

Directions for the following 3 (three) items:

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

Passage – 1

In effect, the Sustainable Development Goals Index celebrates rich countries while turning a blind eye to the damage they are causing. Ecological economists have long warned against this approach. It violates the principle of “strong sustainability,” which holds that good performance on development indicators cannot legitimately substitute for destructive levels of ecological impact. The SDG Index team is aware of this problem. It’s even mentioned in their methodological notes—but then it’s swept under the rug in favor of a final metric that has little grounding in ecological principles.

1. Which one of the following is **best reflects the crux** of the passage?
 - (a) The Sustainable Development Goals Index creates the illusion that rich countries have high levels of sustainability even if they do not.
 - (b) The Nordic countries even with the highest scores on Sustainable Development Goals Index are some of the most environmentally unsustainable countries.
 - (c) If a country performs well on the development indicators, its score for that goal will look good even if it fails in terms of sustainability.
 - (d) The United Nations needs to redesign the Sustainable Development Goals Index to correct the issues.

Passage – 2

While infrastructure is essential for creating safe and inclusive places, we cannot underplay the importance of changing mindsets. There is a need for the sensitization of students, teachers, and staff in all educational institutions, from primary schools to universities, on understanding and accepting queer and transgender folks. India has taken a step in the right direction by enacting the Transgender Persons Act, which speaks of a trans-inclusive education system wherein transgender students learn with other students without fear of discrimination, neglect, or harassment.

2. With reference to the above passage, the following *assumptions* have been made:
 1. Presently every stakeholder in educational institutions is not adequately sensitized about transgender persons.
 2. Before the enactment of the Transgender Persons Act, there was no any Act in the country to deal with transgender persons.
 3. The said Act will empower the transgender while removing difficulties they face in every sector.

Which of the above *assumptions* is/are valid?

- (a) 3 only
 - (b) 1 only
 - (c) 1 and 3 only
 - (d) 2 and 3 only
3. Which one of the following statements **best reflects the crux** of the passage given above?
 - (a) With better ethos and proper implementation of the Act we can make a better world for transgender persons, even with poor infrastructure.
 - (b) Both infrastructure and compassion are the keys to the betterment of transgender persons.
 - (c) With the help of said Act, transgender folks can make themselves empowered.
 - (d) India needs to be better sensitized about transgender persons.

4. A number is multiplied by six; then its decimal point is moved to the left by three spaces. This is the same as what percent of the number?
- (a) $3/100$ %
 (b) $3/5$ %
 (c) $3/50$ %
 (d) 6 %
5. N and P are two positive real numbers. If N is 20% of P, then what must be the value of P in terms of N?
- (a) 5N
 (b) $N/2$
 (c) 2N
 (d) $N/5$
6. If 10% of x is 25% of the half of y, then what must be the value of y/x ?
- (a) $3/4$
 (b) $8/3$
 (c) $4/5$
 (d) $5/4$
7. The price of an item is decreased by 10%, then by 20%, and finally by 30%. This is equivalent to:
- (a) Decreasing the price by 50.4%
 (b) Decreasing the price by 60%.
 (c) Decreasing the price by 40.5%
 (d) Decreasing the price by 49.6%
8. A number is multiplied by one-sixth, then divided by one-seventh, and then multiplied by seven-tenth. Result is what percent of the original number?
- (a) $49/6$ %
 (b) $50/3$ %
 (c) $245/3$ %
 (d) $5/3$ %
9. M is 35% of N; L is 25% of N. What percent of M is L?
- (a) 40.5%
 (b) $500/7$ %
 (c) 140%
 (d) Data insufficient.
10. Two statements S1 and S2 are given below followed by a question.
 S1: N is a multiple of 5.
 S2: Y is a multiple of 4.
 Question: X is 40% of N, and N is 75% of Y. N and Y are positive integers. X is a positive integer or not?
- (a) Both statements together are insufficient to answer the question.
 (b) Either statement alone is sufficient to answer the question.
 (c) Statement 1 alone is sufficient to answer the question, but Statement 2 alone is not sufficient to answer the question.
 (d) Both statements together are sufficient to answer the question, but neither statement alone is sufficient to answer the question.

Directions for the following 4 (four) items:

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

Passage – 1

It is said women hold up half the sky. Yet barely 19 per cent of Indian women of working age participated in the labour force in 2021 as per the World Bank. The question which must haunt India and its policymakers is, can a nation harness its potential when women stay out of the labour force.

The history of economic development is explicit about necessary and sufficient conditions for prosperity. No large economy has attained its level without the participation of women in the workforce. Female Labour Force Participation Rate in the G7 countries ranges between 42 and 61 per cent. India trails all its peers among the BRICS nations on female workforce participation rate.

