

WEBINAR HANDOUT



BYJU'S ALL INDIA PRELIMS TEST SERIES - 2020

CSAT PART - 1



Time Allowed: **Two Hours**

Maximum Marks: **200**

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. You have to enter your Roll Number on the test Booklet in the Box provided alongside.

DO NOT write anything else on the Test Booklet.
3. This Test Booklet contains 80 items (questions). Each item is printed in **English and Hindi**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE response for each item**. More than one response will be treated as wrong answer.
4. All items carry equal marks.
5. For each question for which a wrong answer has been given by the candidate, one-third (-0.33 %) of the marks assigned to that question will be deducted as penalty. There will be no penalty for a question which is left blank.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

ध्यान दें: अनुदेशों का हिन्दी रूपान्तर इस पुस्तिका के अन्तिम पृष्ठ पर छपा है।

Directions for the questions (1 to 9):

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

PASSAGE 1

Many of us are fearful about the way the world is heading. Extremist movements subject people to horrific violence. Conflicts and deprivation are forcing families from their homes. Climate change darkens our horizons – and everywhere, it seems, anxieties are deepening. Humane values are under attack, and we feel overwhelmed – unsure what to do or where to turn.

Messages of intolerance and hatred prey on our fears. They are spread by people who seek power, deploying twisted logic and false promises, and fabricating outright lies. Their narratives speak to selfishness, separatism – a distorting, narrow view of the world. Little by little, this toxic tide of hatred is rising around us, and the deep and vital principles that safeguard peaceful societies risk being swept away.

We must draw the line – and we can. There is another way. It starts with all of us taking practical steps to reaffirm our common humanity.

1. What is the main theme of the passage?
 - (a) Climate change is real, and it will lead to our demise.
 - (b) Intolerance and hatred is spread by people of power.
 - (c) The increase in hatred has left the people unsure and overwhelmed.
 - (d) It is time to take a stand for humanity, to put an end to this hatred

2. According to the author, what is fueling this rising hatred
 - a. The anxiety caused by climate change is causing a rise in hatred.
 - b. Rising cases of conflicts and deprivation are causing anxieties which leads to deep hatred.
 - c. It is facilitated by people who seek power.
 - d. Disruption of deep and vital principles.

PASSAGE 2

Poor health seeking behavior leads to poor Health and Nutritional outcomes has been established by researchers and practitioners. Urban population, largely the poor and the marginalized, are “ghettoized” and “spaced out”.

Poor health seeking behavior leads to poor Health and Nutritional outcomes has been established by researchers and practitioners. Urban population, largely the poor and the marginalized, are “ghettoized” and “spaced out” because of the inadequacy in urban public health delivery system to reach them on account of location, their place of work such as constructions sites etc. In addition, ineffective outreach and weak referral system limits their access. Migrant population’s inability to navigate the complex landscape of deeply fragmented health system has made them much more vulnerable to the ill-effects of health. Lack of economic resources and health insurance inhibits their access to the available private facilities.

3. On the basis of the above passage, the following assumptions have been made:
1. When the poor and marginalized are ghettoized the shortcomings of urban public health, unable to reach them due to location and work sites is rectified.
 2. Improvement in economic conditions or provision of insurance can compensate for the lack of proper public healthcare system

Which of the above assumptions is/are valid?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 or 2

PASSAGE 3

The International Organization for Migration defines environmental migrants as “persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.”

Increased migration – or forced displacement – will continue to be driven by the effects of climate change, including extreme weather events like strong hurricanes. Without development efforts to stem the effects of climate change on children and families, the scale of forced displacement will “ramp up” by 2050 and then accelerate, according to the World Bank Group.

As disasters occur more frequently and become more dangerous, “some local areas will become increasingly marginal as places to live or in which to maintain livelihoods,” according to the United Nations Intergovernmental Panel on Climate Change (IPCC). And when that happens, forced displacement may become permanent relocation, particularly on atolls (rings of coral islands), adding pressures to the communities where people seek refuge. The IPCC finds an increased risk of forced displacement for some populations, including people in rural and urban areas with higher exposure to extreme weather events; low-income developing countries; and communities without the resources to plan for displacement.

4. Consider the following statements
1. Climate change is one of the key reasons for a steady decrease in Mitigation.
 2. The effects to curb climate change will actually decrease the number of children and families who face Mitigation.
 3. Some land are becoming increasingly uninhabitable due to the increasing frequency of disasters.

Which of the above statements above is/are correct?

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

(d) None of the above

5. Consider the following statements

1. Migration of people to other lands in search of better economic opportunities can also be classified as Mitigation.
2. Communities from low income developing countries face a risk of Mitigation than the rest of the people.

Which of the above statements is/are **incorrect**?

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

PASSAGE 4

To most, 'Education' simply connotes a process of facilitating learning or the acquisition of knowledge and skills. Often, we do not lay enough emphasis on values, beliefs, wisdom and habits, which are core to a good education. Good, well-rounded education should help to bring lasting positive changes in human life and behavior, so that we can contribute to society in a meaningful and positive way. To create unity and justice for all.

Albert Einstein during his visit to Boston in 1921, while commenting on college education stated, "Education is not the learning of facts, but the training of minds to think." He argued, that in order to learn facts, a person does not really need a school or college education. The value of a school or college education is to train the mind to think something that cannot be learned from textbooks, it is to create the capacity of integrated understanding and an ability to use the knowledge intelligently. These are fundamental aspects of the ethos of education that we continue to aspire for even today.

