



APTI PLUS

Academy for Civil Services Pvt. Ltd.

CREATING CIVIL SERVANTS FOR THE NATION



**ANSWERS OF OCS (2020)
PRELIMINARY EXAMINATION (GS-II)**

PRELIMINARY QUESTIONS OF GS-II OCS-2019

Direction (Q. Nos. 1 to 10): Read the following two passages and answer the questions that follow each passage. Your answer to these questions should be based on the passages only.

Passage - I

Erosion in Nature is a beneficent process without which the world would have died long ago. The same process, accelerated by human mismanagement, has become one of the most vicious and destructive forces that has ever been released by man. What is usually known as 'geological erosion' or 'denudation' is a universal phenomenon which through thousands of years has carved the earth into its present shape. Denudation is an early and important process in soil formation, whereby the original rock material is continuously broken down and sorted out by wind and water until it becomes suitable for colonization by plants. Plants, by the binding effects of their roots, by the protection they afford against rain and wind and by the fertility they impart to the soil, bring denudation almost to a standstill. Everybody must have compared the rugged and irregular shape of bare mountain peaks where denudation is still active with the smooth and harmonious curves of slopes that have long been protected by a mantle of vegetation. Nevertheless, some slight denudation is always occurring. As each superficial film of plant covered soil becomes exhausted it is removed by rain or wind, to be deposited mainly in the rivers and sea, and a corresponding thin layer of new soil forms by slow weathering of the underlying rock. The earth is continuously discarding its old, worn out skin and renewing its living sheath of soil from the dead rock beneath. In this way an equilibrium is reached between denudation and soil formation so that, unless the equilibrium is disturbed, a mature soil preserves a more or less constant depth and character indefinitely. The depth is sometimes only a few inches, occasionally several feet, but within it lies the whole capacity of the earth to produce life. Below that thin layer comprising the delicate organism known as soil is a planet as lifeless as the moon.

The equilibrium between denudation and soil formation is easily disturbed by the activities of man. Cultivation, deforestation or the destruction of natural vegetation by grazing or other means, unless carried out according to certain immutable conditions imposed by each region, may so accelerate denudation that the soil, which would normally be washed or blown away in a century, disappears within a year or even within a day. But no human ingenuity can accelerate the soil-renewing process from lifeless rock to an extent at all comparable to the acceleration of denudation. "This man accelerated denudation is what is now known as soil erosion. It is the almost inevitable result of reducing below a certain limit the natural fertility of the soil of a man betraying his most

sacred trust when he assumed dominion over the land. That the ultimate consequence of unchecked soil erosion, when it sweeps over whole countries as it is doing today, must be national extinction is obvious, for whatever other essential raw material a nation may dispense with, it cannot exist without fertile soil. Nor is extinction of a nation by erosion merely a hypothetical occurrence that may occur some future date; it has occurred several times in the past. Erosion has, indeed, been one of the most potent factors causing the downfall of former civilisations and empires whose ruined cities now lie amid barren wastes that once were the world's most fertile lands. The deserts of North China, Persia, Mesopotamia and North Africa tell all the same story of gradual exhaustion of the soil as the increasing demands made upon it by expanding civilization exceeded its recuperative powers. Soil erosion, then as now, followed soil exhaustion.

1. In the beginning of the passage the author implies that:

- (A) Nature is always good and kind
- (B) Man can never be his own friend
- (C). There is no other agency more destructive than man
- (D) Geological erosion has saved the world from dying

2. According to the author denudation:

- (A) Took place only in the beginning of world's history
- (B) Stops after a certain stage of historical development
- (C) Is brought under control by plants
- (D) Is completely checked by plants

3. The word 'Weathering' in the phrase 'slow weathering of the underlying rock' means :

- (A) Action of the elements on exposed objects, specially rocks
- (B) Change of weather
- (C) Change of temperature (D) Decay

4. The author condemns :

- (A) Man's dominion over the land
- (B) Soil erosion
- (C) The betrayal of trust by man
- (D) The reduction of soil fertility

5. The best title for the passage will be:

- A) Man's Folly can cause complete destruction
- (B) Soil Erosion is the Greatest Threat to Human Survival
- (C) Equilibrium between Denudation and Soil formation is vital for our survival

(D) Accelerated Denudation is the Primary cause of Soil Exhaustion

Passage-2

Management is a set of process that can keep a complicated system of people and technology running smoothly. The most important aspects of management include planning, budgeting, organizing, staffing, controlling and problem solving. Leadership is a set of processes that creates organisations in the first place or adapts them to significantly changing circumstances. Leadership defines what the future should look like, aligns people with that vision, and inspires them to make it happen despite the obstacles. This distinction is absolutely crucial for our purposes here. Successful transformation is 70 to 90 percent leadership and only 10 to 30 percent management. Yet for historical reasons, many organisations today do not have much leadership and almost everyone thinks about the problems here as one of the managing change.