There is much lather about political empowerment of women – one facet being reservation of seats in Parliament. Whether that alone will change the stranglehold of circumstance is an open question. India has had just one woman as prime minister and the current Lok Sabha has just over 75 women MPs. There is no disputing that social and economic conditions are a contributory factor. Clearly the run of the mill policies are not enough and there is a need to install affirmative intervention. There is merit in the argument that economic empowerment enables and propels political empowerment.

11. Which of the following is *essentially implied* in the above passage?
- (a) Reservation of seats in Indian Parliament for women is needed for their economic empowerment.
 - (b) India has the lowest levels of female workforce participation rate in the South Asia.
 - (c) Participation of women in the workforce is a necessary condition for prosperity.
 - (d) India is expected to continue to have the largest number of women in working-age population.
12. What is the *most logical and rational inference* that can be made from the above passage?
- (a) India should make provision of longer maternity leave, crèche facilities and equal remuneration.
 - (b) India cannot harness the demographic dividend till the working-age rural populace finds remunerative employment.
 - (c) All countries with high levels of female labour participation have comparatively high levels of political representation of women.
 - (d) India is facing low political representation of women due to both social and economic factors.

Passage – 2

Scholars of education have traditionally made a distinction between achievement tests and proficiency tests. The former focus on what has been taught according to a prescribed syllabus while the latter focus on what has actually been acquired in the domain of knowledge through classroom transactions. The achievement test scores normally indicate the extent to which the learner has mastered the prescribed textbooks. Even after she has passed the Class XII examination with distinction, a student may not be equipped to critically examine the claims made by a scholar, propose alternative hypotheses and initiate a new line of rational enquiry.

13. Which one of the following statements *best reflects the most logical, rational and practical suggestion implied* by the passage given above?
- (a) It is not possible to focus on proficiency tests because of the subjectivity involved therein.
 - (b) Critical thinking and not rational enquiry makes a student more intelligent.
 - (c) The knowledge acquired through prescribed textbooks is not enough to deal with claims made by scholars.
 - (d) The criteria for academic outcome must be knowledge and critical thinking, rather than good grades.

Passage – 3

Meaningful politics, especially in democracies, is rooted in local organization, discussion and negotiation. However, the structure of social media has facilitated a perception of engagement without organization, and action without consequence. This wasn't and isn't inevitable — there are more thoughtful ways to structure platforms, which would help connect and root people in their own communities instead of isolating them locally while “connecting” them virtually.

14. With reference to the above passage, the following *assumptions* have been made:

1. Social media has disturbed meaningful politics.
2. Physical organization is the best way for any meaningful discussion.

Which of the above *assumptions* is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

15. If the price of petrol increases by 25% but Raj intends to spend only an additional 15% on petrol, by how much percent should he reduce the quantity of petrol purchased?

- (a) 10%
- (b) 12%
- (c) 8%
- (d) 6.67%

16. A shepherd has 1 million sheep at the beginning of the year 2000. The number of sheep grows by $x\%$ ($x > 0$) during the year. A famine hits his village in the next year and many of his sheep die. The sheep population decreases by $y\%$ during 2001 and at the beginning of 2002 the shepherd finds that he is left with 1 million sheep. Which of the following is correct?

- (a) $x > y$
- (b) $y > x$
- (c) $x = y$
- (d) Cannot be determined

17. In an election contested by two parties, Party D secured 12% of the total votes more than Party R. If party R got 132,000 votes and there are no invalid votes, then by how many votes did it lose the election?
- (a) 300,000
(b) 16,800
(c) 36,000
(d) 24,000
18. A candidate who gets 20% marks, fails by 10 marks. Another candidate who gets 42% marks, gets 12% of the maximum marks more than the passing marks. Find the maximum marks.
- (a) 50
(b) 100
(c) 150
(d) 200
19. When processing flower-nectar into honeybees' extract, a considerable amount of water gets wasted. How much flower-nectar must be processed to yield 1 kg of honey, if nectar contains 50% water, and the honey obtained from this nectar contains 15% water?
- (a) 1.5 kg
(b) 1.7 kg
(c) 3.33 kg
(d) 2.2 kg
20. 30% of the men are more than 25 years old, and 80% of the men are less than or equal to 50 years old. 20% of all men play football. If 20% of the men above the age of 50 play football, what percentage of the football players are less than or equal to 50 years?
- (a) 15%
(b) 20%
(c) 80%
(d) 70%

Directions for the following 5 (five) items:

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

Passage – 1

Biotechnology has brought advances in animal husbandry (ranching, or the raising of domestic animals). Today's farm animals are larger and grow faster than their ancestors. Cattle, for example, are grazing animals. Their digestive system has evolved to process grasses and other crops. Corn and other grains cause a cow's digestive system to become acidic. That makes it easier for dangerous bacteria (such as E. coli) to develop. Bacterial infections can be harmful to the cow and can also infect the milk and meat consumed by people. Antibiotics are spliced into the DNA of feed corn to prevent such infection. Antibiotics have been used since the 1950s to stimulate cattle growth. Over time, this practice has led to the development of antibiotic-resistant bacteria in cattle and people. Many cattle are also given anabolic steroids, or growth hormones, to make them get bigger, and faster.