Education is the catalyst that can help reduce poverty, improve health, prevent needless deaths & illness, eliminate gender inequality and create a sustainable planet. For societies, education drives long-term economic growth, spurs innovation, strengthens institutions, and fosters social cohesion. Education gives people the skills they need to help themselves out of poverty. As per a UN study, there is a 9% increase in hourly earnings for every one extra year of schooling. In many cases expanding access to education is in fact a matter of life and death. A mother who can read is able to better protect her children from chronic illnesses and from dying young. As per UN estimates, in the developing world, a child born to a mother who can read is 50% more likely to survive past age five.

As far as India is concerned, we are proud of the fact that India has youth on her side while the world is aging. By the end of this decade, the average age of the Indian population will be 29. As a result of India's "demographic dividend", by 2040, India will account for a quarter of the globe's incremental increase in working population. Our present workforce (the 15-64 age group) comprises 430 million people. In the next 20 years, India will add another 480 million people to its existing workforce.

6. Which of the following is the logical, rational, and crucial message conveyed by the passage?

- (a) Acquisition of knowledge is the most important goal of education.
- (b) The true aim of education is to train the mind to integrate understanding and the ability to use the knowledge.

- (c) Educating young mothers is very important, as the 9% increase in hourly earnings for every one extra year of schooling, will help them provide more for their kids.
- (d) India's huge population growth was a result of improper education, which can be reduced in the future by educating the current youth, which will amount to about one-quarter of the world population.

7. Consider the following statements

- 1. Provision of unity and justice in society will result in accessibility of education for all.
- 2. According to Albert Einstein, a person does not really need a school or college education.
- 3. One among the best ways to bring people out of poverty is to educate them so that they gain skill to help themselves out.

Which of the statements given above is/are correct?

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

8. With reference to this quote by Einstein "that in order to learn facts, a person does not really need a school or college education", which of the following statements is/are correct?

- 1. Einstein performed poorly in school, which is why he made that statement.
- 2. The true purpose of education should be to train the mind to understand and utilize the facts rather than teaching facts alone.
- 3. The facts taught in schools and colleges are limited, and the training enables the individuals to gain and utilize information themselves.

Select the answer using the code given below:

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

9. What is the main theme of the passage?

- (a) True purpose of education is to create unity and justice for all.
- (b) True education doesn't come from schools or colleges.
- (c) Eradication of poverty and inequality is mandatory to provide quality education for all.
- (d) Education is not the learning of facts, but the training of minds to think.

10. The greatest four-digit number which when divided by 12, 16 and 24 leave remainders 2, 6 and 14 respectively, is

- (a) 9998
- (b) 9984
- (c) 9974

(d) 9886

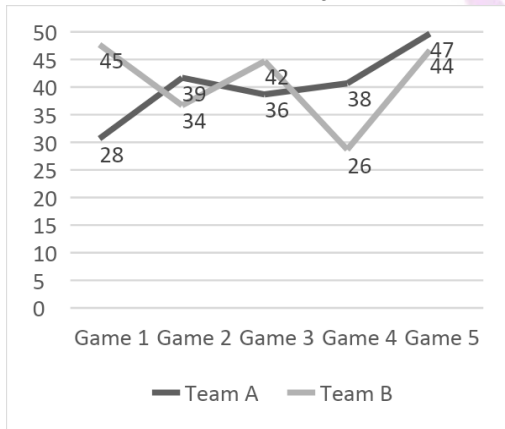
11. In the final examination of class X, 70% of the candidates passed in Hindi, 55% passed in English, and 15% failed in both the subjects. If 128 candidates passed in both the subjects, the total number of candidates was:

- (a) 320
- (b) 400
- (c) 360
- (d) 640

12. In a Government School, Classroom Q has 50% more students than classroom P. Number of girls in class room P is equal to the number of boys in class room Q. The percentage of girls equal in both the classrooms, What percentage of the student group are boys?

- (a) 50%
- (b) 44.44%
- (c) 37.5%
- (d) 40%

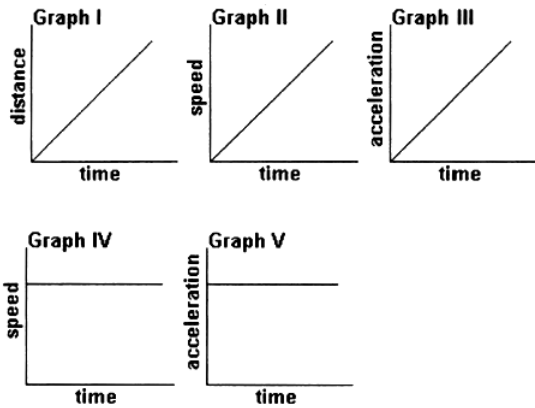
13. Points scored by two teams in a basketball playoff series (best of 5) is given below.



The difference between the average points scored by the teams in a match is:

- (a) 0.2
- (b) 1.2
- (c) 2.1
- (d) 0.6

14. Which of the following graphs correctly represents the motion of a bee flying in straight line with a constant speed?



- (a) Graph I only
- (b) Graph II and V only
- (c) Graph II only
- (d) Graph I and IV only

15. Find the exact time between 8 and 9 'o clock where the hands of a clock will be in a straight line, but do not coincide.

- (a) 100/11 min past 8
- (b) 120/11 min past 8
- (c) 90/11 min past 8
- (d) 80/11 min past 8

16. It was Wednesday on February 4, 2009. What day of the week was on Feb 4, 2008?

- (a) Tuesday
- (b) Thursday
- (c) Wednesday
- (d) Monday

17. A merchant professes to sell his goods at a loss of 12% but uses a weight of 800 grams in place of a 1 kilogram. What is his real loss or gain per cent?