For most of this century, as we created thousands of large organizations for the first time in human history, we did not have enough good managers to keep all those bureaucracies functioning. So many companies and universities developed management programmes, and hundreds and thousands of people were encouraged to learn management on the job and they did. But people were taught little about leadership. To some degree, management was the main item on the twentieth century agenda because that is what was needed who was a leader, we needed hundreds of managers to run their ever growing enterprises.

Unfortunately for us today, this emphasis on management has often been institutionalized in corporate cultures that discourage employees from learning how to lead. Ironically, past success is usually the key ingredient in producing this outcome. The syndrome, as I have observed it on many occasions, goes like this : success creates some degree of marked dominance, which keeping in turn produces much growth. After a while keeping the ever larger organization under control becomes the primary challenges. So attention turns inward, and managerial competencies are nurtured. With a strong emphasis on management but not leadership, bureaucracy and an inward focus take over. But with continued success, the result mostly of market dominance, the problem often goes unaddressed and an unhealthy arrogance begins to evolve. All of these characteristics then make any transformation effort much more difficult.

Arrogant managers can over evaluate their current performances and competitive position, listen poorly, and learn slowly those who want to respond to shifting conditions. And the lack of leadership leaves no force inside these organizations to break out of the morass.

6. To main topic of the passage is:

(A) Importance of management schools in the present context

- (B) Good managers
(C) Importance of leadership in an organisation
(D) Management and success of an organisation
7. In a successful transformation, the leadership contribution in percentage is :
(A) 10 to 30 (B) 40 to 70 (C) 70 to 90 (D) Greater than 90
8. According to the author, the leadership is :
(A) Planning and budgeting resources
(B) Inspiring people to realize the vision
(C) Carrying out the crucial function of manager
(D) Keep the technology running smoothly
9. Which of the following characteristics help organisations in their transformation efforts ?
(A). Bureaucratic and inward looking approach
(B) Emphasis on leadership rather than management
(C) A strong and dogmatic culture
(D) Emphasis on customer satisfaction
10. Which of the following statements is true according to the passage ?
(A) Leader competencies are nurtured only in very large size organisation.
(B) Successful transformation in organisations is largely possible because of leadership
(C) Bureaucracy fosters arrogant culture.
(D) Managers tend to stifle innovation.

Direction (Q. Nos. 11 to 18): Read the following two passages and answer the questions that follow each passage. Your answer to these questions should be based on the passages only.

Passage - 1

In Indian philosophical tradition, questioning is regarded as method of philosophical enquiry. In the Chandogya Upanishad, there is a questioning that illustrates this direct search for a return to truth :

Uddalaka: Shvetaketu, fixed as you are, in great regard for what you have learned. Did you ask for that teaching by which the unheard gets to be heard, the unknown gets to be known?

Shvetaketu : Sir, how indeed is that teaching?

Shvetaketu has been trained in the names, forms and qualities of conventional learning. But now he is being asked how he can get to know what he has not already learned. How

can he find out things for himself, beyond the mere conventions that he has learned so far ? And here he is at a loss. He has not learned to question things directly, beyond his acquired learning. For he has never asked about knowledge itself, beneath the trappings of learning that he has so proudly acquired. He realizes that something is missing, and asks his father to teach him. As the story goes on, Shvetaketu is taught through a number of illustrations. For one of these, he is taken to a large tree, whose fruits have fallen on the ground. He is asked to pick up a fruit and break it open. It has tiny seed in it. He is asked to break a seed and say what he finds here:

He has to reply: Nothing Sir, the seeds are far too small

So now his father says: And yet, within each tiny seed, there is a subtle something which your eyes do not see, something unseen from which this spreading tree has grown and now stands manifested here. This subtle something is that this-itself-ness, which is this entire world. That is the truth. That is yourself. That is what you really are.