21. Based on the passage given above, the following *assumptions* have been made:

1. Use of antibiotics among cattle should be reduced for preventing harmful effects on the population.
2. Reduced use of antibiotics will lead to reduction in milk production.

Select the correct answer using the code given below.

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

22. Which one of the following statements *best implies the suggestion given* by the author of the passage?

- (a) To prevent the creation of antibiotic-resistant microorganisms in cattle and people, there is an urgent need to reduce the use of antibiotics.
- (b) Research should be done to evolve some alternatives to the harmful use of antibiotics.
- (c) Use of biotechnology has negative side effects.
- (d) Biotechnology can be used to reduce antibiotic resistance among people.

Passage – 2

Present-day health problems differ from those with which public health traditionally has been concerned in the amount of individual understanding necessary to prevent and cure diseases or to avoid accidents. Avoiding disability and death from these causes depends a great deal more on individual understanding and action than did the prevention of infectious diseases. Not every person needs to take specific preventive action to be protected from a communicable disease. For example, if a community, through the action of a few of its citizens and its government, installs a safe water supply and sanitary sewage disposal, all members of the community will benefit. The immunization of even a few persons in a community affords some protection to the others, for each immune person in a population reduces the chance of transmission of the disease.

23. Which of the following is/are the *most rational and logical Inference/Inferences* that can be made from the passage?

- 1. Efforts should be made to increase the knowledge of individuals about the prevention of diseases.
- 2. Immunization of every person in the community is a must to prevent the spread of disease.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

24. Which one of the following statements *best reflects the crux* of the passage?

- (a) Governments should speed up vaccination for different diseases to prevent deaths.
- (b) All citizens should take steps to reduce the load of diseases from the community and prevent the spread of diseases.
- (c) Individuals' knowledge about the infectious disease is important but not sufficient to protect the community from its spread.
- (d) Immunization of children is more important than adults as it reduces the chance of transmission of the disease.

Passage – 3

Plants could be selectively bred for certain qualities. In 1866, Gregor Mendel's studies in heredity were published in Austria. In experiments with pea plants, Mendel learned how traits were passed from one generation to the next. His work paved the way for improving crops through genetics.

New crop rotation methods also evolved during this time. Many of these were adopted over the next century or so throughout Europe. For example, the Norfolk four-field system, developed in England, proved quite successful. It involved the yearly rotation of several crops, including wheat, turnips, barley, clover, and ryegrass. This added nutrients to the soil, enabling farmers to grow enough to sell some of their harvest without having to leave any land unplanted.

Most of the world was not affected by these developments, however. Farmers in Asia, Australia, Africa, and South America continued to use old ways of agriculture.

25. With reference to the passage, the following *assumptions* have been made:

1. The Europeans introduced plants such as potatoes, tomatoes, corn and tobacco in Asia.
2. By channeling water from streams into their fields, the farmers were able to increase the food grain production in Europe.
3. New agricultural methods have helped in increasing the soil fertility and production.

Which of the above *assumptions* is/are valid?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1, 2 and 3

26. Two equal sums of money were invested, one at 4% and the other at 4.5%. At the end of 7 years, the simple interest received from the latter exceeded that received from the former by Rs. 31.50. Each sum invested was

- (a) Rs. 1,200
- (b) Rs. 600
- (c) Rs. 750
- (d) Rs. 900

27. Lucknow Shatabdi Express has a capacity of 500 seats of which 10% are in the Executive class and the rest are chair cars. During one journey, the train was booked to 85% of its capacity. If the Executive class was booked to 96% of its capacity, then how many chair car seats were empty during that journey?

- (a) 78
- (b) 73
- (c) 72
- (d) 76

28. If the difference between P and R is $r\%$ of R, and the sum of P and R is 210, then which of the following statements is always true?