- (a) 8% Loss
- (b) 10% Profit
- (c) 12.5% Profit
- (d) 10% Loss

18. A person sells his old bike at a loss of 25%. If he had bought the bike for 15% less cost and sold it for Rs. 270 more than the original selling price, he would have lost only 10%. The cost price of the bike is:

- (a) Rs. 27,000
- (b) Rs. 21,600
- (c) Rs. 20,000
- (d) Rs. 18,000

19. Average cost of 7 pens and 5 books is Rs. 19. The average cost of 9 pens and 11 books is Rs. 23.80. What will be the total cost of 8 books and 8 pens?

- (a) 325
- (b) 352
- (c) 333
- (d) 420

20. In what ratio must three alloys containing copper 30%, 35%, and 40% by weight be mixed to get a new kind of alloy containing 36% copper?

- (a) 1: 2: 1
- (b) 2: 1: 2
- (c) 2: 2: 1
- (d) 1: 2: 2

Directions for the following 9 (Nine) items:

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

PASSAGE 1

A three-judge bench of India's Supreme Court reaffirmed the value in due process of law, even in its application to those whom we as society have shunned, by commuting to life imprisonment the sentences of 15 convicts on the death row.

The commutations, in *Shatrughan Chauhan v. Union of India*, were primarily ordered on grounds of delays by the President in disposing of petitions filed by felons praying for mercy. The Court held that to execute a person who has been kept on death row for years on and with no answer to his or her plea for clemency, is an act of torture that violates the prisoner's fundamental right to life. Such acts of clemency would have hardly occasioned in most other civilized societies where the death penalty has been abolished.

21. With reference to the passage, consider the following statements about death row convicts:

- 1. Death row convicts have been shunned by the society.
- 2. Keeping death row convicts on endless wait amounts to torture.
- 3. Fundamental right to life of even death row convict is sacrosanct.

Which of the statements given above is/are correct?

- (a) Only 1 and 2
- (b) Only 2 and 3
- (c) Only 1 and 3
- (d) All of the above

22. What is the essential message being conveyed by the author of the passage?

- (a) Judiciary is more powerful than the president.
- (b) Capital punishment must be abolished as in other civilized societies.
- (c) Fundamental rights of even those on death row cannot be violated.
- (d) Death row convicts should be executed quickly.

PASSAGE 2

Ecosystems provide people with a variety of goods and services: food, clean water, clean air, flood control, soil stabilization, pollination, climate regulation spiritual fulfilment and aesthetic enjoyment, to name just a few.

Most of these benefits either are irreplaceable or, the technology necessary to replace them is expensive. For example, potable freshwater can be provided by desalinating seawater, but only at a high cost. The rapidly expanding human population has dramatically modified the Earth's ecosystems to meet their increased requirements of some of the goods and series, particularly food, fresh water, timber, fibre and fuel. These modifications have contributed substantially to human well-being and economic development. The benefits have not been equally distributed as these changes have harmed some people. Moreover, short-term increase in some ecosystem goods and services have come at the cost of the long-term degradation of others. For example, efforts to increase the production of food and fibre have decreased the ability of some ecosystems to provide clean water, regulate flooding and support biodiversity.

23. Consider this statement mentioned in the passage: "The benefits have not been equally distributed as these changes have harmed some people". What does it imply?

1. The rapid expansion of population has adversely affected some people.
2. Sufficient efforts have not been made to increase the production of food and fibre to meet everyone's requirement.
3. In the short term some people may be harmed, but in the long term everyone will benefit from modifications in the Earth's ecosystems.

Which of the statements given above is implied?

- (a) 1 only
- (b) 2 only
- (c) 1 and 3 only
- (d) None of the above.

24. With reference to the passage, consider the following statements

1. It is imperative to modify the Earth's ecosystems for the well-being of mankind.
2. Technology can never replace all the goods and services provided by ecosystems.

Which of the statements given above is/are correct?

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

PASSAGE 3

One could be struck in awe if they could relive the earths geological past. Massive beasts such as the dinosaur have never really become extinct. A giant caterpillar who later becomes a moth destroys Beijing, and stars in the 1962 Chinese film named for him. The famous Chinese cult Kinasota is born, dies, and reborn regularly on classic movie channels. In China, Kinasota is one of the most popular films ever made. Kinasota has survived the creation of more current scary creatures such as giant apes, extraterrestrial beings and swamp creatures. More than 30 years after his creation, Kinasota still lives.

25. The main theme of the passage is:

- (a) The reasons that fads do not endure
- (b) The Lasting appeal of Kinasota
- (c) The difficulty of marketing good horror movies
- (d) Old models for creatures are still used because making new monsters is expensive

PASSAGE 4

Global population was around 1 billion in 1975—today it is around 7.2 billion and growing. The estimates on population growth predict a global population of 8 billion in 2035 and 10 billion in 2075. Unlike Australia and America, where only three to four per cent of the population is engaged in agriculture, around 47 per cent of country's population is dependent upon agriculture. Even if India continues to do well in the service sector and the Industrial sector picks up, it is expected that around 2032 when India overtakes China as the world's most populous country, nearly 38 per cent of India's population will still be predominantly dependent on agriculture.

26. Which of the following is the most logical and rational inference that can be made from the above passage?

- (a) Prosperity of agriculture sector is of critical importance to India.
- (b) Indian economy greatly depends upon its agriculture.
- (c) India should take strict measures to control its rapid population growth.
- (d) India's farming communities should switch over to other occupations to improve their economic conditions.

PASSAGE 5

Large volumes and different types of data, including some of scientific and technical relevance are generated and compiled by various arms of the Government of India and various State Governments for meeting their specific requirements.

Scientific organizations generate data and develop scientific databases deploying huge public funds. Since such data are not generated under any standardized format, inter-operability of both scientific and technical data poses a serious challenge. Global experience has demonstrated convincingly that access to data leads to breakthroughs in scientific understanding as well as to economic and public good, in addition to several benefits to civil society. Given the untapped potentials of benefits to social society, it has become important to make available non-sensitive data for legitimate and registered use.

