acts of kindness and service to his mother.

Q.71) What is author's opinion about success in professional life and Mother Teresa's given philosophy?

- a) Professional life is completely different way of lifestyle as compared to the social one which Mother Teresa belonged to.
- b) It will be an impossible task to achieve professional heights following the path of Mother Teresa.
- c) Success will automatically be taken care given we continue our journey with purity and sincerity.
- d) There is no context given in the article to comment on this question.

Q.71) Solution (c)

Through couple of examples, author has clearly stated the relation of purity & sincerity with that of the success.

It clearly describes that the professional life will also be taken care given our small actions are pure.

Q.72) What is the underlying message given by the passage?

- a) Expansion is the ultimate reality of life and best way to happiness and satisfaction.
- b) Materialistic accomplishment is the main source of happiness and satisfaction in our life.
- c) We can do great things keeping focus on smaller things at a time and doing that with purity and honesty.
- d) A balanced life is a myth; a person can either be accomplished or happy & satisfied but not both.

Q.72) Solution (c)

Taking the example of Mother Teresa in the beginning and Viren Joshi in the later half, author lays emphasis on the intention in every small/big actions and its positive ripple effect on the larger canvas.

Passage 2

The effect produced on the mind by travelling depends entirely on the mind of the traveller and on the way he conducts himself. The chief idea of one very common type of traveller is to see as many objects of interest as he possibly can. If he can say after returning home that he has seen such and such temple, castle, picture gallery, or museum, he is perfectly satisfied. Far different is the effect of travels upon those who leave their country with a mind prepared by culture to feel intelligent admiration for all the beauties of nature and art to be found in foreign lands.

When they visit a new place, instead of hurrying from temple to museum to picture gallery, they allow the spirit of the place to sink into their minds, and only visit such monuments as the time they have at their disposal allows them to contemplate without irreverent haste.

Q.73) It can be inferred from the above passage that

- a) the writer prefers the second type of traveller
- b) the first type of traveller is the lay traveller who does not understand the worth of any place he travels to
- c) the objective of the second type of traveller is not to see much, but to see well
- d) All of the above

Q.73) Solution (c)

According to the passage, the latter kind of travellers only visits such monuments as the time they have at their disposal allows them to contemplate without irreverent haste.

Option a is incorrect as the preference of the writer is not the main subject of focus.

Option b is way too harsh. This cannot be inferred from the passage.

Option c correctly describes the second kind of travellers.

Thus, option c is the correct

Q.74) A can do a piece of work in 20 days and B in 40 days. If they work on it together for 5 days then, find the fraction of the work that is uncompleted

- a) 5/8
- b) 8/15
- c) 7/15
- d) 1/10

Solution (a)

Part of the work completed in 1 day = $1/20 + 1/40 = 6/80 = 3/40$

Therefore, part of the work completed in 5 days

$5 \times 3/40 = 15/40$

Remaining part = $1 - 15/40 = 5/8$

Q.75) In Bangalore, 12 men and 18 boys completed construction of a primary health centre in 60 days, by working for 7.5 hours a day. Subsequently the residents of the neighbouring Mysore also decided to construct a primary health centre in their locality, which would be twice the size of the facility built in Bangalore. If a man is able to perform the work equal to the same done by 2 boys, then how many boys will be required to help 21 men to complete the work in Mysore in 50 days, working 9 hours a day?

- a) 45 boys
- b) 48 boys
- c) 40 boys
- d) 42 boys

Q.75) Solution (d)

It is given that a man can perform the work equal to the same done by 2 boys. Hence, we can assume that in Bangalore 21 men $(12+18/2)$ completed construction of a primary health centre in 60 days, by working for 7.5 hours a day.

Hence, the total of men hours required to complete the primary health centre in Bangalore = $7.5 \times 21 \times 60 = 9450$.

Let us assume that 'n' be the number of boys required to help 21 men to complete the work in Mysore in 50 days by working 9 hours a day.

Therefore, we can say that

$$2 \times 9450 = 50 \times 9 \times (21 + n/2)$$

$$42 = 21 + n/2$$

$$n = 42$$

Q.76) A certain number of people were supposed to complete a work in 24 days. The work, however, took 32 days, since 9 people were absent throughout. How many people were supposed to be working originally?

- a) 32
- b) 27
- c) 36
- d) 30

Q.76) Solution (c)

Let the total work be W units and the number of people employed to do it were 'x'

Since the work to be done is same, we equate both the cases

$$24*x = 32*(x-9)$$

$$3x = 4(x-9)$$

$$x=36$$

Therefore, the number of people who were supposed to work originally was 36

Q.77) Q is twice efficient as P and P can do a piece of work in 15 days. P started the work and after a few days, Q joined him. They completed the work in 11 days, from the starting. For how many days did they work together?

- a) 1 day
- b) 2 days
- c) 6 days
- d) 5 days

Q.77) Solution (b)

P can do a piece of work in 15 days.

Q is twice as efficient as P.

So, Q can do the same piece of work in 7.5 days.

Assume the total work to be 15 units

P does 1 unit per day and Q does 2 units per day.

For the first x days, P worked alone and hence work done per day is

$$1 * x = x \text{ units.}$$

For the next (11 - x) days, P and Q worked together. In 1 day, they will do (1 + 2) = 3 units.

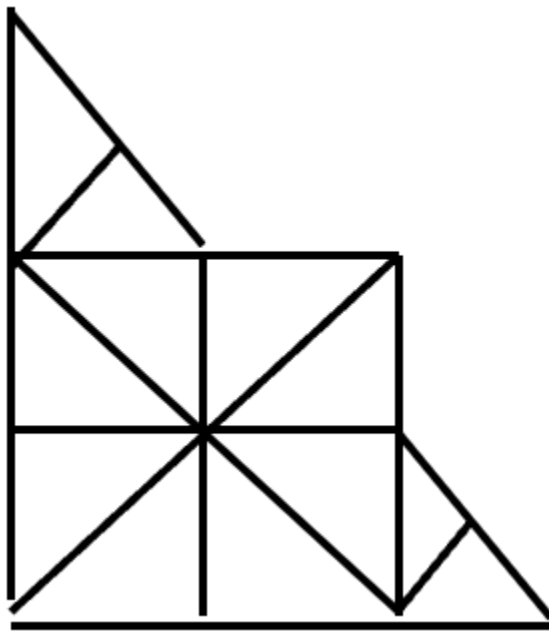
So, in 11 - x days, they will do 3(11 - x) units.

$$33 - 3x + x = 15$$

$$2x = 18 \text{ and } x = 9.$$

Thus, P worked alone for 9 days whereas P and Q worked together for 2 days.

Q.78) How many triangles are there in the given figure?



- a) 21
- b) 22
- c) 24
- d) 26

Q.78) Solution (b)

There are in total 22 triangles

Read the following passage and answer the items that follow. Your answers to these items should be based on the passages only.

Passage 1

It is notable that power major NTPC has joined hands with oil giant IOC to set up a series of electric vehicle (EV) charging stations in cities and along highways. There is much potential for India to emerge as a leader in small and public EVs, given high latent demand. The benefits in reducing demand for imported crude oil can be huge, apart from reducing carbon emissions and other air pollutants.

The most effective way to bring down carbon emissions and pollution from transport is to vastly expand and improve public transport — buses are just 2% of the vehicles on the road. That said, there is much scope to replace India's giant fleet of two-wheelers with electric bikes. India has over 170 million two-wheelers, and sales data from the last six years show that 79% of on-road vehicles here are two-wheelers. It would make perfect sense to boost supply of EVs, especially two-wheelers, e-rickshaws, tempos and small cars, so as to complement and supplement public transport going forward. Estimates suggest that by meeting a rising part of the incremental demand for mobility, EVs can lead to macroeconomic benefits, and sooner rather than later. Assuming only about half a litre of petrol consumption per two-wheeler daily, or about 200 litres annually, the volumes would add up to over 30 billion litres. And the bill for which, at current prices, would amount to well over Rs 2 lakh crore.

In tandem, we need power reforms to rev up utility realisations and strengthen the grid. India also has an opportunity in supplying on-board electric batteries. Swapping services to provide charged batteries on lease would step-up diffusion of EVs. A power-electronics industry ecosystem would raise production and provide high-efficiency subsystems for EVs. India must not miss the bus on EVs.

Q.79) "There is much potential for India to emerge as a leader in small and public EVs, given high latent demand." What can be logically deduced from the given sentence?

1. Electric vehicles are less in developed countries as compared to India.
2. India has not yet adopted electric vehicles fully.
3. Indians are already demanding a huge number of electric vehicles.

Choose the correct option

- a) Only statement 3 is correct
- b) Only statement 2 is correct
- c) Only statements 1 and 3 are correct
- d) All the statements 1, 2 and 3 are correct

Q.79) Solution (b)

Statement 1: Electric vehicles are less in developed countries as compared to India.

Nothing has been indicated regarding the number of electric vehicles in developed countries.

This makes statement 1 an invalid one.

Statement 2: India has not yet adopted electric vehicles fully.

This is correct. Since there is scope for adoption of a huge number of EVs, India has the potential to emerge as a global leader in this sector but it has not yet achieved so. Thus, statement 2 is valid.

Statement 3: Indians are already demanding a huge number of electric vehicles.

The demand for electric vehicles in India is still latent, i.e., existing but not yet developed or manifested. This, hence, makes statement 3 invalid.

Evidently, option b is the correct answer.

Q.80) From the given information, the tone of the passage can be deduced as

- a) Sarcastic
- b) Caustic
- c) Cynical
- d) Laudatory

Q.80) Solution (d)

Sarcastic, caustic and cynical are tones that correspond to negative passages. However, the given passage is not negative in nature. Hence, options a, b and c are eliminated.

The tone of this passage is positive and optimistic. The author supports as well as justifies the subject. Hence, option d is the correct answer.

Read the following three passages and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Passage 1

The casual horrors and real disasters are thrown at newspaper reader without discrimination. In the contemporary arrangements for circulating the news, an important element, evaluation is always weak and often wanting entirely. There is no point anywhere along the line somewhere someone put his foot down for certain and says, "This is important and that does not amount to row of beans; deserves no one's attention, and should travel the wires no farther". The junk is

dressed up to look as meaningful as the real news.

Q.81) The writer of the above passage

- a) seems to be happy with the contemporary arrangements for circulating news
- b) is shocked by the casual stories about horrors and disasters reported in the newspapers
- c) wants better evaluation of news before publication
- d) wants to put his foot down on news stories

Q.81) Solution (c)

Option a is wrong and option b does not give the whole idea of the passage. Option d is also wrong as it is not mentioned in the passage but option c explains the whole idea of the passage. Hence option c is the correct answer.

Passage 2

Internet banking is the term used for new age banking system. Internet banking is also called as online banking and it is an outgrowth of PC banking. Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits. Internet banking is a result of explored possibility to use internet application in one of the various domains of commerce. It is difficult to infer whether the internet tool has been applied for convenience of bankers or for the customers' convenience. But ultimately it contributes in increasing the efficiency of the banking operation as well providing more convenience to customers. Without even interacting with the bankers, customers transact from one corner of the country to another corner.