- (a) $P = 110, R = 100$
- (b) $P = 270, R = 180$
- (c) $P = 3000, R = 3200$
- (d) All of these

29. How much water must be added to a 100 cc of 80% solution of boric acid to reduce it to a 50% solution?

- (a) 20 cc
- (b) 40 cc
- (c) 80 cc
- (d) 60 cc

30. If A's salary is 25% higher than B's salary, then how much per cent is B's salary lower than A's?
- (a) 16.33%
 (b) 20%
 (c) 25%
 (d) 33.33%
31. The difference between the simple interest and the compound interest compounded annually at a rate of 12% per annum on Rs. 5000 for two years will be
- (a) Rs. 47.50
 (b) Rs. 63
 (c) Rs. 45
 (d) Rs. 72
32. If a% of X is equal to b% of Y, then c% of Y is what percent of X?
- (a) c%
 (b) $(ac/b)\%$
 (c) $(bc/a)\%$
 (d) $abc\%$

Directions for the following 5 (five) items:

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

Passage – 1

In sum, the main aim of transport planning is to make the transport sector more sustainable from a social and environmental point of view while simultaneously allowing tourism to grow. Transport planning and tourism policy have to be integrated to achieve joint environmental and social objectives. In this sense, it is important to create incentives that reduce the need for private cars and minimize the length of time needed to access specific locations. This could lead to substantial welfare gains, in terms of pollution reductions and improved access for rural inhabitants.

33. What is the **crucial message** conveyed by the above passage?
- (a) Separating the transport and tourism policy will be detrimental to the society and environment.
 (b) Tourism industry cannot grow without the growth in the transport sector.
 (c) Pollution and economic issues of rural inhabitants exist because of poor public transport infrastructure.
 (d) Socio-environmental development is dependent on the synergy between transport and tourism policies.

Passage – 2

Pesticide resistance is increasing and farmers' and other pest managers' dependencies on chemical insecticides have led to a high frequency of insecticide resistance in some crop systems. To fight pesticide resistance and based on a knowledge of the genetics of the development of pesticide resistance, several principles must be adhered to for delaying the emergence of resistance or avoiding it entirely. These principles include pesticide rotation or switching, avoiding unnecessary pesticide applications, using non-chemical control techniques, and leaving untreated refuges where susceptible pests can survive.

34. Which one of the following statements **best reflects the central idea** of the passage?
- (a) Pesticide resistance can be avoided by following the principles of rotation, non-chemical control techniques etc.
 (b) Increasing pesticide resistance could lead to food insecurity in the long run.
 (c) It is not possible to develop pesticides without the knowledge of the genetics of the pests.
 (d) Bio-pesticides should be promoted as an alternative to chemical pesticides to prevent pesticide resistance.

Passage – 3

Packaging is enclosing the food material in a container to ensure the delivery of the product in the best condition to the consumer for final use. Therefore, good packaging plays a vital role in developing the image and brand of the company product. Intelligent food packaging incorporating nanosensors can provide information on the state of the food inside. It is recommended that nano packaging should be designed in such a way to release antimicrobials, antioxidants, flavour enzymes and nutraceuticals to extend the shelf life of the food products. There is a need to undertake further toxicological and migration studies to ensure the safe development of nanotechnologies in the food packaging industry.

35. Which of the following is/are *the most rational and logical inference/ inferences* that can be made from the passage?

1. Including nanosensors in packaging will increase the cost of packaging for companies.
2. There is limited understanding of the use of nanotechnology in the packaging industry.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Passage – 4

Today about 25% of modern pharmacopoeia are derived from plants. World Health Organization (WHO) estimated that about 80% of the developing country's population still relies on traditional medicines, mostly plant drugs, to help meet their health care needs. Also, there is an increase in the demand for plant products in both developing and developed countries because of several advantages such as no side effects, non-toxic, and affordable prices. Plants provide the raw material for industries producing pharmaceuticals, cosmetics, perfumes, and fragrance flavours imparting biochemical. Therefore, there is an urgent need for conservation, sustainable utilization, and management of plant genetic resources of the region to meet the growing requirements of food, fodder, fibre, health, water, and other needs.

36. According to the passage above, what are the different uses of plants?

1. Preparation of medicines
2. Consumption of food
3. Prevention of soil erosion
4. Making perfumes
5. Controlling air pollution

Select the correct answer from code below:

- (a) 1, 2 and 4 only
- (b) 1, 2, 3 and 4 only
- (c) 1, 2, 3, 4 and 5
- (d) 2, 3, 4 and 5 only

37. Based on the above passage, the following *assumptions* have been made:

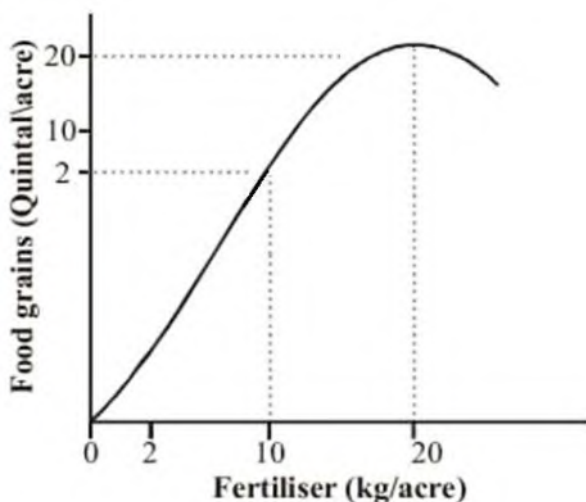
1. Developed nations are mainly dependent on chemical-based medicines.
2. Many plant genetic resources are getting extinct because of the increasing loss of biodiversity.