Keeping in view the emphasis of the Government on engaging citizens in Governance Reforms, placing of non-strategic data in public domain and the provisions of RTI Act 2005 for empowering the citizens to secure access to information under the control of public authority leading to the transparency and accountability in the working of every public authority, the National Policy on Data Sharing and Accessibility (NPDSA) is being brought out. The National Policy will increase the accessibility and easier sharing of non-sensitive data amongst the registered users and their availability for scientific, economic and social

developmental purposes. Detailed Policy document will be prepared within six months. All the data holding organizations will be re-classifying their data and prepare a negative list of sensitive data, keeping in view, the broad guidelines delineated in the RTI Act 2005. This list will be periodically reviewed to see whether the data should remain in the restricted category or not. Efforts will also be made to convert the analogue data into digital domain within the set time frame.

27. Consider the following statements

1. Inter-operability of both scientific and technical data is required because scientific databases are deployed using huge public funds.
2. For breakthroughs in scientific understanding and economic and public good, accessibility to data is required.

Which of the statements given above is/are correct?

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

28. With reference to the emphasis of the Government on engaging citizens in Governance Reforms, which of the following statements is/are correct?

1. Provisions of RTI Act 2005 lead to transparency and accountability in the working of every public authority.
2. Sharing of non-sensitive data amongst the registered users, however, pose a risk of hurting national policy.
3. Re-classification of reviewed data periodically is the responsibility of the Data holding organizations.

Select the correct answer using the code given below.

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

29. Consider the following statements

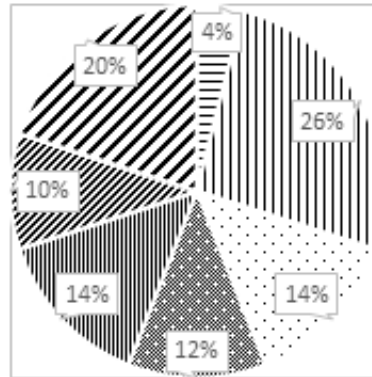
1. Huge funds are deployed by Scientific organizations to generate data and develop scientific databases because they are inept.
2. Provision and sharing of non-sensitive data leads to scientific breakthrough, and helps in economic and social developmental purposes.

Which of the statements given above is/are incorrect?

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

Directions for questions (30 – 32): The following pie chart gives a state-wise breakup of the number of students who appeared for CAT exam in the year 2018.

STUDENTS WHO
APPEARED FOR CAT 18



= J&K | Maharashtra . UP
 ※ West Bengal || Manipur ✕ Kerala
 ▸ Gujarat

State	students who cleared the exam out of total students who attempted
J&K	
Maharashtra	52
	56
West Bengal	48
Manipur	39
Kerala	71
Gujarat	66

30. What is the number of students in UP who cleared the exam, if the total number of students who appeared from the states is 2.5 lakh?

- (a) 22500
- (b) 19600
- (c) 16800
- (d) 17500

31. What is the difference between the numbers of students from Kerala who cleared the exam, to that from J&K who did not clear the exam, if the total number of students who appeared from the states is 1.75 lakh?

- (a) 9835

- (b) 7428
- (c) 8367
- (d) 11268

32. What is the total number of students from the given states who appeared for the exam, if 5460 students from Manipur cleared the exam?

- (a) 1 Lakh
- (b) 1.2 Lakh
- (c) 1.25 Lakh
- (d) 0.75 Lakh

Directions for questions (33 – 34): Read the following passage and answer the questions based on it.

Two hundred and sixteen cubes of the same size are arranged in the form of a cube on a table. A column of six cubes is removed from each of the four corners. Then, all the exposed faces of the solid (except the face touching the table) are coloured black. Now, answer these questions based on the above information:

33. How many cubes do not have any face colored black?

- (a) 48
- (b) 80
- (c) 72
- (d) 64

34. How many small cubes have at most 2 faces colored?

- (a) 128
- (b) 172
- (c) 192
- (d) 184

35. Pointing to a person in a photograph, a man said, “That man’s father’s wife is my daughter’s aunt.” How is the person in the photograph related to the man?

- (a) Cousin
- (b) Brother-in-Law
- (c) Uncle
- (d) Nephew

36. Pointing to a photograph of a man , a person says, “This man’s son’s sister is the mother of my children.” How is the person related to the man in the photograph?

- (a) Son
- (b) Nephew
- (c) Son-in-Law
- (d) Grandson

37. Pointing to a lady, a person said, ‘The son of her only brother is the grandson of my wife and I.’ How is the lady related to the person?

- (a) Niece

- (b) Daughter
- (c) Mother-in-Law
- (d) None of the above

38. When asked about his best friend, Raman said, "My brother's grandfather's only daughter is the mother of my best friend." How is his best friend's father related to Raman?

- (a) Father
- (b) Grand Uncle
- (c) Cousin
- (d) Nephew

39. Pointing to a boy in the photograph, Tina said, "He is son of the only child of father of my brother's mother." How is Tina related to that boy?

- (a) Sister
- (b) Aunt
- (c) Grand Niece
- (d) Niece

Directions for the questions (40 to 48):

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

PASSAGE 1

Biodiversity is the living fabric of our planet. It underpins human well-being in the present and in the future, and its rapid decline threatens nature and people alike.