There are many advantages of online banking. It is convenient, it isn't bound by operational timings, there are no geographical barriers and the services can be offered at a minuscule cost. Electronic banking has experienced explosive growth and has transformed traditional practices in banking

Q.82) Which of the following is not an advantage of online banking?

- a) It is convenient.
- b) It is bound by operational timings.
- c) The services can be offered at a minimum cost.
- d) There is no geographical barrier.

Q.82) Solution (b)

In evident from the 2nd sentence of the 2nd paragraph of the passage that one of the advantages of internet banking is that it is not bound by operational timings and which is exactly opposite to what the option B says.

Passage 3

Harold a professional man who had worked in an office for many years had a fearful dream. In it, he found himself in a land where small slug-like animals with slimy tentacles lived on people's bodies. The people tolerated the loathsome creatures because after many years they grew into elephants which then became the nation's system of transport, carrying everyone wherever he wanted to go. Harold suddenly realised that he himself was covered with these things, and he woke up screaming. In a vivid sequence of pictures this dream dramatized for Harold what he had never been able to put in to words; he saw himself as letting society feed on his body in his early years so that it would carry him when he retired. He later threw off the "security bug" and took up freelance work.

Q.83) In his dream Harold found the loathsome creatures

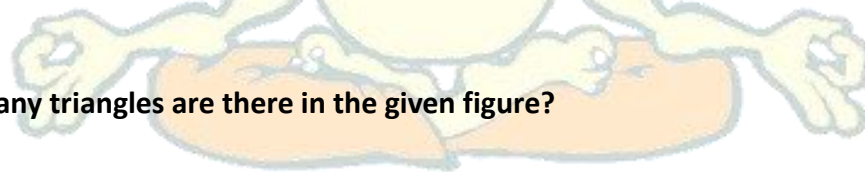
- a) In his village
- b) In his own house
- c) In a different land
- d) In his office

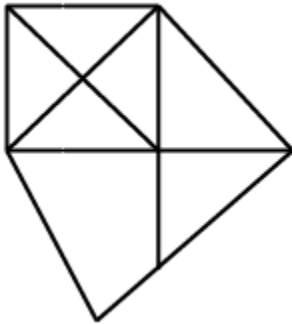
Q.83) Solution (c)

He found himself in a land where small slug like animal.....

'a land' refers to unknown piece of land.

Q.84) How many triangles are there in the given figure?





- a) 12
- b) 13
- c) 14
- d) 15

Q.84) Solution (b)

Triangles at the diagonal of the square = 4

Triangles formed by combining 2 triangles (at the right) = 1

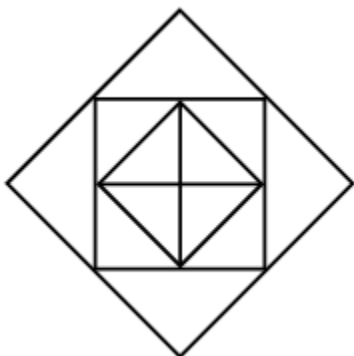
Triangles formed by combining 1 triangles and 1 quadrilateral (at the bottom) = 1

Triangles formed by combining 3 triangles = 1

Smaller triangles = 6

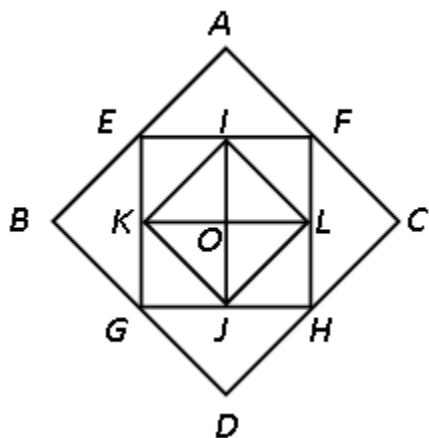
Thus, total triangles = $4 + 1 + 1 + 1 + 6 = 13$

Q.85) How many triangles are there in this figure?



- a) 11
- b) 15
- c) 16
- d) 18

Q.85) Solution (c)



Small triangles = (AEF, AEG, GDH, CFH), (IEK, IFL, JLH, JKG), (IOK, IOL, JOL, KOJ)

Big triangles = IKL, JKL, IJK, IJL

Thus, total triangles = 16

Directions for the following questions:

Read the following 3 (three) passages and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Passage 1

Until the end of his first year at school, Cyril retained many of the pleasures and pursuits he had brought with him from home, and he kept an old interest in butterflies and fossils. His grandmother had presented him with a fine bird's eggs cabinet, but he could never bring himself to risk in climbing trees. Once or twice he dissected dead birds from sheer determination to overcome his horror of the operation. Probably it was his envy of those physically unlike himself that brought on a phase during which he drew massive athletes with thick necks and square shoulders. Again he pitied himself for what he could never be.

Q.86) The reason Why Cyril made drawings of athletes was that

- a) though he admired them, he lacked a fine physique himself
- b) he loved violent exercises
- c) athletics was a passion with him
- d) he had to complete an assignment

Q.86) Solution (a)

Refer to the last 2 lines of the passage.

Passage 2

The Indian middle class consist of so many strata that it defies categorisation under a single term class, which would imply a considerable degree of homogeneity. Yet two paradoxical features characterise its conduct fairly uniformly; extensive practice and intensive abhorrence of corruption. In the several recent surveys of popular perceptions of corruptions, politicians of course invariably and understandably top the list, closely followed by bureaucrats, policemen, lawyers, businessmen and others. The quintessential middle class, if teachers do not figure high on this priority list, it is not for lack of trying, but for lack of opportunities. Over the years, the sense of shock over acts of corruption in the middle class has witnessed a steady decline, as its ambitions for a better material life have soared but the resources for meeting such ambitions have not kept pace. What is fascinating however is the intense yearning of this class for a clean corruption less politics and society, a yearning that has again and again surfaced with any figure public or obscure, focus on his mission of eradicating corruption. Even the repeated failure of this promise on virtually every man's part has not subjected it to the law of diminishing returns.

Q.87) The intense Middle Class intensely yearns for

- a) better material resources
- b) better material resources
- c) clean honest society
- d) law of increasing returns

Q.87) Solution (c)

What is fascinating however is the intense yearning of this class for a clean corruption less politics and society.

Hence option c is the correct answer.

Passage 3

The “who’s who” of universities and research institutions published by the Human Resource Development Ministry, as the National Institutional Ranking Framework, 2018, should be viewed mainly as a proposition that data makes it possible to assign objective credentials to some aspects of education. Its assessment of some of the top institutions such as the Indian Institute of Science, the Jawaharlal Nehru University, the IITs and the IIMs is unsurprising, given their record of research, peer-reviewed publications and outcomes for graduates.

Even among the 3,954 institutions that participated, there is a clear skew towards southern, south-eastern and western India. Participation levels are inadequate: there were 40,026 colleges and 11,669 standalone institutions according to the HRD Ministry’s All India Survey on Higher Education for 2016-17.

To the faculty and students in many colleges, what matters is the vision of the administrative leaders and a commitment to excellence. The governing bodies should make available adequate financial and academic resources to colleges, particularly the younger ones, to help them improve performance. These are measured by the NIRF in terms of the percentage of faculty with doctoral degrees, papers published in credentialed journals, inclusivity and diversity of students, and median salaries for the graduates.

Q.88) What does the author mean when he refers to the universities and institutions as “Who’s who”?

- a) He is trying to understand ‘who’ the list prepared by NIRF consists of
- b) He is referring to the top institutions among all institutions mentioned in the list prepared by NIRF
- c) He is asking the reader to fathom ‘who’ developed the list and the reasons behind it
- d) Both a and c

Q.88) Solution (b)

Who’s who is basically used to refer to people/entities who/ which are important in a particular group. In this case, NIRF ranks all institutions and the topmost here have been referred to as who’s who.

Only option b fits in as per the explanation above.

Hence, option b is correct.

Q.89) Which of the following can be logically deducted from the given passage?

1. There was a huge amount of participation seen in NIRF 2018.
2. The ranking approach has been critiqued for failing to capture the crucial metric of learning outcomes.
3. NIRF's assessment of the top notch institutions was expected.

Chose the correct code

- a) Only statement 3 is correct
- b) Only statements 1 and 2 are correct
- c) Only statements 2 and 3 are correct
- d) Only statements 1 and 3 are correct

Q.89) Solution (a)

Referring to the following excerpt from the passage,

'Participation levels are inadequate: there were 40,026 colleges and 11,669 standalone institutions according to the HRD Ministry's All India Survey on Higher Education for 2016-17.'

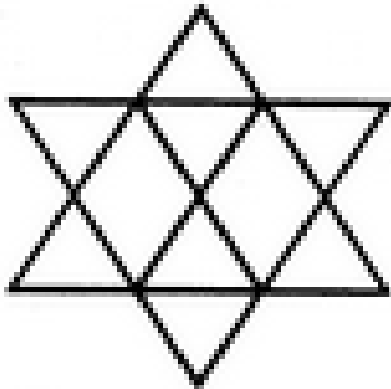
Statement 1 is incorrect.

Statement 2 is not mentioned anywhere in the passage and is incorrect.

'Its assessment of some of the top institutions such as the Indian Institute of Science, the Jawaharlal Nehru University, the IITs and the IIMs is unsurprising, given their record of research, peer-reviewed publications and outcomes for graduates.' Statement 3 is correct.

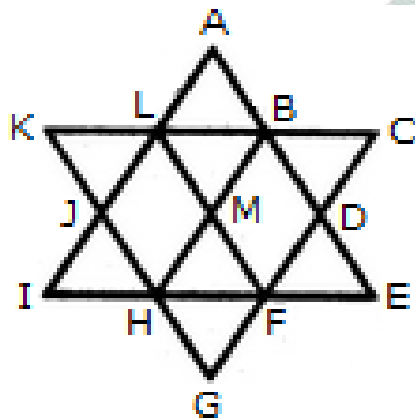
Hence, option 'a' is the correct answer.

Q.90) Count the number of parallelogram in the given figure.



- a) 13
- b) 14
- c) 15
- d) 16

Q.90) Solution (c)



The simplest parallelograms are LMHJ and BDFM i.e. 2 in number.

The parallelograms composed of two components each are ABML and MFGH i.e. 2 in number.

The parallelograms composed of six components each are LCFI, KBEH and ADGJ i.e. 3 in number.

The parallelograms composed of three components each are DFLA, BCFH, KLFH, ABHJ and LFGJ, LBHI, LBEF, BDGH i.e. 8 in number.

Total number of parallelograms are = $2 + 2 + 3 + 8 = 15$.

Q.91) Fresh grapes contain 80% of water and dry grapes contain 20% of water. If the weight of

dry grapes were 250 kg. What was its total weight when it was fresh?

- a) 1,000 kg
- b) 1,100 kg
- c) 1,200 kg
- d) 1,150 kg

Q.91) Solution (a)

The weight of dry grape is 250 kg, In this weight of water is 20%, i.e. 50 kg of water and remaining 200 kg is the weight of the pulp

The weight of pulp remains same both in fresh grapes and dry grapes.