Which of the above *assumptions* is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Direction for the following 2 (two) items

The graph below indicates the relationship between fertilizer consumed (in kg/acre) to output (in quintal/acre). Study the graph given below carefully and answer the questions that follow



38. If a farmer is having 5 acres of land and only 50 kg of fertilizer, which of the following will give the best yield?
- 10 kg/acre
 - 20 kg in one acre and remaining 30 kg over four acres
 - 20 kg in two acres and remaining in three acres
 - All of the above will give the same yield
39. What is the minimum angle that the given graph makes with the x-axis?
- 30°
 - 45°
 - 60°
 - 0°
40. In a class, the average score of girls in an examination is 73 and that of boys is 71. The average score of whole class is 71.8. The percentage of girls in the class is:
- 60%
 - 40%
 - 30%
 - 18%

Directions for the following 4 (four) items:

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

Passage – 1

Traditionally, farmers have used a variety of methods to protect their crops from pests and diseases. They have put herb-based poisons on crops, handpicked insects off plants, bred strong varieties of crops, and rotated crops to control insects. Now, almost all farmers, especially in developed countries, rely on chemicals to control pests. The definition of “pest” ranges from insects to animals such as rabbits and mice, as well as weeds and disease-causing organisms—bacteria, viruses, and fungi. With the use of chemicals, crop losses and prices have declined dramatically.

41. Based on the passage given above, the following *assumptions* have been made:
- Chemical pest control methods work better than traditional methods.
 - Like developed countries, developing countries too should adopt chemical methods to control pests.
- Which of the following *assumptions* is/are valid?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2

Passage – 2

Protecting Earth’s remaining biodiversity and restoring at least one-third of what has been lost in the last 30 years is the most efficient and cost-effective step we can take to stabilize the climate emergency. Unlike technological and engineered solutions that are expensive and must be scaled up to be effective, wild nature is already in place and working for free (as it has done for 500 million years) to produce everything life needs most to survive.

42. Which one of the following statements *best reflects the crux* of the passage?
- (a) Humans must align their activities with nature to completely regain the lost biodiversity.
 - (b) Man-made solutions for climate change are more effective than natural solutions.
 - (c) Climate emergency needs human and nature's intervention for stabilizing it.
 - (d) Governments across the globe should invest in scaling up technologies to handle climate emergencies.

Passage – 3

When physical activity is used as a break from academic learning time, post-engagement effects include better attention, increased on-task behaviours, and improved academic performance. Comparisons between 1st-grade students housed in a classroom with stand-sit desks where the child could stand at his/her discretion and in classrooms containing traditional furniture showed that the former children were highly likely to stand, thus expending significantly more energy than those who were seated. More important, teachers can offer physical activity breaks as part of a supplemental curriculum or simply as a way to reset student attention during a lesson and when provided with minimal training can efficaciously produce vigorous or moderate energy expenditure in students. Further, after-school physical activity programs have demonstrated the ability to improve cardiovascular endurance, and this increase in aerobic fitness has been shown to mediate improvements in academic performance, as well as the allocation of neural resources underlying performance on a working memory task.

43. Based on the above passage, the following *assumptions* have been made:
1. Students should be provided with frequent physical activity breaks that are developmentally appropriate.
 2. Students respond better to a variety of cognitive tasks after participating in a session of physical activity.
- Which of the above *assumptions* is/are valid?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

44. Physical activity is important in a child's daily life because
- (a) It helps in breaking the monotonous pattern of life.
 - (b) Otherwise, there will be a lack of physical development in the child.
 - (c) It improves cognitive functions related to attention and memory to facilitate learning.
 - (d) Consistent engagement in physical activity can help students refine social skills.
45. A report consists of 20 sheets, each having 55 lines and each such line consists of 65 characters. This report is retyped into sheets having 65 lines, such that each line consists of 70 characters. The percentage reduction in number of sheets is close to:
- (a) 20%
 - (b) 5%
 - (c) 30%
 - (d) 35%