According to reports released in 2018 by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the main global drivers of biodiversity loss are climate change, invasive species, over-exploitation of natural resources, pollution and urbanization. Biodiversity loss implies the reduction and disappearance of species and genetic diversity and the degradation of ecosystems. It jeopardizes nature's vital contributions to humanity, endangering economies, livelihoods, food security, cultural diversity and quality of life, and constitutes a major threat to global peace and security. Biodiversity loss also disproportionately affects the most vulnerable exacerbating inequality. To halt or reverse this decline it is vital to transform people's roles, actions and relationships with biodiversity.

This transformation has already begun with the commitment of the international community to the 17 Sustainable Development Goals (SDGs) of Agenda 2030. This global and holistic framework highlights the complex interconnections and interdependencies between society, biodiversity and sustainable development. It recognizes that human behaviour, values and choices shape people's interactions with biodiversity, all of which have a direct impact on our collective future on the planet. Awareness and appreciation of the diverse values of biodiversity need to be further amplified and mainstreamed within this global framework in order to transform human behaviour in favour of biodiversity conservation and its sustainable use. Many solutions exist for stopping and reversing the decline in biodiversity. UNESCO's diverse networks, programmes and partners have observed positive and inspiring seeds of change around the world. UNESCO also accompanies Member States and their people in their efforts to halt biodiversity loss by

understanding, appreciating, safeguarding and using biodiversity sustainably. This publication highlights some of UNESCO's biodiversity-related actions and solutions, based on the Organization's unique mandate and its diverse normative instruments, networks, programmes and partners. These actions have reduced biodiversity loss and improved the lives of many people around the planet. For each thematic challenge, the publication highlights current actions and solutions that have been successfully implemented, as well as suggestions for improvement and innovation.

40. Regarding biodiversity which of the following is correct?

1. Biodiversity loss has minimal effect on the well-being of humans.
2. Climate change results in the reduction and disappearance of species.

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

41. Which of the following statements is **incorrect**?

- a. Biodiversity loss is the major driving cause for climate change.
- b. One of the key steps in reducing biodiversity loss is to change human behaviour, values and choices.
- c. Programmes and activities undertaken by UNESCO have brought about changes which reduced biodiversity losses and improved lives worldwide.
- d. None of the above

Passage 2

The twentieth century was marked by momentous changes in the world. It has been a century of struggle against imperialism. The century was witness to great revolutionary events, beginning with the October Socialist Revolution of 1917. The victory over fascism in the Second World War in which the Soviet Union played a decisive role, was a major event. The historic Chinese revolution, the success of the revolutionary forces in Vietnam, Korea and Cuba and the formation of the socialist states in Eastern Europe were a product of the titanic clash between imperialism and socialism. This was also a century of national liberation movements leading to the political independence of the colonies. These victories marked a new epoch in world history as was projected by the theory of Marxism-Leninism. The revolutionary events of the century opened up grand prospects for the advance of humanity on a scale never envisioned before.

42. What is the main theme of passage?
- The emergence of socialist states marked the success of Marxism-Leninism.
 - Twentieth-century saw the rise of struggle against imperialism.
 - The revolutionary events of twentieth-century helped in the advancement of humanity.
 - Political liberation of colonies is the major event of the last century.
43. Consider the following statements
- The clash between imperialism and socialism was due to the formation of the Socialist States in Eastern Europe.
 - Political independence of colonies was product of national liberation movement.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2

PASSAGE 3

Home to nearly 18% of the global population, India uses only 6% of the world's primary energy resources. The country's primary energy consumption, however, has risen significantly over the past three decades. This trend is expected to continue, driven by strong economic growth and population expansion. Ensuring adequate energy supply to satisfy these demands is a key challenge facing the country. Additionally, India's energy sector accounts for 71% of total greenhouse gas emissions in the country. The Government is committed to accelerate economic growth and promote sustainable development.

As the country steps up efforts to meet commitments made under the Paris Agreement and adopt a "cleaner path than the one followed hitherto by others at a corresponding level of economic development", addressing climate change, both in rural and urban spaces, is an equal challenge. Developing nations are increasingly vulnerable to climate change; in 2013, India figured in the top three countries affected by climate risk. India, with only 2.4% of the world's land area, is also home to 7-8% of all recorded species and 692,027 km of forests covering 21.05% of the geographical area of the country.

Environmental degradation, climate change and disasters, unsustainable use of land and natural resources, and ineffective waste and chemical management have different and disproportionate impacts on the lives of women and children. National policymaking needs to address gender inequalities in environmental management and disaster risk management and response. Widespread losses from disasters require specific interventions at all levels to build resilience of communities and institutions, and to promote risk-informed development.

44. Consider the following statement.
- An increased demand in primary energy resources if not met in a sustainable manner will lead to an increase in its share in greenhouse gas emissions in the country
 - Gender inequality is a key topic that must be addressed in disaster management and environmental management.

Which of the statements given above is/are **incorrect**?

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

PASSAGE 4

In conflict and disaster, children suffer first and suffer most. Today, one in four of the world's children lives in a conflict or disaster zone — a fact that should shake each of us to our core. All of these children face an uncertain future.

Sadly, the number of countries experiencing conflict is at its highest point since the adoption of the Convention on the Rights of the Child in 1989. Nearly nine years of war in the Syrian Arab Republic have left nearly 5 million children in need and more than 2.5 million children living as refugees outside of the country. More than four years of conflict in Yemen have created the world's worst humanitarian crisis. About 1.2 million children in the Central African Republic desperately need help after six years of war.

In other ongoing conflicts in Afghanistan, Libya, Mali, Nigeria, Somalia and South Sudan — and many more — children pay the heaviest price. Around the world, more than 30 million children have been displaced by conflict. Many of them are being enslaved, trafficked, abused and exploited. Many more are living in limbo, without official immigration status or access to education and health care.

From the Rohingya refugee crisis in Bangladesh to the outflow of families from Central America seeking a safer and more dignified life, children have been uprooted by conflict and violence in historic numbers.