Fresh grapes contain 80% of water and 20% pulp

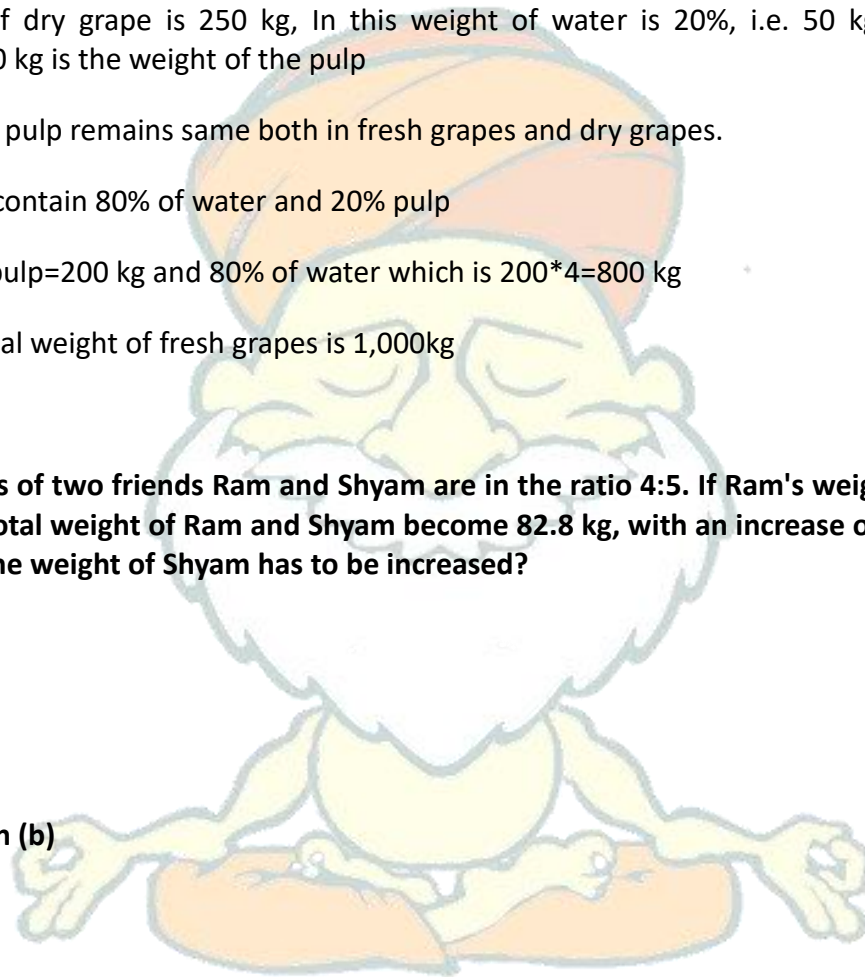
Here 20% of pulp=200 kg and 80% of water which is $200 \times 4 = 800$ kg

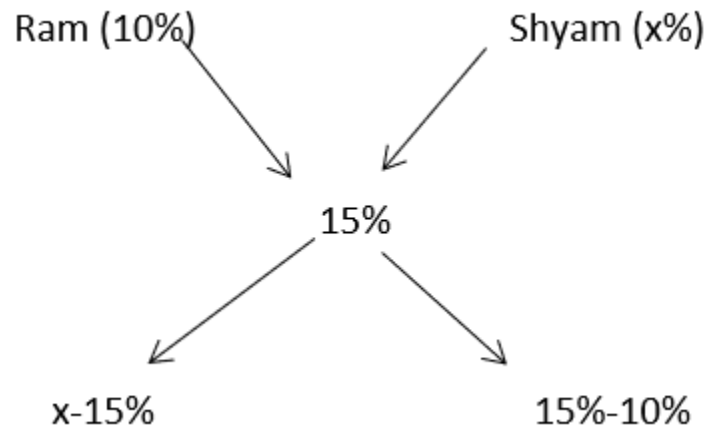
Therefore, total weight of fresh grapes is 1,000kg

Q.92) Weights of two friends Ram and Shyam are in the ratio 4:5. If Ram's weight is increased by 10% and total weight of Ram and Shyam become 82.8 kg, with an increase of 15%. By what percent did the weight of Shyam has to be increased?

- a) 10%
- b) 19%
- c) 21%
- d) 25%

Q.92) Solution (b)





Now, given ratio of Ram and Shyam's weight = 4:5

Hence, $(x-15)/(15-10) = 4/5$

On solving we get, $x = 19\%$

Q.93) On a test consisting of 80 questions, Anusha answered 90% of the first 40 questions correctly. What percent of the other 40 questions does she need answer correctly for her grade on the entire exam to be 80%?

- a) 50%
- b) 60%
- c) 70%
- d) 80%

Q.93) Solution (c)

80% of the entire exam means getting 64 answers correct.

As 90% of the first 40 questions were answered correctly, she already has 36 questions correctly answered. All she needs is to answer another 28 correctly in remaining 40 questions which is nothing but 70%.

Q.94) In an examination, 34% of the students failed in mathematics and 42% failed in English. If 20% of the students failed in both the subjects, then find the percentage of students who passed in both the subjects.

- a) 40%
- b) 42%
- c) 44%
- d) 46%

Q.94) Solution (c)

Failed in mathematics, $n(A) = 34$

Failed in English, $n(B) = 42$

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

$$= 34 + 42 - 20 = 56$$

Failed in either or both subjects are 56

$$\text{Percentage passed} = (100 - 56) \% = 44\%$$

Directions for the following 1(one) question:

Read the following passage and answer the question that follows the passage. Your answer to the question must be based on the passage only.

North American walnut sphinx moth caterpillars (*Amorpha juglandins*) look like easy meals for birds, but they have a trick up their sleeves—they produce whistles that sound like bird alarm calls, scaring potential predators away. At first, scientists suspected birds were simply startled by the loud noise. But a new study suggests a more sophisticated mechanism: the caterpillar's whistle appears to mimic a bird alarm call, sending avian predators scrambling for cover. When pecked by a bird, the caterpillars whistle by compressing their bodies like an accordion and forcing air out through specialized holes in their sides. The whistles are impressively loud - they have been measured at over 80 dB from 5 cm away from the caterpillar -considering they are made by a two-inch long insect.

Q.95) What is the most logical and appropriate summary of the passage?

- a) North American walnut sphinx moth caterpillars will whistle periodically to ward off predator birds - they have a specialized vocal tract that helps them whistle.
- b) North American walnut sphinx moth caterpillars can whistle very loudly; the loudness of their whistles is shocking as they are very small insects.

- c) North American walnut sphinx moth caterpillars, in a case of acoustic deception, produce whistles that mimic bird alarm calls to defend themselves
- d) North American walnut sphinx moth caterpillars, in a case of deception and camouflage, produce whistles that mimic bird alarm calls to defend themselves

Q.95) Solution (c)

A new study suggests a more sophisticated mechanism: the caterpillar whistle appears to mimic a bird alarm call, sending avian predators scrambling for cover.

The whistles are impressively loud - they have been measured at over 80 dB.

Directions for the following 1 (one) questions:

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Our voyage was very prosperous, but I shall not trouble the reader with a journal of it. The captain called in at one or two ports and sent in his long-boat for provisions and fresh water, but I never went out of the ship still we came into the Downs, which was on the 3rd day of June, 1706, about nine months after my escape. I offered to leave my goods in security for payment of my freight, but the captain protested he would not receive one farthing. We took kind leave of each other, and I made him promise that he would come to see me at my house in Red riff. I hired a house and a guide for five shillings which I borrowed from the captain.

Q.96) On the voyage, the author

- a) left the ship at intervals
- b) was not able to leave the ship because it did not stop
- c) never left the ship at all
- d) never left the ship till they came into the Downs

Q.96) Solution (d)

Author has mentioned in third line of passage 'I never went out of the ship till we came into the Downs' So, statement of option D is clearly written and hence the obvious choice.

Q.97) A man spends 75% of his income and saves the remaining. His income increases by 20% and expenditure by 10%. The increase in savings is

- a) 35%
- b) 37(1/2)%
- c) 50%
- d) 60%

Q.97) Solution (c)

Let the income be Rs. 100

Then Expenditure = Rs. 75

∴ Saving = 100-75 = 25

New income = Rs. 120

New expenditure = 110% of 75 = $110/100 \times 75 = 165/2 = \text{Rs. } 82.5$

∴ New saving = 120-82.5 = Rs. 37.5

∴ Increase in saving = $(37.5-25)/25 \times 100$

$12.5/25 \times 100 = 50\%$

Q.98) The sum of the radius and height of a cylinder is 42 cm. Its total surface area is 3,696 cm². What is the volume of a cylinder?

- a) 17,428 cubic cm
- b) 17,248 cubic cm
- c) 17,244 cubic cm
- d) 17,444 cubic cm

Q.98) Solution (b)

Total surface area of cylinder

$$\Rightarrow 2\pi rh + 2\pi r^2 = 3,696$$

$$2\pi r(r + h) = 3,696$$

$$(r + h) = 42$$

$$2 \times 22/7 \times r \times 42 = 3,696$$

$$44 \times 6 \times r = 3,696$$

$$r = 14 \text{ cm}$$

$$h = 42 - 14 = 28 \text{ cm}$$

$$\begin{aligned} \text{Volume of the cylinder} &= \pi r^2 h \\ &= 22/7 * 14 * 14 * 28 = 17,248 \text{ cm}^3 \end{aligned}$$

Therefore, option b is correct.

Q.99) A solid sphere is melted and recast into a right circular cone with a base radius equal to the radius of the sphere. What is the ratio of the height and radius of the cone so formed?

- a) 4:3
- b) 2:3
- c) 5:4
- d) 4:1

Q.99) Solution (d)

Let the radius of solid sphere be r .

$$\text{The volume of a sphere, } V_s = 4/3 \pi r^3$$

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

$$\text{The volume of a cone, } V_c = 1/3 \pi r^2 h$$

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

$$V_s = V_c$$

$$4/3 \pi r^3 = 1/3 \pi r^2 h$$

$$h = 4r$$

$$h/r = 4$$

Q.100) In an examination, D scored 25 marks less than E. E scored 45 more marks than B. A

scored 75 marks in an examination which are 10 more than B. C's score is 50 less than the maximum marks of the examination. What approximate percentage of marks did C score in the examination, if he gets 34 marks more than D?

- a) 90.4
- b) 70.4
- c) 80.4
- d) 60.4

Q.100) Solution (b)

Marks obtained by A =75

Marks obtained by B = 65

Marks obtained by E = 65+45=110

Marks obtained by D = 110-25 = 85

Marks obtained by C = 85+34 = 119

Maximum Marks = 119+50 = 169

Required percentage = $(119/169)*100 = 70.4\%$

Directions for the following 3 (three) questions:

Read the following passage and answer the questions that follow. Your answer to these questions should be based on passage only.

Ani Di, our Manav Sadhna family member from UK, had been mentoring and guiding our lovely Paryavaran Mitra sisters on the values of life such as kindness, gratitude etc.