46. A person who has a certain amount with him goes to a market. He can buy 50 oranges or 40 mangoes with the amount he has. However, he retains 10% of the amount for taxi fares, buys 20 mangoes, and purchases oranges with the remaining amount. Number of oranges he purchased is:
- (a) 36
(b) 40
(c) 15
(d) 20
47. Forty per cent of the employees of a certain company are men, and 75% of the men earn more than Rs. 425,000 per year. If 45% of the company's employees earn more than Rs. 425,000 per year, what fraction of the women employed by the company earn Rs. 425,000 or less per year?
- (a) $\frac{2}{11}$
(b) $\frac{1}{4}$
(c) $\frac{1}{3}$
(d) $\frac{3}{4}$
48. Three friends Ashwini, Bhavna and Charulata divide Rs. 1105 among them in such a way that if Rs. 10, Rs. 20, and Rs. 15 are removed from the sums that Ashwini, Bhavna, and Charulata received respectively, then the share of the sums that they got will be in the ratio 11:18:24. How much did Charulata receive originally?
- (a) Rs. 495
(b) Rs. 510
(c) Rs. 480
(d) Rs. 375
49. A house costs Rs. C. Later it was sold for a profit of 25%. What is the capital gains tax if it is 50% of the profit made?
- (a) Rs. $\frac{C}{24}$
(b) Rs. $\frac{C}{8}$
(c) Rs. $\frac{C}{4}$
(d) Rs. $\frac{C}{2}$
50. Consider the following statements:
If a sum of money is lent at simple interest, then the
- I. Money gets doubled in 5 years if the rate of interest is 16.67%.
II. Money gets doubled in 5 years if the rate of interest is 20%.
III. An amount of money becomes four times in 10 years, if the same amount of money gets doubled in 5 years.
- Which of the above is/are correct?
- (a) Only I and III are correct
(b) Only II is correct
(c) Only III is correct
(d) Only II and III are correct.

Directions for the following 4 (four) items:

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

Passage – 1

Any suicide is a tragedy of insurmountable proportions for the family. It has multiple ramifications for those left behind. Truly, it is the end point of the collective failure of society. Hence, its prevention begins within the society. Suicides which happen due to coercion and threat of violence are not truly suicides, they are murders committed by all of us. In India, we harbour suicides in our shanties, colonies, homes, colleges, schools and professional institutions. We love the talk of death as a means of retribution. If we do not want that to happen, then we must raise our voices at every act of injustice, abuse, prejudice, threat and violence aimed at the ordinary Indian.

51. Which one of the following is the *most rational inference(s)* one can draw from the passage?

- (a) Society, in many cases, provokes one to commit suicide.
- (b) Society is solely responsible for suicide.
- (c) Society promotes suicide in order to maintain its supremacy over individuals.
- (d) All of the above

52. Which one of the following acts represents us as insensitive human beings according to the passage?

- 1. Raising voice at every act of injustice.
 - 2. Loving the talk of death.
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

Passage – 2

Children growing up in more disadvantaged neighbourhoods – meaning those with poor housing quality, more poverty and lower levels of employment and education – show observable increases in brain activity when viewing emotional faces on a screen. But importantly, this association was true only when the adults in those neighbourhoods also did not have strong shared norms about preventing crime and violence. The findings emphasize that where children live, the resources of others in the neighbourhood may affect brain development. But neighbours may help protect children from these effects on the brain when they can build positive social norms about looking out for one another and preventing violence.

53. Which of the following is/are the *most rational and logical Inference/Inferences* that can be made from the passage?

- 1. There is a visible impact of adult behaviour on the brain of children.
- 2. Imparting positive values in children through socialization is not the sole responsibility of the family.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

54. Which one of the following statements *best implies the crux* of the passage?

- (a) There's an impact of the neighbourhood and its values on the brain development of the child.
- (b) Poverty in the neighbourhood results in children committing crimes and violence.
- (c) Education is the best tool for children for imparting strong shared norms.
- (d) There is a need for a child policy which deals with the development of children in disadvantaged neighbourhoods.

55. In a class, 40% of the boys is same as half of the girls, and there are 20 girls in total. Total number of students in the class is:

- (a) 70
- (b) 45
- (c) 35
- (d) 25

56. A country follows a progressive taxation system under which the monthly income tax rates applicable vary for different slabs of income. Total tax is computed by calculating the tax for each slab and adding them up. The rates applicable are as follows:

Monthly Income	Tax Rate
0 to 50,000	0%
50001 to 60,000	10%
60001 to 1,50,000	20%
>1,50,000	30%

If my income is Rs. 70,000 per month, then what is the tax payable by me each month

- (a) Rs. 51000
 (b) Rs. 17000
 (c) Rs. 34000
 (d) Rs. 25000
57. A Business Group has 3 Companies X, Y, Z and a Trust P which is engaged in charitable activities. Each group company has to donate 5% of its own funds to the trust. X has given a loan to Y which is equivalent to 10% of the funds of Y. After receiving the loan, Y has funds which are 2 times the funds of Z. If Z gave Rs. 10000 in donation to trust P, then how much is the approximate contribution of Y to trust P?
- (a) Rs. 17,000
 (b) Rs. 18,000
 (c) Rs. 19,000
 (d) Rs. 20,000