At the same time, extreme weather events are creating more frequent and destructive natural disasters worldwide. More than half a billion children now live in areas with extremely high flood occurrence, and almost 160 million are in areas with high drought severity. Regions like the Sahel, where livelihoods rely on agriculture, grazing and fishing, are especially vulnerable to the effects of climate change.

All too often, armed groups exploit the social grievances that arise under such pressurized conditions. Across West and Central Africa, violence and insecurity are already robbing nearly 2 million children — an entire generation — of their right to education.

Faced with these challenges, UNICEF and partners have responded to emergencies in 61 countries in 2019. In the first eight months of the year, we provided humanitarian assistance to nearly 29 million children – substantially on track to reach the target of 53 million by 31 December.

45. Consider the following statements

- 1. The condition of children improves once the conflict in those lands have been resolved.
- 2. Adoption of the Convention on the Rights of the Child in 1989 is one of the key reasons for the increase in the number of countries experiencing conflict.

Which of the statements given above is/are correct?

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

46. Consider the following statements
1. Being robbed of the right to education is the only problem faced by children in pressurized conditions.
 2. Climate change is one of the contributing factors to the sufferings of children worldwide.

Which of the statements given above is/are **incorrect**?

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

PASSAGE 5

The State Ministry of Kerala has sent an alert to all Districts warning them about the vulnerability of the Android OS to a bug called 'BrandFogg' that allows real-time malware applications to pose as genuine applications and access user data of all kinds.

This malware can then potentially listen to the user's conversations, access galleries, read and send messages, make phone calls, record conversations and get login credentials to various accounts. This apart, things that such malware can access include private images, files, contact details, call logs, and location information. The information was shared by the Threat Analytical Unit, Kerala Cyber Crime Coordination Centre. While all versions of Android, including Android 10.1, are vulnerable to this bug, it may not be apparent to the affected users that malware applications are already onboard their devices. Pop-ups asking for permission to send notifications, messages, etc., are one of the main entry points for 'BrandFogg' to launch the attack. An app in which the user is already logged in asking him/her to log in again is another anomaly pointing to the possibilities of a cyberattack. Once users approve such requests, the malware would instantly access the Android device for specific purposes. Links that become non-functional, apps asking for permissions that are not required are among the other warning signs. An alert has been sent to all the Cyber cell experts to sensitize them to the threat. Steps should be taken to create awareness among the public on the vulnerability of Android to 'BrandFogg'.

47. With reference to the passage consider the following statements
1. Only individuals who have questionable files and information stored in their devices need to fear this malware.
 2. Users should check for certain warning signs to make sure that their devices are not infected.

Which of the statements given above is/are correct?

- a. 1 only
- b. 2 only
- c. 1 and 2
- d. Neither 1 nor 2

PASSAGE 6

Nanotechnology, the manipulation of matter at the atomic and molecular scale to create materials with remarkably varied and new properties, is a rapidly expanding area of research

with huge potential to revolutionize our lives and to provide technological solutions to our problems in agriculture, energy, the environment and medicine. In order to fully realize this potential, we need to be able to control the synthesis of nanoparticles, the construction of Nano-devices, and the characterization of materials on the Nanoscale and to understand the effects of these things on environment and health. INST will bring together chemists, physicists and materials scientists at the forefront of the science of making and characterizing materials at the Nanoscale, with biologists and biochemists applying these discoveries in the agricultural, medical, biological sphere. It brings together research-active basic and applied scientists from different backgrounds in an intimate atmosphere to learn about the needs and scientific advances in their respective fields and to build interactions and collaborations.

48. With reference to Nano technology, which of the following statements is/are incorrect?
1. Nanotechnology is the best solution to provide technological solutions to our problems in agriculture, energy, the environment and medicine.
 2. The impact of Nanoparticles on the environment is not a priority in the development of Nanotechnology.
 3. Interaction and collaboration between scientists of different fields helps to learn about the needs and scientific advances in their respective areas.

Select the correct answer using the code given below.

- a. 1 and 2 only
- b. 2 only 3 only
- c. 1 and 3 only
- d. 1, 2, and 3

Directions for the questions (49 to 52):

Five Subjects - Maths, Biology, Chemistry, Physics and English - each of one-day duration, are to be taught from Monday to Friday one after the other, though not necessarily in the same order, by five teachers - Pravin, Kamal, Ria, Sana and Tony. Pravin teaches Biology but not on Thursday or Friday. Kamal teaches Maths on Wednesday. Ria teaches on Monday but does not teach Chemistry or Physics.

49. Which subject is taught by Sana?
- (a) Chemistry
 - (b) English
 - (c) Physics
 - (d) Either Chemistry or Physics
50. Which teacher's subject immediately follows the subject Biology?
- (a) Kamal
 - (b) Pravin
 - (c) Sana
 - (d) Tony
51. Which subject is taught on Monday?
- (a) Chemistry

- (b) Physics
- (c) English
- (d) Data Inadequate

52. What day of the week is Biology taught?

- (a) Monday
- (b) Tuesday
- (c) Wednesday
- (d) Thursday

53. In a month if the seventh day is three days earlier than Saturday, then the nineteenth day of the month will be a

- (a) Tuesday
- (b) Monday
- (c) Thursday
- (d) Friday

54. Reaching the Police station 20 minutes before 8:50, Sathish realized that he has reached the Station 30 minutes before Lakshman who was 40 minutes late to the station. What time were they supposed to reach the station?