Last two Saturday Specials, she planted the seeds of 'Joy of giving' within the sisters. The experiment was very simple. Rs.50 was gifted to each sister and they were humbly asked to spend it in a thoughtful manner trying to bring smile on the faces around us. Idea was to make ourselves aware of the feeling we go through when we do something for someone with selfless intention. It could simply be spending time with someone, sharing something with someone. Sisters were given a week time to implement this experiment.

One of our sisters Laxmiben fed cows buying fresh grass from this amount while Muriben got 50 toffees and treated every kid coming her way. Ratanben made shira/halwa(Indian sweet which

is luxury for our sisters) for feeding the street dog while Mogiben got another sweets for the kids of our pre-school. All were excited and proud to share their joyful experience.

The underlying learning we all had was that practicing the Joy of giving makes our soul happier and healthier.

Q.101) According to the passage, what is the only thing needed to practice 'Joy of Giving'?

- a) Intention
- b) Money
- c) Time
- d) None of these

Q.101) Solution (a)

Correct answer option is (a)

It is clearly discussed that giving can be time, emotional help, anything gift. So, only thing we need to practice this joy is the intention.

Q.102) What is the underlying learning from the experiment of 'Joy of Giving'?

1. It makes the person at the receiving end happy and satisfied.
2. The soul of the person practicing these acts is happier and healthier.
3. Everyone loves the act of giving and feel happy about it.

Which of the following options is/are correct?

- a) Only 1
- b) Both 1 and 2
- c) Both 2 and 3
- d) All of these

Q.102) Solution (d)

All persons mentioned in the passage were happy for their kind work done. It is clearly mentioned in last paragraph 'The underlying learning we all had was that practicing the Joy of giving makes our soul happier and healthier'

Q.103) Is it important to practice the Joy of Giving with a selfless intention?

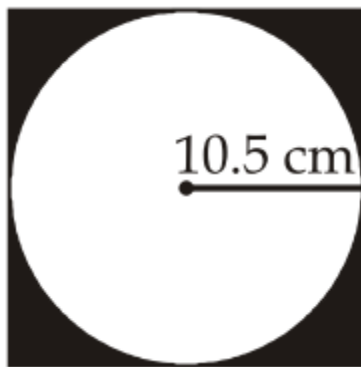
- a) Yes
- b) No
- c) Not sure
- d) None of these

Q.103) Solution (a)

Correct answer option is (a)

It is important to practice only for our own good and happiness. Joy of giving makes our soul happier and healthier.

Q.104) What is the area of the shaded portion if each side of the square measures 21 cm?



- a) 86.5 cm^2
- b) 102 cm^2
- c) 94.5 cm^2
- d) 81.5 cm^2

Q.104) Solution (c)

Area of the shaded portion

= (Area of the square - Area of the circle)

= $(21 * 21 - \pi * 10.5 * 10.5)$

= $(21 * 21 - 22/7 * (10.5)^2) \text{ cm}^2 = 94.5 \text{ cm}^2$

Q.105) The price of sugar is increased by 20%. By what percentage must one cut down on the consumption of sugar, so that no extra amount has to be incurred on sugar?

- a) $14\frac{1}{3}\%$
- b) $16\frac{2}{3}\%$
- c) 18%
- d) $19\frac{1}{3}\%$

Q.105) Solution (b)

It is given that the price of sugar is increased by 20%.

Therefore, Percentage decrement in the consumption of sugar = $[\text{rate}/(100+\text{rate})]*100$

$$[20/(100+20)]*100 = 16\frac{2}{3}\%$$

Direction for the following 2 (two) items:

Study the following passages and answer the questions that follow. Your answers to these questions should be based on the passage only.

Passage 1

Both Socrates and Bacon were very good at asking useful questions. Socrates is largely credited with coming up with a way of asking questions, 'the Socratic method,' which itself is at the core of the 'scientific method,' popularised by Bacon. The Socratic Method disproves arguments by finding exceptions to them, and can, therefore, lead your opponent to a point where they admit something that contradicts their original position. In common with Socrates, Bacon stressed it was as important to disprove a theory as it was to prove one — and real-world observation and experimentation were key to achieving both aims. Bacon also saw science as a collaborative affair, with scientists working together, challenging each other.

Q.106) Which of the following is the most logical corollary that can be drawn from the passage?

- a) Both Socrates and Bacon advocated clever questioning of the opponents to disprove their arguments and theories.
- b) Both Socrates and Bacon advocated challenging arguments and theories through observation and experimentation.
- c) Both Socrates and Bacon advocated confirming arguments and theories by finding exceptions.

- d) Both Socrates and Bacon advocated examining arguments and theories from both sides to prove them.

Q.106) Solution (d)

According to the paragraph, Socrates and Bacon were good at asking questions. The Socratic Method works in a way by finding exceptions to the arguments of the opponent, which makes the opponent agree on something that contradicts their original position. Similarly, Bacon stressed that it was important to disprove theory as it is to prove it. Thus both Socrates and Bacon stressed on examining arguments from both ends - to prove as well as disprove.

Option a, which speaks only about disproving of arguments, can be eliminated.

Option b talks only about examining and observation. Hence, it can be eliminated.

Option c talks about only confirming of arguments but not the other way. Hence, it can be eliminated.

Option d captures the main points which we discussed earlier.

Hence, option d is the correct answer.

Passage 2

A serious critic has to comprehend the particular content, unique structure, and special meaning of a work of art. And here she faces a dilemma. The critic must recognize the artistic element of uniqueness that requires subjective reaction; yet she must not be unduly prejudiced by such reactions. Her likes and dislikes are less important than what the work itself communicates, and her preferences may blind her to certain qualities of the work and thereby prevent an adequate understanding of it. Hence, it is necessary that a critic develop a sensibility informed by familiarity with the history of art and aesthetic theory. On the other hand, it is insufficient to treat the artwork solely historically, in relation to a fixed set of ideas or values. The critic's knowledge and training are, rather, preparation of the cognitive and emotional abilities needed for an adequate personal response to an artwork's own particular qualities.

Q.107) The passage suggests that the author would be most likely to agree with which of the following statements?

- a) Art speaks to the passions as well as to the intellect
- b) Most works of art express unconscious wishes or desires
- c) The best art is accessible to the greatest number of people

d) The meaning of art is a function of the social conditions in which it was produced

Q.107) Solution (a)

The author talks about the various dimensions of art such as aesthetic, uniqueness, historic and all these dimensions reflect the passion.

While looking at other options they sound unrealistic and not related closely.

Q.108) Find the number of bricks, each measuring 25 cm × 12.5 cm × 7.5 cm, required to construct a wall 12 m long, 5 m high and 0.25 m thick, while the sand and cement mixture occupy 5 % of the total volume of wall?

- a) 6080
- b) 3040
- c) 1520
- d) 12160

Q.108) Solution (a)

Total volume of the wall = $(12*5*0.25*100*100*100)$ cm³

Sand and cement mixture occupies 5% of the total volume of the wall

So, Volume of wall occupied by brick = 95% of total volume

$(95*12*5*0.25*100*100*100)/100$ cm³

Volume of each brick = $(25*12.5*7.5)$ cm³

Hence, the number of bricks required = $(95*12*5*0.25*100*100*100)/(100*25*12.5*7.5) = 6080$

Q.109) Rahul answered 40% of the first 75 questions correctly in an examination consisting of 150 questions. Find the percentage of the remaining 75 questions that he needs to answer correctly in order to answer 60% of the total number of questions correctly?

- a) 60%
- b) 80%
- c) 100%

d) 120%

Q.109) Solution (b)

60% of total number of questions = 60% of 150 = 90 questions

Number of questions that Rahul answered correctly in the first 75 questions = $40 \times 75 / 100 = 30$

Number of questions from the remaining 75 questions that he should answer correctly is

$$90 - 30 = 60$$

$$\text{Required percentage} = (60/75) \times 100 = 80\%$$

Q.110) The odds that 'A' agrees with the truth are 3:2 and the odds that 'B' agrees with the truth are 5:3. In what percent of cases are they likely to agree with each other on an identical point?

- a) 47.5%
- b) 37.5%
- c) 63.5%
- d) 52.5%

Q.110) Solution (d)

Probability that A speaks the truth = $3/5$

Probability that A does not speak the truth = $2/5$

Probability that B speaks the truth = $5/8$

Probability that B does not speak the truth = $3/8$

Cases that are likely to agree each other on identical point = $3/5 \times 5/8 + 2/5 \times 3/8 = 21/40 = 52.5\%$

Q.111) A mango and orange costs Rs 200 and Rs 100 respectively. The price of mango and orange is increased by 20% and 25% respectively. If a person wants to buy 10 mangoes and 5 oranges, then what should be the percentage change in the total amount spent by him after an increase in the price?

- a) 20%
- b) 21%
- c) 18%
- d) 15%

Q.111) Solution (b)

Price of mango becomes Rs 200 → Rs 240 (After 20% increase)

Price of Orange becomes Rs 100 → Rs 125 (After 25 % increase)

Before the increase in price his expenditure was

$$200 \times 10 + 100 \times 5 = 2500$$

After an increase in the price, the expenditure will be

$$240 \times 10 + 125 \times 5 = 3025$$

$$\text{Percentage increase} = \frac{(3025 - 2500) \times 100}{2500} = 21\%$$

Q.112) 8% of the people eligible to vote are between 18 and 21. In an election 85% of those eligible to vote who were between 18 and 21 actually voted. In that election, people between 18 and 21 who actually voted were what percent of those people eligible to vote?

- a) 4.2%
- b) 6.4%
- c) 6.8%
- d) 8.6%

Q.112) Solution (c)

Let the people eligible to vote be P

Then people eligible to vote between 18 and 21 = $\frac{8P}{100}$

In the election people who voted between 18 and 21 = $\frac{85}{100} \times \frac{8P}{100}$

$$\text{Required percentage} = \left\{ \frac{85}{100} \times \frac{8P}{100} \right\} / P \times 100 = 6.8\%$$

Q.113) In a competitive exam there were 5 different sections. 10% of the total number of

students cleared the cut off in all the sections and 5% cleared none of the sections. From the remaining candidates, 30% cleared only section 1, 20% cleared only section 2, 10% cleared only section 3 and the remaining 1,020 candidates cleared only section 4. How many students appeared in the competitive exam?

- a) 2,550
- b) 3,000
- c) 3,200
- d) 3,800

Q.113) Solution (b)

Let the total of students are 100. So, 15 cleared either no section or all sections. Out of the remaining 85 students, 60% cleared 1 section or 2 sections or 3 sections.

So, the number of students who cleared 4 sections is 40% of 85 = 34.

Now, if 34 students cleared section 4, total students are 100

If 1,020 students cleared section 4, total students = $(100/34)*1,020 = 3,000$

Read the following 2 (two) passages and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Passage 1

Aspiration is nothing new. Neither is the debate over what the Indian middle class is, what it wants and what it buys. Since the mid-80s, that has been the focus of the economic policy papers so-called pro- and anti-poor budgets and marketing strategies that have successfully broken the barrier of urban selling and reached deeper into rural India with increasing income levels and aspirations.