58. The pre-paid recharge of a certain telecom company X gives 21% less talktime than that given by pre-paid recharge of telecom company Y at the same price. The post-paid talktime given by X is 12% more than that given by its pre-paid recharge at the same price. Further, the post-paid talktime given by Y is 15% less than that given by its pre-paid recharge at the same price. How much percent less/more talktime can one get from the post-paid service of X as compared to the post-paid service of Y?
- (a) 4% more
 (b) 5% less
 (c) 5% more
 (d) 8% less
59. A dealer sold two bicycles for Rs. 9900 each, gaining 10% on one and losing 10% on the other. The total gain or loss percent in the whole transaction is:
- (a) (1/99)% gain
 (b) (100/99)% gain
 (c) 1% loss
 (d) Neither loss nor gain
60. On selling a pen at 5% loss and a book at 15% gain, Karan gains Rs. 7. If he sells the pen at 5% gain, and the book at 10% gain, then he gains Rs. 13. The actual price of the book is:
- (a) Rs. 100
 (b) Rs. 80
 (c) Rs. 10
 (d) Rs. 40

61. A dairyman pays Rs. 6.4 per litre for milk. He adds water and sells the mixture at Rs. 8 per liter, thereby making 37.5% profit. The ratio of water to milk received by the customer is:
- (a) 1:5
(b) 1:10
(c) 1:20
(d) 1:12
62. A person deposited Rs. 13,200 in a bank, which pays 14% simple interest. If he rather had invested in Rs. 110 stocks which pay a dividend of 15% on the face value of Rs. 100, how much would he had lost or gained?
- (a) Loses Rs. 48
(b) Gains Rs. 48
(c) Loses Rs. 132
(d) Gains Rs. 132
63. A manufacturer sells a pair of glasses to a wholesale dealer at a profit of 18%. The wholesaler sells the same to a retailer at a profit of 20%. The retailer in turn sells them to a customer at 25% profit. If the cost price for the customer is Rs. 30.09, then the cost price for the manufacturer must have been:
- (a) Rs. 15
(b) Rs. 16
(c) Rs. 17
(d) Rs. 18
64. A departmental store receives a shipment of 1,000 shirts, for which it pays Rs. 900000. The store sells the shirts at a price 80 per cent above the cost for one month, after which it reduces the price of the shirts to 20 per cent above the cost. The store sells 750 shirts in the first month, and 50 per cent of the remaining shirts afterwards. How much gross income did the sales of the shirts generate?
- (a) Rs. 1000000
(b) Rs. 1080000
(c) Rs. 1215000
(d) Rs. 1350000
65. Two friends Ajit and Lalit made investments in a business in the ratio 60:40. Lalit had borrowed his entire invested amount as personal loan at an annual interest rate of 5%. He repaid this loan after one year. After 5 years of investment, they got a profit of 30% on the total investment they had made. What is the ratio of actual profit made by Ajit and Lalit?
- (a) 3 : 2
(b) 2 : 3
(c) 9 : 5
(d) 11 : 18

Directions for the following 4 (four) items:

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

Passage - 1

Education is a valuable tool for gaining learning and wisdom. Though books are essential to education, the notion encompasses more than just books and bookish knowledge. It isn't required for education to be only based on books. The most important goal of education is to help people with how to read and write. The first step toward literacy is reading and writing. Education provides a person with endless opportunities for growth and advancement. People who have had an education tend to be calmer and more self-assured. People who have been educated are disciplined and understand the importance of time. Education allows a person to be more expressive and opinionated. He is able to readily communicate his viewpoints, which are supported by a clear aim and rationale. Education benefits, not just the individual but also the community. The most important aspect of education is that it goes from one individual to another, then throughout society, and eventually throughout the country. An educated individual tries to teach and inspire everyone with whom he or she comes into contact. Education brings one up to speed on technological advancements as well. A well-educated person can easily adjust to technological developments. Education, more than anything else, is a source of hope. The desire for a better life; the desire for a wealthy and poverty-free existence.

66. According to the passage, which of the following is/are the benefits of education?

1. Discipline, Confidence and Punctuality
2. Enhanced economic participation of women
3. Technological literacy of the society
4. Improving the communication skills of the person

Select the correct answer form the code given below:

- (a) 1, 2 and 3 only
- (b) 2 and 3 only
- (c) 1, 2 and 4 only
- (d) 1, 3 and 4 only

67. Based on the above passage, the following *assumptions* have been made:

1. The sole goal of education is to ensure everyone can read a book.
2. The benefits of education do not remain limited to one person alone.