- (a) 8:10
- (b) 8:05
- (c) 7:50
- (d) 8:20

Directions for questions (55 to 58):

The Air Quality Index (AQI) values of 5 cities, Cochin, Kolkata, Bangalore, Mumbai and Delhi are given. The AQI values are 95, 107, 172, 206 and 260, not necessarily in the same order. Also, a higher AQI value corresponds to a higher level of pollution. The cities are located in five different terrains of the country: The mountains, The forest, the coast, the desert, and in a valley.

- The city in the desert has the least level of pollution whereas the one in forest is the most polluted.
- Bangalore is in the mountains.
- Cochin is more polluted than Mumbai.
- Kolkata is more polluted than Delhi but less polluted than Bangalore.
- The AQI value of Mumbai is 206.

55. Which city is in the desert?

- (a) Cochin
- (b) Kolkata
- (c) Bangalore
- (d) Delhi

56. Which is the most polluted city?

- (a) Cochin
- (b) Kolkata
- (c) Bangalore
- (d) Delhi

57. What is the AQI value of Kolkata?

- (a) 95
- (b) 107
- (c) 172
- (d) 206

58. Where is Mumbai located?

- (a) Mountains
- (b) Coast
- (c) Valley
- (d) Cannot be determined

59. Pointing to a man, Indira said, "He is the youngest son of my Father-in-law's only son". How is Indira related to this youngest son's father?

- (a) Daughter
- (b) Sister
- (c) Wife
- (d) Cannot be determined

Directions for Questions (60 to 62):

If $a + b$ means, a is sister of b.

$a - b$ means a is brother of b,

$a * b$ means a is daughter of b,

a / b means a is mother of b.

60. Which of the following relationships shows that l and n are wife and husband?

- (a) $l / m * n$
- (b) $l - m * n$
- (c) $l + m * n$
- (d) None of the above

61. How many females are there in the following relationship?

$l + m - n + o - p * q$

- (a) 2
- (b) 3
- (c) 4
- (d) Cannot be determined

62. The relationship $p+q-r*s/t$ implies that
- (a) p, q, r, s are children of t.
 - (b) p, q, r, t are children of s.
 - (c) p, q, r are children of t and s.
 - (d) p, q, r, s and t are all siblings.

Directions for the questions (63 to 67):

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

PASSAGE 1

Improving efficiency of the logistics sector is of high importance for the country's economy as it boosts economic growth, grows exports through global supply chains and generates employment. While India's passenger and freight mobility sectors are becoming more efficient and the logistics sector is growing at CAGR of 10.5% and expected to reach about USD 215 billion in 2020, there are a set of interconnected problems in the system, which need to be addressed to further enhance efficiency. Logistical inefficiencies lead to reduced employment opportunities, perpetuate a poverty cycle for rural populations, make roads and highways unsafe, and contribute to pollution. Conversely, enhancing the efficiency of logistics can create high quality economic growth and employment opportunities, improve safety and public health, and support India's successful fulfilment of international commitments towards climate change.

India is currently the fastest growing major economy globally, with GDP growing by 6.6% in 2017–2018 and expected to accelerate to 7.3% in 2018 and 2019. As a result of this rapid growth, India is poised to become the third largest economy in the world by 2027.

In order to realize these projections, the Government of India (GoI) has launched the "Make in India" initiative with an aim to support the manufacturing sector of the Indian economy and elevate its contribution to GDP from the current 17% up to 25%.

Efficient logistics are a cornerstone for the continuation of India's economic development over the coming decades. The robust growth in manufacturing envisioned through the "Make in India" initiative will demand high levels of logistical efficiency, which means that goods must not only be produced, they must also be efficiently transported to markets at reasonable prices.

While the growth in GDP created by logistics improvements is important, even more important is the quality of that growth and the employment and income it creates, especially for the most economically vulnerable segments of the population. World Bank research in Latin America showed that reducing the share of logistics costs in the final price of goods by 14% can increase demand for those goods by 8–18% and increase employment in that sector by 2.5%– 16%. Such an impact is particularly important for micro small and medium enterprises, which employ over 110 million Indian citizens. Specifically for agricultural products, another critical sector of the Indian economy, the same reduction in logistics costs to 14% of final prices increased demand by 12% and increased agricultural employment by 6% —boosting both rural incomes and nutrition and food security for the entire country.

63. Improvement in Logistical efficiency is of high importance for the country because
1. It improves economic growth and employment opportunities.
 2. It leads to improvements in safety and public health.
 3. It greatly contributes to reducing the consumption of crude oil.

Select the correct answer using the code given below.

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

64. Consider the following statements

1. India's economic development over the coming decades is dependent on efficient logistics only.
2. High level of logistical efficiency is demanded to compliment the projected growth in manufacturing as a result of the Make in India initiative.

Which of the statements given above is/are correct?

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

65. Consider the following statements

1. Growth in GDP created by logistics improvements is the reason for the growth in employment and income.
2. Boosting agricultural industry for improving nutrition and food security for the entire country can help in the growth of logistical efficiency.

Which of the statements given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 or 2
- d. Neither 1 or 2

PASSAGE 2

The Infrastructure sector is one of the key drivers of economic growth across the world, and India is no exception. The sector is responsible for propelling India's overall development and enjoys priority focus from Government for initiating policies that would ensure time-bound creation of world-class infrastructure in the country.

The Government has launched various critical infrastructure mega programs like Power for All, Bharatmala, Sagarmala, Smart Cities mission, Housing for All, Swachh Bharat Mission, AMRUT, etc. with an objective to build world-class infrastructure in the country. However, the track record of completing projects on time is abysmal. There are multiple challenges attributed to the same including regulatory clearances, land acquisition, Resettlement &

Rehabilitation amongst others. The Govt. has set up various bodies to tide over such obstacles and is continuing to improve them. However, one aspect which needs attention is the successful adoption of globally accepted Project and Program Management practices. The country is in the transformation phase and with such large-scale initiatives planned, there is a growing demand for structured project and program management practices in order to manage these programs and implement them successfully. Project and Program management practices, when implemented successfully, can bring in synergies, integration and a common language to all these complex program initiatives like Sagarmala, Bharatmala, Industrial Corridors, Smart Cities Mission, etc.