In this illustration, the tree symbolically represents the entire universe. To be more accurate, it represents the big picture that we have of the whole universe, with all its vast size and mind-boggling complexity. Compared with this huge picture, our little personalities are very small and insignificant, like tiny little seeds. But there are some huge trees which grow from the unseen essence of life within a tiny seed. So also, our big pictures of the world all rise from knowledge. This knowledge is the unseen essence of our lives, in each of our little personalities. We cannot see it with out outward-looking eyes; but it is always present here, within each person's body and mind. When knowledge is seen like this, as our inner essence, it is called - consciousness. It is the truth which Shvetaketu's father shows. That, he says, is what you really are.

11. What is the main focus in the dialogue ?

- (A) Knowledge of society
- (B) Knowledge of various kinds of things
- (C) Nature of knowledge in the abstract
- (D) Knowledge of Self or Atman

12. How do you define the metaphors of tree and seed in the dialogue ?

- (A) It is a method in which one goes from the appearance to the nature of the soul
- (B) It is a method in which one formulates one's own soul
- (C) It is a monologue
- (D) I am but remain silent

13. What is the philosophical quest in the dialogue between the participants ?

- (A) Unheard gets to be heard, the unknown gets to be known
- (B) Both the participants are truth seekers

- (C) Both the participants live in two different worlds
- (D) None of the participants understand each other's language

14. What does 'in-itselfness' mean?

- (A) It can be formulated in dialogue
- (B) It cannot be formulated in monologue
- (C) It is an expression of other's views
- (D) It is what you are

Passage-2

In an imperfect world, institutions are required to instantiate ideals of justice, however imperfectly. These institutions may be justified by their approximate instantiation of justice, or they may be deeply unjust when compared with ideal standards – consider the institution of slavery. Justice is an ideal which the world fails to live up to, sometimes despite good intentions, sometimes disastrously. The question of institutive justice raises issues of legitimacy, procedure, codification and interpretation, which are considered by legal theorists and by philosophers of law. Imagine that a person has been made the trustee of a large estate, the owner of which is deceased and the heirs are both ignorant of its existence and independently wealthy in their own right, while also being immensely wasteful and uncharitable. Suppose the trustee and his family of a wife and children are in dire financial straits and that the wealth contained in the estate would be sufficient to relieve them of their distress. It could be argued that the trustee's duty to distribute those resources in the manner their owner intended should trump the temptation to divert them for the promotion of happiness. This view has been summarized pithily in the observation that the right is (ethically or morally) prior to the good.

15. What is the central theme of the passage ?

- (A) To develop the concept of justice
- (B) To distinguish institutions and society
- (C) To introduce individual rights
- (D) To defend the idea of the good

16. What is the main difference between goodness and human right regarding justice?

- (A) Goodness is unjust, human right is just
- (B) Goodness is meritocratic, human right is distributive
- (C) There is no difference between goodness and human right
- (D) Human supersedes goodness

17. What are the issues raised in institutive justice ?

- (A) Legitimacy
(B) Procedure
(C) Codification
(D) All of these
- 18.** What is the moral implication of the passage?
(A) Right is morally prior to goodness
(B) Right is all that is the case
(C) Goodness supersedes right
(D) Both right and goodness are at par
- 19.** Given below are two statements, one levelled as Assertion (A) and the other levelled as Reason (R):
Assertion (A) : Social contract theory is purely hypothetical.
Reason (R): Social contract theory cannot be traced historically in terms of when did the first social contract take place.
In the context of the two statements, which one of the following is correct?
(A) Both (A) and (R) are correct and (R) is the correct explanation of (A).
(B) Both (A) and (R) are correct, but (R) is not the correct explanation of (A).
(C) (A) is correct, but (R) is not the correct
(D) (A) is not correct, but (R) is correct.
- 20.** In classical logic, how is an argument defined ? Choose the correct option from below:
(A) True or false
(B) Valid or invalid
(C) Justified or unjustified
(D) Verified or unverified
- 21.** Induction proceeds from:
(A) Particular to general
(B) General to particular
(C) Particular to particular
(D) General to general
- 22.** The figure of the categorical syllogism is decided by the position of the:
(A) Major term
(B) Minor term
(C) Middle term