Which of the above *assumptions* is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

68. Which one of the following statements *best reflects the crux* of the passage?

- (a) Education is a necessary condition for economic growth of a person.
- (b) A person cannot be successful in life without education.
- (c) An educated society is essential for poverty-free existence.
- (d) A well-educated individual is a valuable asset to the society.

Passage - 2

A great transformation can be observed in our daily routine life along with the increasing involvement of IoT devices and technology. One such development of IoT is the concept of Smart Home Systems (SHS) and appliances that consist of internet-based devices, automation systems for homes and reliable energy management systems. Besides, another important achievement of IoT is the Smart Health Sensing system (SHSS). SHSS incorporates small intelligent equipment and devices to support the health of human beings. These devices can be used both indoors and outdoors to check and monitor the different health issues and fitness levels or the number of calories burned in the fitness centre etc. Also, it is being used to monitor critical health conditions in hospitals and trauma centres as well. Hence, it has changed the entire scenario of the medical domain by facilitating it with high technology and smart device.

69. Which one of the following *best reflects the crux* of the above passage?
- (a) IoT has positively affected the lives of humans in almost every domain.
- (b) With the increasing use of IoT, there is a dire need for investment in the online security of the citizens.
- (c) In the medical domain, IoT devices can act as a double-edged sword.
- (d) Application of high-end technology, and smart systems for home, health and energy increases the cost of living.
70. A machine costs m rupees per day to maintain and n paise for each unit it produces. If the machine produces r units in a week, then which of the following is the total cost of operating the machine for a week?
- (a) $7m + 100nr$
- (b) $(700m + nr) / 100$
- (c) $m + nr$
- (d) $700mnr$
71. A shopkeeper purchases a packet of 50 pens at Rs. 10 per pen. He sells a part of the packet at a profit of 30%. On the remaining part, he incurs a loss of 10%. If his overall profit on the whole packet is 10%, the number of pens he sold at profit is:
- (a) 25
- (b) 30
- (c) 20
- (d) 15
72. A garment company declared 15% discount for wholesale buyers. Mr. Sachdev bought garments from the company for Rs. 25000 after getting the discount. He fixed up the selling price of garments in such a way that he earned a profit of 8% on original company price. What is the approximate total selling price?
- (a) Rs.28000
- (b) Rs. 29000
- (c) Rs. 31765
- (d) Rs. 29500
73. A shopkeeper labelled the price on his articles in such a manner so as to earn a profit of 30% on the cost price. He, then sold the articles by offering a discount of 10% on the labelled price. What is the actual profit percentage earned by him?
- (a) 18%
- (b) 15%
- (c) 20%
- (d) None of these
74. Rani bought more apples than oranges. She sells apples at Rs. 23 a piece and makes 15% profit. She sells orange at Rs. 10 a piece and makes 25% profit. If she gets Rs. 653 after selling all the apples and oranges, find her profit percentage.
- (a) 16.8%
- (b) 17.4%
- (c) 18.9%
- (d) 183%

75. In a local shop as part of promotional measures, the shop owner sells three different varieties of soap, one at a loss of 13 percent, another at a profit of 23 percent and the third one at a loss of 26 percent. Assuming that the shop owner sells all three varieties of soap at the same price, the approximate percentage by which average cost price is lower or higher than the selling price is:
- (a) 10.5% higher
 - (b) 12.5% lower
 - (c) 14.5% lower
 - (d) 8.5% higher
76. The percentage of accountants at a company that has 10,000 employees dropped from 10% at the end of last year to 6% at the end of this year. If the number of employees at the end of this year is 9,500, what is the approximate change in the number of accountants over this period?
- (a) 13% increase
 - (b) 43% decrease
 - (c) 30% decrease
 - (d) 23% decrease
77. X is 20% of Y, which is 40% of Z. All three are positive integers. In which range does the smallest possible value of $X + Y + Z$ fall?
- (a) From 31 to 40
 - (b) From 51 to 60
 - (c) From 21 to 30
 - (d) From 41 to 50
78. The cost price of 10 candles is the same as the selling price of 'n' candles. If a loss of 40% is incurred, what is the approximate value of 'n'?
- (a) 15
 - (b) 14
 - (c) 17
 - (d) 19
79. In a certain business deal, the profit percentage is set at 80% of the cost. If the cost further increases by 20% but the selling price remains the same, then what must be the new profit percentage?
- (a) 50%
 - (b) 60%
 - (c) 40%
 - (d) 21%
80. A company with 800 employees is planning to hire 100 additional employees at the beginning of the next fiscal year. Currently, only 10% of the company's employees have a college degree. How percentage of the additional employees to be hired should have a college degree in order to double the number of employees having college degrees?
- (a) 90%
 - (b) 60%
 - (c) 80%
 - (d) 100%