This can be well substantiated from the recent report of the Ministry of Statistics and Program Implementation (MOSPI) released in December 2018 which has reviewed 1424 central infrastructure sector projects worth INR 150 crore and above. It has been observed that more than 25% of these central sector projects are delayed beyond their scheduled date of completion, and there has been a significant cost overrun of around INR 3.17 lakh crore in these projects.

66. Consider the following statements

1. The infrastructure sector is a key driver of Indian economy because it enjoys priority focus from Government for initiating policies.
2. The track record for completion of government project is bad because the government launches many mega programs simultaneously.

Which of the statements given above is/are incorrect?

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

67. Consider the following statements

1. The demand for a structured project and program management practices is due to the number of large scale initiatives planned.
2. The report by MOSPI indicates that since 25% of the projects are delayed and has a significant cost overrun, the Structured Project and Program management practices was not successful.

Which of the statements given above is/are correct?

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

68. W can do 25% of a work in 30 day, in 10 days X can do $\frac{1}{4}$ of the work, Y can do 40% of work in 40 days and Z can do $\frac{1}{3}$ of the work in 13 days. Who will complete the work first?

- (a) W
- (b) X
- (c) Y
- (d) Z

69. What is X in the sequence?

5, 8, 30, X, 14, 26, 17, 20, 22

- (a) 15
- (b) 12
- (c) 11
- (d) 13

70. Find X in the following series.

1, 512, 8, 343, 27, 216, 64, 125, X

- (a) 121
- (b) 144
- (c) 125
- (d) 134

71. Find X in the following series

1, 730, X, 1054, 1081, 1090, 1093

- (a) 916
- (b) 892
- (c) 928
- (d) 973

Directions for the following 3 (Three) items:

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

PASSAGE 1

Why is it that having spent many happy years with a companion, when they make one mistake that hurts us badly, we get so angry that we end the relationship forever? All the wonderful moments we have shared together count as nothing. We only see that one dreadful mistake and destroy the whole thing. It doesn't seem fair. If you want to be lonely, then cultivate anger.

72. Which of the following statement(s) best sums up the above passage?
- a. Anger can destroy our relationships and separate us from our friends.
 - b. Anger can deteriorate our health and shorten our longevity.
 - c. Anger is the perfect solution of dreadful mistakes in a relationship.
 - d. One should not prefer irrationality and emotion over wisdom.

PASSAGE 2

My view of relationships and marriage is this: when the couple are going out, they are merely involved: when they become engaged, they are still only involved, maybe more deeply; when they publicly exchange marriage vows, that is commitment. The meaning of the marriage ceremony is the commitment. I explain that the difference between involvement and commitment is the same as the difference between bacon and eggs. "With bacon and eggs, the chicken is only involved, but the pig is committed. Let this be a pig marriage."

73. Which among the following is the most logical and rational assumption that can be made from the above passage?

- Pigs show higher level of commitment and fidelity towards their partner than humans.
- The level of commitment in marriage is much more than that in other relationships.
- Relationships before marriage is a virtual erosion of culture and traditions.
- Marriage has become meaningless in the light of increasing live-in relationships.

74. With reference to the above passage, consider the following statements:

- The author believes that most relationships are fraud.
- The author finds merits of relationships in human life.
- The author is comparing relationships with marriage.

Which of the above statement(s) is/are correct?

- Only 1 and 2
- Only 3
- Only 2 and 3
- All of the above

Directions for the questions 75 - 77:

Consider the following statements followed by two conclusions.

75.

Statements:

- Some fountain pens are pens.
- All pens are writing instruments.

Conclusions:

I. Some fountain pens are writing instruments.

II. No writing instruments is a fountain pen.

- Only conclusion I follows
- Only conclusion II follows
- Either conclusion I or II follows
- Neither I nor II follows

76.

Statements:

- All huts are mansions.
- All mansions are palaces.

Conclusions:

- I. Some palaces are huts.
- II. Some palaces are mansions.

- (a) Only conclusion I follows
- (b) Only conclusion II follows
- (c) Either conclusion I or II follows
- (d) Both conclusions I and II follows

77.

Statements:

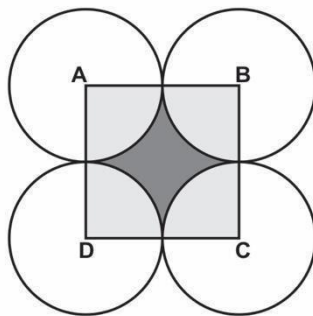
- All magazines are books.
- No book is a newspaper.

Conclusions:

- I. All newspapers are books.
- II. Some newspapers are books.

- (a) Only conclusion I follows
- (b) Only conclusion II follows
- (c) Either conclusion I or II follows
- (d) Neither I nor II follows

78. A square of side 14 cm with corners A, B, C and D, four circles are drawn from each corner in such a way that each circle touches externally two of the remaining three circles as shown below:



What is the area of the darker shaded region?

- (a) 42 cm²
- (b) 50cm²
- (c) 43 cm²
- (d) 52 cm²

79. In a regular polygon each interior angle is 140 degrees. Then the number of sides is:

- (a) 6
- (b) 8

- (c) 9
- (d) 12

80. Find the largest angle of a quadrilateral if the measures of its interior angles are in the ratio 1: 2: 3: 4.

- (a) 18 degrees
- (b) 36 degrees
- (c) 72 degrees
- (d) 144 degrees