Q.114) Based on the above passage, it can be inferred that

- a) the Indian middle class has been the focus of economic policies for a long time
- b) the Indian middle class has graduated from being the 'deprived' middle class to the 'pampered' middle class
- c) Both a and b
- d) Neither a nor b

Q.114) Solution (a)

There is nothing in the passage to suggest that the Indian middle class has been transformed into a 'pampered' middle class. Options b and c are incorrect. However, the paragraph strongly suggests that the Indian middle class has been the focus of the economic policies of the Government for a long time now. So, option a can be inferred.

Passage 2

Developed countries have made adequate provisions for social security for senior citizens. State insurers (as well as private ones) offer Medicare and pension benefits to people who can no longer earn. In India, with the collapse of the joint family system, the traditional shelter of the elderly has disappeared. And a State faced with a financial crunch is not in a position to provide social security. So, the working population should give serious thought to building a financial base for itself.

Q.115) Which one of the following if it were to happen, weakens the conclusion drawn in the above passage the most?

- a) The investable income of the working population, as a proportion of its total income, will grow in the future
- b) The insurance sector is underdeveloped and trends indicate that it will be extensively privatized in the future
- c) India is on a path of development that will take it to a developed country status, with all its positive and negative implications
- d) If the working population builds a stronger financial base, there will be a revival of the joint family system

Q.115) Solution (c)

The main conclusion of the paragraph is that the working population should save for its future given that the Indian state is not in a position to provide social security for its citizens. The underlying assumption is that the Indian state would not be in a position to provide social security even in the future. If option c is true, then this assumption is attacked and the conclusion is weakened.

Q.116) The length, breadth and height of a room are in the ratio 3:2:1. If the breadth and height are halved while the length is doubled, then the total area of the four walls of the room will

- a) decrease by 13.64%
- b) decrease by 15%

- c) decrease by 18.75%
- d) decrease by 30%

Q.116) Solution (d)

The area of the four walls is $\text{length} \times \text{height} \times 2 + \text{breadth} \times \text{height} \times 2$

$$\text{Initial area} = 3 \times 1 \times 2 + 2 \times 1 \times 2 = 10$$

$$\text{Final area} = 6 \times \frac{1}{2} \times 2 + 1 \times \frac{1}{2} \times 2 = 7$$

So, the area is decreased by 30%

Q.117) In a village, 60% of registered voters cast their votes in the election. Only two candidates (A and B) were contesting the election. A won the election by 600 votes. Had B received 40% more votes, the result would have been a tie. How many registered voters are there in the village?

- a) 4000
- b) 3500
- c) 3000
- d) 3250

Q.117) Solution (b)

Let B gets X number of votes

Then, A gets X+600 votes

If B gets 40% more votes then, $B = 1.4x$

As per the question

$$1.4X = X + 600 - 0.4X$$

$$X = 750$$

So, $A = 600 + 750 = 1350$ and $B = 750$

Total votes = 2100 (60%)

Hence, 100% votes = 3500

Q.118) The sum of the radius and height of a cylinder is 42 cm. Its total surface area is 3,696 cm². What is the volume of a cylinder?

- a) 17,428 cubic cm
- b) 17,248 cubic cm
- c) 17,244 cubic cm
- d) 17,444 cubic cm

Q.118) Solution (b)

Total surface area of cylinder

$$\Rightarrow 2\pi rh + 2\pi r^2 = 3,696$$

$$2\pi r(r + h) = 3,696$$

Given radius and height is, $(r + h) = 42$

$$2 \times \frac{22}{7} \times r \times 42 = 3,696$$

$$44 \times 6 \times r = 3,696$$

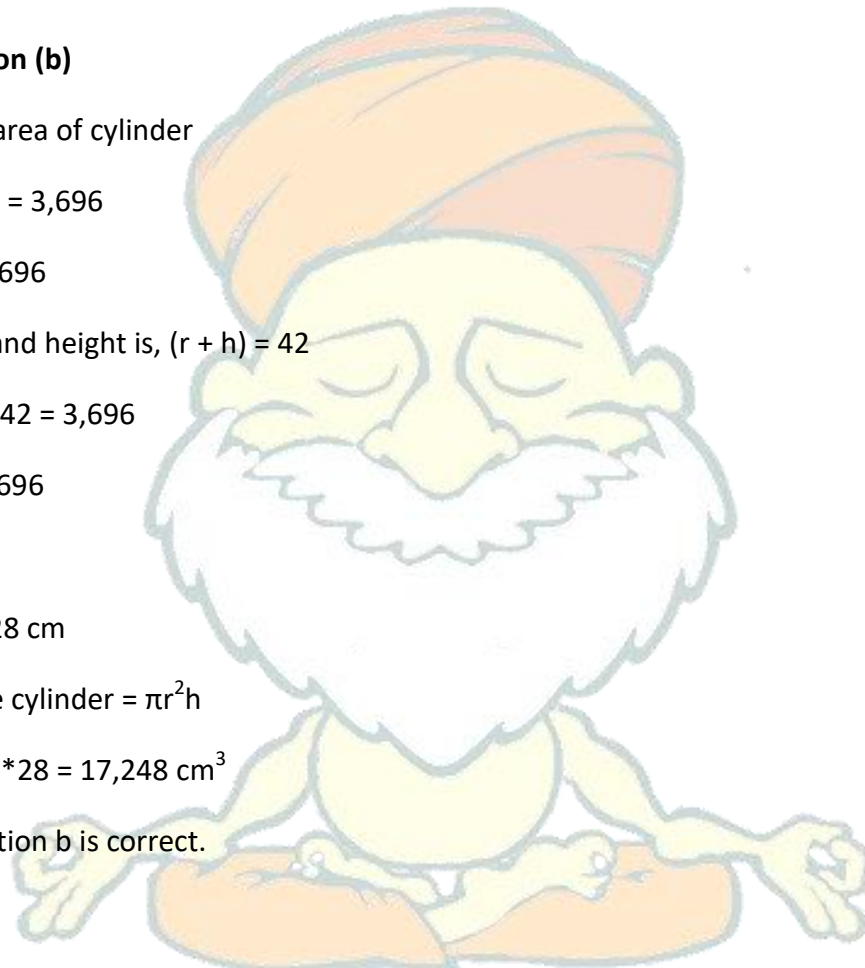
$$r = 14 \text{ cm}$$

$$h = 42 - 14 = 28 \text{ cm}$$

Volume of the cylinder = $\pi r^2 h$

$$= \frac{22}{7} \times 14 \times 14 \times 28 = 17,248 \text{ cm}^3$$

Therefore, option b is correct.



Directions for the following 2 (two) questions:

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only

Rag-pickers go in the early hours of every day throughout the city, harmoniously and mutually agreeing upon each one's territory, travel around 8-10kms, bend at least 1000 times and collect 15-20kgs of recyclable waste with their bare hands, and carry that in large bags on their head and shoulders.

In Ahmedabad alone, there are 40,000 such women collecting nearly 8,00,000 kgs of recyclable waste every day. Due to their efforts, this immense amount of recyclable waste reaches a recycling unit, which translates into saving of nearly 2,400,000kgs CO₂ from being emitted into the Environment. Because they do such a vital service to both society and the environment, we call them Paryavaran Mitra (PM) (Friends of the Environment).

Q.119) What is the central theme of the passage?

- a) Ahmedabad and its rag-pickers
- b) Rag-pickers and their life
- c) Solid Waste Management
- d) Women and their hardships

Q.119) Solution (b)

As the passage starts with the description of rag-picking women and their work on daily basis and how it is contributing towards our society and the environment, the main theme and point of sharing is Rag-pickers and their life.

Q.120) Women are referred as Paryavaran Mitra because

- a) They work in early hours of the morning every day
- b) They carry so much load of waste on their head and shoulder
- c) They are illiterate and therefore doing the work of rag-picking
- d) They do immense service to both society and Environment by virtue of their.

Q.120) Solution (d)

The three options a, b and d, all talk about the rag-picking ladies. But the questions ask for the main explanation behind the reason for referring them as ParyavaranMitra which is option (d).

Study the following 2 (two) passages and answer the questions that follow. Your answers to these questions should be based on the passage only.

Passage 1

The benefits of psychotherapy result not only from the advice the therapist gives but also from the supportive relationship offered to the patient. Even though this relationship may cost large amounts of money over many years, most patients interpret the therapist's concern for them as genuine and identify this caring relationship as the primary factor in improving their mental

health. However, recent studies have found that only eight per cent of therapist/patient relationships continue after the patient terminates formal paid visits.

Q.121) Which of the following is in accordance with the ideas contained in the passage?

- a) therapists are equally concerned with moneymaking and their patients' well-being
- b) reading published articles of reputed psychotherapists will hardly be beneficial
- c) therapists can always treat mental illness without the use of prescription drugs
- d) therapists who terminate relationships are likely to improve the mental health of their patients

Q.121) Solution (a)

The paragraph discusses the 'benefits of psychotherapy'. Although the 'cost factor' is mentioned in the paragraph the main cause behind a patient's improved mental health condition is the 'caring relationship' which the patient shares with his/her therapist. Option (a) is the correct answer choice as it briefly mentions the ideas given in the passage.

Passage 2

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read-only in parts; others to be read, but not curiously; and some few to be read wholly and with diligence and attention. Some books may also be read by deputy, and extracts made of them by others; but that would be only in the less important arguments and the meaner sort of books; else distilled books are like common distilled waters, flashy things. Reading makes a full man, conference a ready man, and writing an exact man. And therefore if a man writes little, he had need have a good memory; if he confers little, he had need have a present wit; and if he read little, he had need have much cunning to seem to know that he doth not. Histories make men wise, poets witty, the mathematics subtle, natural philosophy deep, moral grave, logic and rhetoric able to contend.

Q.122) What can be done about the 'meaner' sort of books?

- a) to be read but not to contradict and confute
- b) to be read curiously
- c) to be read, but not curiously
- d) they can be read by deputy and extracts made of them by others

Q.122) Solution (d)

"Some books may also be read by deputy, and extracts made of them by others, but that would be only in the less important arguments and the meaner sort of books". Hence option d is correct.

Q.123) From a pack of 52 cards, one card is drawn at random. Find the probability that the drawn card is a club or a jack?

- a) 8/13
- b) 7/41
- c) 4/13
- d) 6/13

Q.123) Solution (c)

$$n(S) = 52$$

$$n(E) = 16$$

$$P(E) = n(E) / n(S) = 16 / 52 \\ = 4/13$$

Q.124) Tickets numbered 1 to 50 are mixed and one ticket is drawn at random. Find the probability that the ticket drawn has a number which is a multiple of 4 or 7?

- a) 9/25
- b) 9/50
- c) 8/25
- d) 18/25

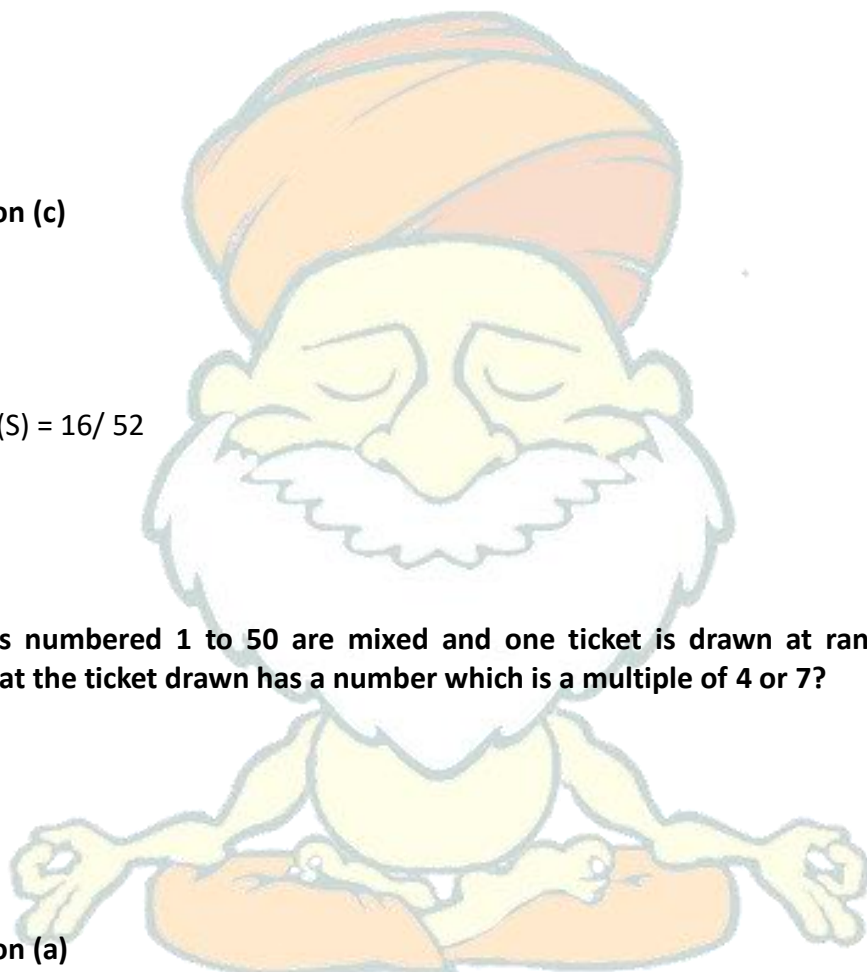
Q.124) Solution (a)

$$S = \{1, 2, 3, \dots, 49, 50\}$$

$$E = \{4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 7, 14, 21, 35, 42, 49\}$$

$$n(S) = 50$$

$$n(E) = 18$$



$$P(E) = n(E)/n(S) = 18/50$$

$$\text{Therefore, } P(E) = n(E)/n(S) = 9/25$$

Q.125) P, Q and R were trying to hit a target. If P hits the target 5 times in 8 attempts, Q hits it 3 times in 5 attempts and R hits it 2 times in 4 attempts. What is the probability that the target is hit by at least 2 persons?

- a) 41/80
- b) 23/70
- c) 49/80
- d) 47/90

Q.125) Solution (c)

Probability of P hitting a target = $5/8$

Probability of Q hitting a target = $3/5$

Probability of R hitting a target = $1/2$

Probability that the target is hit by at least 2 persons = $1 - [\text{Probability of no hit} + \text{Probability of 1 hit}]$

$$= 1 - [(3/8)*(2/5)*(1/2) + (5/8)*(2/5)*(1/2) + (3/8)*(3/5)*(1/2) + (3/8)*(2/5)*(1/2)]$$

$$= 1 - (6+10+9+6)/80$$

$$= 1 - 31/80 = 49/80$$

Study the following 2 (two) passages and answer the questions that follow. Your answers to these questions should be based on the passage only.

Passage 1

A fundamental property of language is that it is slippery and messy and more liquid than solid, a gelatinous mass that changes shape to fit. As Wittgenstein would remind us, "usage has no sharp boundary." Oftentimes, the only way to determine the meaning of a word is to examine how it is used. This insight is often described as the "meaning is use" doctrine. There are differences between the "meaning is use" doctrine and a dictionary-first theory of meaning.

"The dictionary's careful fixing of words to definitions, like butterflies pinned under glass, can suggest that this is how language works. The definitions can seem to ensure and fix the meaning of words, just as the gold standard can back a country's currency." What Wittgenstein found in the circulation of ordinary language, however, was a free-floating currency of meaning. The value of each word arises out of the exchange. The lexicographer abstracts a meaning from that exchange, which is then set within the conventions of the dictionary definition.

Q.126) Which of the following best captures the author's position in the passage?

- a) Dictionary definitions are like 'gold standards' — artificial, theoretical and dogmatic. The actual meaning of words is their free-exchange value.
- b) Language is already slippery; given this, accounting for 'meaning in use' will only exasperate the problem. That is why lexicographers 'fix' meanings.
- c) Meaning is dynamic; definitions are static. The 'meaning in use' theory helps us understand that definitions of words are culled from their meaning in exchange and use and not vice versa.
- d) The meaning of words in dictionaries is clear, fixed and less dangerous and ambiguous than the meaning that arises when words are exchanged between people.

Q.126) Solution (c)

According to the paragraph, language is like a gelatinous mass that changes shape to fit. Also, many times the only way to find the meaning of the word is to examine how it is used. It is stated that definitions are fixed for the word by dictionary. Wittgenstein found that circulation of ordinary language was a free-floating currency of meaning. So the meanings are dynamic. Thus, the value of word arises from the exchange and then the lexicographer abstracts meaning from that exchange. Thus, definitions are picked up from the meaning in use.

Option (a), which states that definitions are like dogmatic, cannot be found in the paragraph. Hence, it can be eliminated.

The paragraph doesn't talk about why lexicographers fix meanings. Hence, option b can be eliminated.

Option (c) covers all the main points. Hence, it is the right choice.

The purpose of the passage is not to compare the meaning of words in dictionaries with meaning which arises from the exchange. Hence, option d can be eliminated.

Hence, option (c) is the right choice.

Passage 2

A translator of literary works needs a secure hold upon the two languages involved, supported by a good measure of familiarity with the two cultures. For an Indian translating work in an Indian language into English, finding satisfactory equivalents in a generalized western culture of practices and symbols in the original would be less difficult than gaining fluent control of contemporary English. When a westerner works on texts in Indian languages the interpretation of cultural elements will be the major challenge, rather than control over the grammar and essential vocabulary of the language concerned. It is much easier to remedy lapses in the language in a text translated into English than flaws of content. Since it is easier for an Indian to learn the English language than it is for a Briton or American to comprehend Indian culture, translations of Indian texts is better left to Indians.

Q.127) Which of the following statements is correct, according to the passage?

- a) While translating, the Indian and the westerner face the same challenges but they have different skill profiles and the former has the advantage.
- b) As preserving cultural meanings is the essence of literary translation Indians' knowledge of the local culture outweighs the initial disadvantage of lower fluency in English.
- c) Indian translators should translate Indian texts into English as their work is less likely to pose cultural problems which are harder to address than the quality of language.
- d) Westerners might be good at gaining reasonable fluency in new languages, but as understanding the culture reflected in literature is crucial, Indians remain better placed

Q.127) Solution (c)

Indians have a better knowledge of their culture. A westerner might be fluent in the language but will find it hard to relate to the culture. Indians, on the other hand, might be less fluent in the language but will be able to preserve the culture when a text is translated. Therefore, Indians should translate Indian texts.

Option (a) states that Indians and Westerners face the same challenges but they have different skill sets. Indians and Westerners face different challenges while translating the text. Indians face difficulty in the language and westerners face difficulty in relating to the culture. Therefore, we can eliminate option a.

Option (d) fails to capture the fact that the primary intention of the paragraph is not to pit Indians against westerners but to suggest that Indians should translate Indian texts. Also, it does not capture the fact that Indians will retain the advantage only when translating the Indian texts. Therefore, we can eliminate option d.

Option (b), though true, fails to capture the India-centric angle that the paragraph adopts. The

paragraph places a huge emphasis on the term 'Indian texts' and only option C manages to capture this fact.

Also, only option (c) captures the fact that it is easier to remedy errors in the language than to fix errors in the interpretation of culture. Therefore, option c is correct.

Q.128) The probability that a leap year selected at random contains either 53 Sundays or 53 Mondays, is

- a) $3/7$
- b) $5/7$
- c) $1/53$
- d) $2/27$

Q.128) Solution (a)

Total number of days in a leap year = 366

It will contain 52 weeks and 2 days

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

For 53 Sundays, the probability = $2/7$

Similarly for 53 Mondays, the probability = $2/7$

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

Probability for this = $1/7$

Hence, the required probability = $2/7 + 2/7 - 1/7 = 3/7$

Q.129) 36 identical chairs must be arranged in rows with the same number of chairs in each row. Each row must contain at least three chairs and there must be at least three rows. A row is parallel to the front of the room. How many different arrangements are possible?

- a) 2
- b) 4
- c) 5

d) 6

Q.129) Solution (c)

No. of rows	No. of chairs in each row
3	12
4	9
6	6
9	4
12	3

No. of different arrangement = 5

Q.130) The odds that 'A' agrees with the truth are 3:2 and the odds that 'B' agrees with the truth are 5:3. In what percent of cases are they likely to agree with each other on an identical point?

- a) 47.5%
- b) 37.5%
- c) 63.5%
- d) 52.5%

Q.130) Solution (d)

Probability that A speaks the truth = $\frac{3}{5}$

Probability that A does not speak the truth = $\frac{2}{5}$

Probability that B speaks the truth = $\frac{5}{8}$

Probability that B does not speak the truth = $\frac{3}{8}$

Cases that are likely to agree each other on identical point = $(\frac{3}{5} * \frac{5}{8}) + (\frac{2}{5} * \frac{3}{8}) = \frac{21}{40} = 52.5\%$

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Passage 1

At this stage of civilisation, when many nations are brought in to close and vital contact for good and evil, it is essential, as never before, that their gross ignorance of one another should be diminished, that they should begin to understand a little of one another's historical experience and resulting mentality. It is the fault of the English to expect the people of other countries to react as they do, to political and international situations. Our genuine goodwill and good intentions are often brought to nothing, because we expect other people to be like us. This would be corrected if we knew the history, not necessarily in detail but in broad outlines, of the social and political conditions which have given to each nation its present character.

Q.131) As per the passage, The need for a greater understanding between nations

- a) is more today than ever before
- b) was always there
- c) is no longer there
- d) will always be there

Q.131) Solution (a)

...it is essential, as never before, that their gross ignorance of one another should be diminished, that they should begin to understand a little of one another's historical experience and resulting mentality.

This statement makes it clear that option a is the correct answer

Passage 2

Soft bodied animals like caterpillars often fall a prey to voracious hunters like birds or reptiles. Despite having no means to actively defend them with weapons like claws or jaws, they have nevertheless, evolved other equally effective deterrents. A particular species of the caterpillar lives at an altitude over 2.500 metres in the Himalayas. It uses prominent colour to inform would be predators of its in edibility. In the event that an inexperienced or adventurous bird did eat the caterpillar, it would probably vomit it soon after and subsequently desist from attacking similar species in future. Even though this would do the unfortunate victim no good, the species benefits. This is a rare example of the martyr among animals.

Q.132) The expression "others equally effective deterrents" mean

- a) preventive weapons which have equal effect of others
- b) mechanism which scares everyone equally well
- c) preventive equipment which it is as effective as something that has been already mentioned in the passage
- d) deterrents that are as powerful as those the caterpillars have

Q.132) Solution (b)

Despite having no means to actively defend themselves, with weapons like claws or jaws, they have nevertheless, evolved other equally effective deterrents.

This statement makes it clear that option b is the correct answer

Q.133) Two dice are tossed at the same time. The probability that the total score is a prime number is:

- a) 1/15
- b) 5/12
- c) 3/14
- d) 6/15

Q.133) Solution (b)

Clearly, the total number of outcomes, $n(S) = (6 \times 6) = 36$.

Let E = Event that the sum is a prime number.

Then, $E = \{(1, 1), (1, 2), (1, 4), (1, 6), (2, 1), (2, 3), (2, 5), (3, 2), (3, 4), (4, 1), (4, 3), (5, 2), (5, 6), (6, 1), (6, 5)\}$

$n(E) = 15$.

$P(E) = n(E)/n(S) = 15/36 = 5/12$

Q.134) P, Q and R were trying to hit a target. If P hits the target 5 times in 8 attempts, Q hits it 3 times in 5 attempts and R hits it 2 times in 4 attempts. What is the probability that the target is hit by at least 2 persons?

- a) 41/80
- b) 23/70

- c) 49/80
- d) 47/90

Q.134) Solution (c)

Probability of P hitting a target = $5/8$

Probability of Q hitting a target = $3/5$

Probability of R hitting a target = $1/2$

Probability that the target is hit by at least 2 persons = $1 - [\text{Probability of no hit} + \text{Probability of 1 hit}]$

$$= 1 - [(3/8)*(2/5)*(1/2) + (5/8)*(2/5)*(1/2) + (3/8)*(3/5)*(1/2) + (3/8)*(2/5)*(1/2)]$$

$$= 1 - (6+10+9+6)/80$$

$$= 1 - 31/80 = 49/80$$

Q.135) Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even?

- a) $1/4$
- b) $3/4$
- c) $5/8$
- d) $7/16$

Q.135) Solution (b)

In a simultaneous throw of two dice, we have $n(S) = (6 \times 6) = 36$.

Then, $E = \{(1, 2), (1, 4), (1, 6), (2, 1), (2, 2), (2, 3), (2, 4), (2, 5), (2, 6), (3, 2), (3, 4),$

$(3, 6), (4, 1), (4, 2), (4, 3), (4, 4), (4, 5), (4, 6), (5, 2), (5, 4), (5, 6), (6, 1),$

$(6, 2), (6, 3), (6, 4), (6, 5), (6, 6)\}$

So, $n(E) = 27$

$$P(E) = n(E)/n(S) = 27/36 = 3/4$$

Directions for the following 2 (two) questions:

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only –

'The person who tries to do everything achieves nothing.' So, the real secret to getting things done is to know what things need to remain undone. To find the time to do what you should be doing in order to get where you are going, you must have the leadership focus on the worthy. You must develop a sense of tunnel vision for your highest leadership priorities. Once you do, you will never be the same again. Any pursuit that somehow advances you closer to the vision you have of the future is time well spent. Any task that actually gives you a solid return on the time invested and gets you nearer to the outcome you are ultimately aiming for should be considered. It's like the old law you must have learned in business school that held that 20 percent of your activities deliver 80 percent of your production. So, focus on the things that count, those pursuits that are worthy, you implicitly say no to the unnecessary. You automatically simplify your leadership and streamline your life.

"It is like a Zen monk once said,' Most people I know try to become cleverer every day, whereas I attempt to become more simple and uncomplicated every day. 'The simpler your leadership focus, the more effective you will be."

Q.136) In the passage the writer addresses with

- a) Leadership is something about leading people.
- b) Focusing on the production is the essence.
- c) Twenty percent of your activities deliver eighty percent of your production.
- d) Leaders should try to achieve everything.

Q.136) Solution (c)

Any pursuit that somehow advances you closer to the vision you have of the future is time well spent. Any task that actually gives you a solid return on the time invested and gets you nearer to the outcome you are ultimately aiming for should be considered. It's like the old law you must have learned in business school that held that 20% of your activities deliver 80% of your production. So focus on the things that count, those pursuits that are worthy, you implicitly say no to the unnecessary.

Q.137) The main purpose of the first paragraph is to

- a) Describe leadership

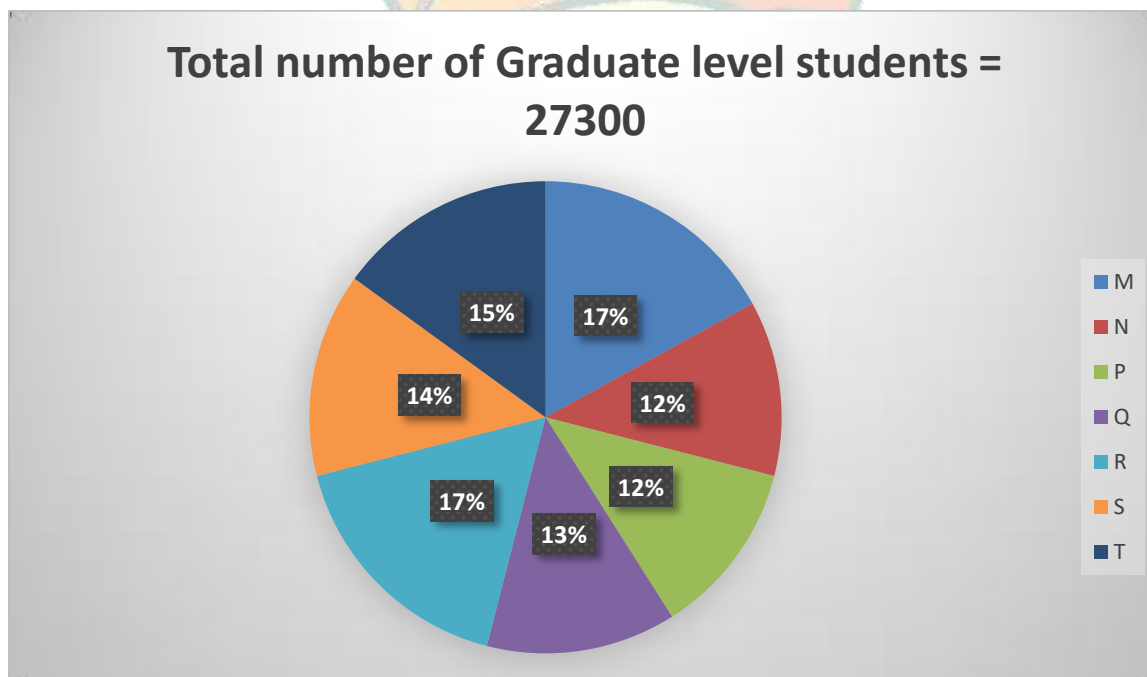
- b) Criticize the culture of leadership.
- c) Nature of leadership.
- d) Secret of leadership

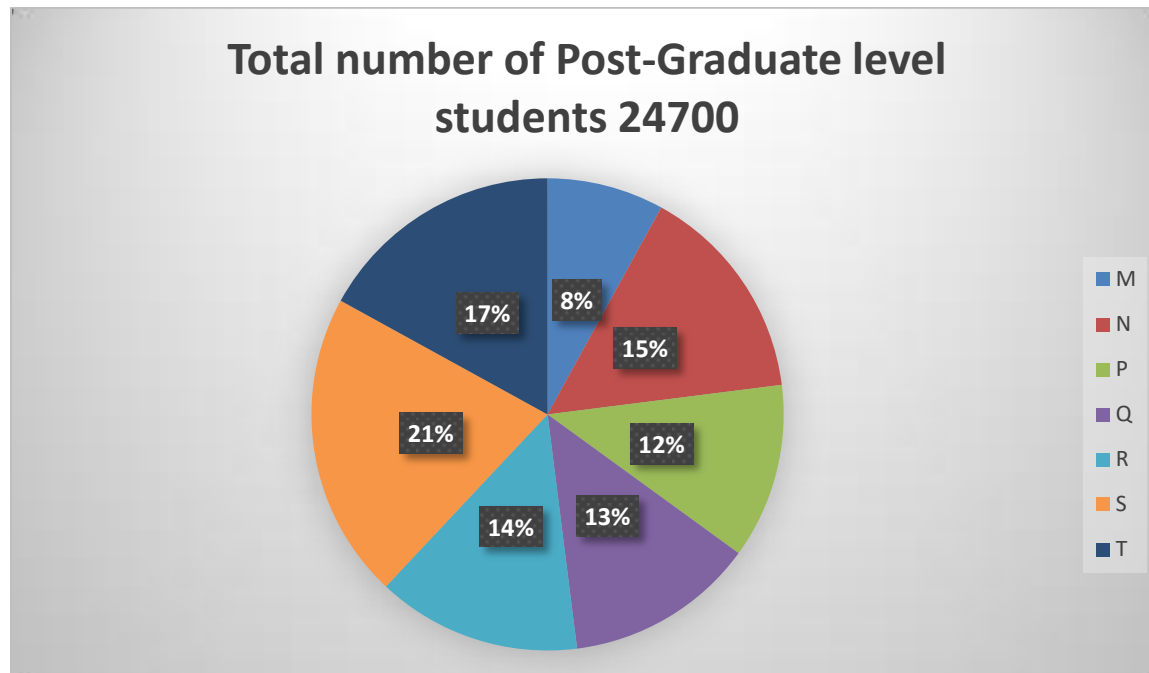
Q.137) Solution (d)

To find time to do what you should be doing in order to get where you are going, you must have the leadership focus on the worthy.

Direction for following 3 (three) questions.

The following pie-charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town.





Q.138) What is the total number of graduate and post-graduate level students is institute R?

- a) 8320
- b) 7916
- c) 9116
- d) 8099

Q.138) Solution (d)

Required number = (17% of 27300) + (14% of 24700)

= 4641 + 3458

= 8099.

Q.139) What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

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

d) 19 : 14

Q.139) Solution (d)

Required ratio = (21% of 24700) / (14% of 27300) = 19/14

Q.140) How many students of institutes of M and S are studying at graduate level?

- a) 7516
- b) 8463
- c) 9127
- d) 9404

Q.140) Solution (b)

Students of institute M at graduate level = 17% of 27300 = 4641.

Students of institute S at graduate level = 14% of 27300 = 3822.

Therefore Total number of students at graduate in institutes M and S = (4641 + 3822)
= 8463.

Read the following passage and answer the questions that follow each passage. Your answer to these questions should be based on passage only.

Passage 1

At this stage of civilisation, when many nations are brought in to close and vital contact for good and evil, it is essential, as never before, that their gross ignorance of one another should be diminished, that they should begin to understand a little of one another's historical experience and resulting mentality. It is the fault of the English to expect the people of other countries to react as they do, to political and international situations. Our genuine goodwill and good intentions are often brought to nothing, because we expect other people to be like us. This would be corrected if we knew the history, not necessarily in detail but in broad outlines, of the social and political conditions which have given to each nation its present character.

Q.141) According to the author of 'Mentality' of a nation is mainly product of its

- a) history

- b) politics
- c) international position
- d) present character

Q.141) Solution (a)

...that they should begin to understand a little of one another's historical experience and resulting mentality.

This makes it clear that option a is the correct answer.

Passage 2

The dangerous illusion of technology is that it can create stronger, top-down accountability of service providers in implementation-intensive services within existing public sector organizations. One notion is that electronic management information systems (EMIS) keep better track of inputs and those aspects of personnel that are 'EMIS visible' can lead to better services. A recent study examined attempts to increase attendance of Auxiliary Nurse Midwife (ANMs) at clinics in Rajasthan, which involved high-tech time clocks to monitor attendance. The study's title says it all: Band-Aids on a Corpse. E-governance can be just as bad as any other governance when the real issue is people and their motivation.

Q.142) In the context of the passage, we can infer that the title "Band Aids on a Corpse" suggests that:

- a) the nurses who attended the clinics were too poorly trained to provide appropriate medical care
- b) the electronic monitoring system was a superficial solution to a serious problem
- c) the clinics were better funded, but performance monitoring did not result in any improvement
- d) the nurses attended the clinics, but the clinics were ill-equipped

Q.142) Solution (b)

In the context of the passage, it suggests that it was a superficial solution to a more serious problem. The other choices are focusing too much on the nurses and the clinics, but that is not the main idea of the passage.

In the context of the passage, the example of nurses is just a small suggestion of a superficial solution to a bigger problem. We should not forget that the question asks us to answer in the context of the passage.

Hence, option b is correct.

Direction for the following 3 (three) items:

Study the following information and answer the questions that follow

Village	% of literates in total population (male and female)	% of literates in the male population	% of literates in the female population
A		72	70
B	61	64	56
C	73.8	75	72
D	60		60
E	70		70

Note: Some of the data is deliberately missing. You need to calculate the values based on the given data to answer the given questions

Q.143) Only 40% and 20% of females were graduates in villages A and C respectively. If the female population of villages A and C were equal, what was the respective ratio of a number of non-graduate females (including illiterate females) in villages A and C?

- a) 81:107
- b) 90:107
- c) 90:121
- d) 40:49

Q.143) Solution (b)

Let females in village A = X

=> Females in village C = X

Literate females in village A = $(70/100)*X = 7X/10$

Graduate females in village A = $(40/100)*7X/10 = 7X/25$

Literate females in village C = $(72/100)*X = 18X/25$

Graduate females in village C = $(20/100)*18X/25 = 18X/125$

Therefore, the required ratio of number of non-graduate females (including illiterate females) in villages A and C

$$= (X - 7X/10):(X - 18X/25)$$

$$= (18X/25):(107X/125)$$

$$= 90:107$$

Q.144) If in village E, 40% of male literates and 40% of female literates were graduates, what per cent of the total population were graduates?

- a) 32%
- b) 35%
- c) 28%
- d) 40%

Q.144) Solution (c)

In village E,

Let number of males = X and Number of females = Y

$$\Rightarrow \text{Total literate population} = (70/100)*(X+Y)$$

$$\text{Literate males} = (70/100)*X$$

$$\text{Literate females} = (70/100)*Y$$

$$\text{Literate males who are graduates} = (40/100)*7X/10 = 7X/25$$

$$\text{Literate females who are graduates} = (40/100)*7Y/10 = 7Y/25$$

$$\text{Therefore, the required \%} = [(7X/25) + (7Y/25)]/X+Y = (7/25)*100 = 28\%$$

Q.145) In village B, the number of females was what per cent less than the number of males?

- a) 20%
- b) 30%
- c) 32%
- d) 40%

Q.145) Solution (d)

In village B,

Let number of males = X and Number of females = Y

=> Total literate population = $61/100*(X+Y)$

Literate males = $(64/100)*X$

Literate females = $(56/100)*Y$

$(64X/100) + (56Y/100) = 61/100*(X+Y)$

$64X + 56Y = 61X + 61Y$

$3X = 5Y$

$X/Y = 5/3$

Required % = $[(5-3)/5]*100 = 40%$

Q.146) Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?

- a) $1/2$
- b) $2/5$
- c) $7/20$
- d) $9/20$

Q.146) Solution (d)

Here, $S = \{1, 2, 3, 4, \dots, 19, 20\}$.

Let E = event of getting a multiple of 3 or 5 = $\{3, 6, 9, 12, 15, 18, 5, 10, 20\}$.

Therefore, $P(E) = n(E)/n(S) = 9/20$

Q.147) A speaks truth in 75% of cases and B in 80% of cases. In what percentage of cases are they likely to contradict each other, narrating the same incident?

- a) 25%
- b) 30%
- c) 35%
- d) 40%

Q.147) Solution (c)

Let A = Event that A speaks the truth.

B = Event that B speaks the truth

Then $P(A) = 75/100 = 3/4$

$P(B) = 80/100 = 4/5$

$P(\text{A-lie}) = 1 - 3/4 = 1/4$

$P(\text{B-lie}) = 1 - 4/5 = 1/5$

Now

A and B contradict each other = [A lies and B true] or [B true and B lies]

= $P(A) * P(\text{B-lie}) + P(\text{A-lie}) * P(B)$ [Please note that we are adding at the place of OR]

= $(3/5 * 1/5) + (1/4 * 4/5) = 7/20$

= $(7/20 * 100) \% = 35\%$

Study the following passage and answer the 3 (three) questions that follow. Your answers to these questions should be based on the passage only.

To discover the relation between rules, paradigms, and normal science, consider first how the historian isolates the particular loci of commitment that have been described as accepted rules. Close historical investigation of a given speciality at a given time discloses a set of recurrent and quasi-standard illustrations of various theories in their conceptual, observational, and instrumental applications. These are the community's paradigms, revealed in its textbooks,

lectures, and laboratory exercises. By studying them and by practising with them, the members of the corresponding community learn their trade. The historian, of course, will discover also a penumbral area occupied by achievements whose status is still in doubt, but the core of solved problems and techniques will usually be clear. Despite occasional ambiguities, the paradigms of a mature scientific community can be determined with relative ease.

That demands a second step and one of a somewhat different kind. When undertaking it, the historian must compare the community's paradigms with each other and with its current research reports. In doing so, his object is to discover what isolable elements, explicit or implicit, the members of that community may have abstracted from their more global paradigms and deploy it as rules in their research. Anyone who has attempted to describe or analyse the evolution of a particular scientific tradition will necessarily have sought accepted principles and rules of this sort. Almost certainly, he will have met with at least partial success. But, if his experience has been at all like my own, he will have found the search for rules both more difficult and less satisfying than the search for paradigms. Some of the generalizations he employs to describe the community's shared beliefs will present more problems. Others, however, will seem a shade too strong. Phrased in just that way, or in any other way he can imagine, they would almost certainly have been rejected by some members of the group he studies. Nevertheless, if the coherence of the research tradition is to be understood in terms of rules, some specification of common ground in the corresponding area is needed. As a result, the search for a body of rules competent to constitute a given normal research tradition becomes a source of continual and deep frustration.

Recognizing that frustration, however, makes it possible to diagnose its source. Scientists can agree that a Newton, Lavoisier, Maxwell, or Einstein has produced a permanent solution to a group of outstanding problems and still disagree, sometimes without being aware of it, about the particular abstract characteristics that make those solutions permanent. They can, that is, agree in their identification of a paradigm without agreeing on, or even attempting to produce, a full interpretation or rationalization of it. Lack of a standard interpretation or an agreed reduction to rules will not prevent a paradigm from guiding research. Normal science can be determined in part by the direct inspection of paradigms, a process that is often aided by but does not depend upon the formulation of rules and assumption. Indeed, the existence of a paradigm need not even imply that any full set of rules exists.

Q.148) What is the author attempting to illustrate through this passage?

- a) Relationships between rules, paradigms, and normal science
- b) How a historian would isolate a particular 'loci of commitment'
- c) How a set of shared beliefs evolve into a paradigm
- d) Ways of understanding a scientific tradition

Q.148) Solution (d)

The main point of the first paragraph is to define what accepted rules are and how to identify them. In the second paragraph, the author talks about comparing different sets of accepted rules or community paradigms and analysing them. In the last paragraph, the author talks about how paradigm, even if they cannot be distilled into rules, can yet guide research and be widely accepted. Thus, the main point of the passage is how to understand scientific paradigms.

Option a is an answer to how the author is attempting to illustrate his point through the passage. It does not answer the 'what' part.

Options b and c give only partial answers to what the author is trying to illustrate through the passage.

Hence, Option d is the correct answer.

Q.149) The term 'loci of commitment' as used in the passage would most likely correspond with which of the following?

- a) Loyalty between a group of scientists in a research laboratory
- b) Loyalty between groups of scientists across research laboratories
- c) Loyalty to a certain paradigm of scientific inquiry
- d) Loyalty to global patterns of scientific inquiry

Q.149) Solution (c)

In the first line of the passage, the author describes the loci of commitment as accepted rules. The passage talks about the historian trying to isolate the particular loci of commitment, which he later concludes as the community's paradigms.

Option c succinctly captures this idea. None of the other options is appropriate.

Q.150) The author of this passage is likely to agree with which of the following?

- a) A group of scientists investigating a phenomenon would benefit by defining a set of rules
- b) Acceptance by the giants of a tradition is a sine qua non for a paradigm to emerge
- c) Choice of isolation mechanism determines the types of paradigm that may emerge from a tradition
- d) Paradigms are a general representation of rules and beliefs of a scientific tradition

Q.150) Solution (d)

Throughout the passage, the author highlights that "the paradigms" are "the general rules of science".

Rules are difficult to be defined. On the other hand, paradigms can follow without any rules. Option d accurately represents the idea.





The Website that redefined the UPSC Preparation



AIMING FOR IAS/IPS?

**20+ Ranks in Top 10, 350+ Ranks overall
in the last 5 years**

**If you want to be the next,
Join us and let's create history together !**

BABA'S FOUNDATION COURSE 2022

**A COMPREHENSIVE CLASS ROOM
PROGRAM**

(ONLINE & OFFLINE)



Enables you to achieve IAS/IPS in your First Attempt.

**IASbaba's Guidance + Your Dedication=
Rank in Top 100**

Class Starting From 3rd May

CONTACT US:



www.iasbaba.com



support@iasbaba.com



84296 88885 / 91691 91888

Admissions
Open



UPSC 2022

Baba's Foundation Course (Baba's FC 2022)

Comprehensive Classroom programme for Freshers- GS+CSAT

General Studies & CSAT Classes
Focussing on Conceptual clarity



Early Bird offer - 10% Discount
GS + Optional subjects are available at a discounted price

Optionals

Following Optional Subject's Classes are available

- Geography
- Political Science & International Relations
- Sociology
- Anthropology
- Public Administration
- Kannada Literature

Contact us

Our Centres are in
Bangalore, Delhi and Lucknow

Know more by



scanning the QR

www.iasbaba.com

support@iasbaba.com

84296 88885 / 91691 91888