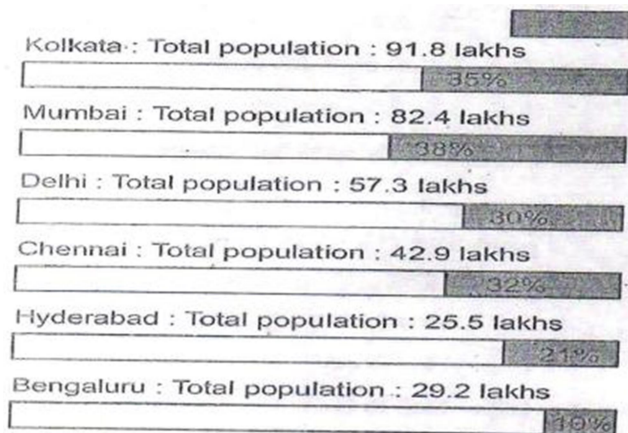
- (D) Copula
23. Deduction proceeds from:
- (A) General to general
 - (B) Particular to particular
 - (C) Particular to general
 - (D) General to particular
24. In the traditional square of opposition I and O propositions are:
- (A) Contradictory
 - (B) Contraries
 - (C) Subcontrary
 - (D) None of these
25. The sum of two numbers is 100 and their difference is 37. The difference of their squares is :
- (A) 37 (B) 63
 - (C) 3700 (D) 1800
26. Three numbers are in the ratio of 4:5:6 and their average is 25. The largest number is :
- (A) 30 (B) 32
 - (C) 42 (D): 36
27. Which one of the following numbers when multiplied by 16 is increased by 225?
- (A) 30 (B) 25
 - (C) 20 (D) 15
28. If the side of a square is increased by 30%, its area is increased by:
- (A) 79% (B) 59%
 - (C) 69% (D) 49%
29. A shopkeeper marks the prices of his goods at 25% higher than the original price after that he allows the discount of 12%. What profit or loss did he get ?
- (A) 10% profit (B) 15% profit
 - (C) 10% loss (D) 15% loss
30. A train 100 meters long takes $18\frac{4}{5}$ seconds to cross the man walking @ 6 km per hour in a direction opposite to that of the train. Find the speed of the train :
- (A) 76 km/hour (B) 94 km/hour
 - (C) 86 km/hour (D) 80 km/hour

31. The present ages of three persons are in the proportion of 4:7:9. Eight years ago the sum of their ages was 56. Find their present ages :
- (A) 20, 35 and 45 years
(B) 8, 20 and 28 years
(C) 16, 28 and 36 years
(D) 16, 24 and 32 years
32. Sita sells a calculator to Gita at the gain of 17%. Gita sells it to Anu at a loss of 25%. If Anu pays Rs. 1,842.75 for it, what did Sita pay for it?
- (A) Rs. 2,080 (B) Rs. 2,100
(C) Rs. 2,110 (D) Rs. 2,010
33. A cistern has two taps which fill it in 12 minutes and 15 minutes respectively. There is also a waste pipe in the cistern. When all the pipes are open, the empty cistern is full in twenty minutes. How long will the waste pipe take to empty a full cistern?
- (A) 8 minutes (B) 12 minutes
(C) 15 minutes (D) 10 minutes

Direction (Q. Nos. 34 to 39) : Study the following chart to answer the questions.

Slum population in Metro cities in 1991

Slum population as a % of total population



34. The total slum population of Kolkata in 1991 was approximately:
- (A) 30 lakhs (B) 31 lakhs
(C) 32 lakhs (D) 33 lakhs
35. The difference between the slum population of Bengaluru and Hyderabad is :
- (A) 4.1 lakhs (B) 3.71 lakhs

- (C) 2.43 lakhs (D) 2.0 lakhs
36. The city with the highest slum population was :
(A) Mumbai (B) Delhi
(C) Chennai (D) Kolkata
37. Two cities with nearly equal slum population were :
(A) Delhi and Chennai
(B) Hyderabad and Bengaluru
(C) Mumbai and Kolkata
(D) Delhi and Bengaluru
38. The slum population of Delhi was more than three times the slum population of :
(A) Hyderabad (B) Kolkata
(C) Bengaluru (D) Chennai
39. In terms of slum population the second city with the least population was :
(A) Delhi (B) Bengaluru
(C) Hyderabad (D) Chennai
40. Given below are two statements, one levelled as Assertion (A) and the other levelled as Reason (R):
Assertion (A) : Social contract theory through associated with modern moral and political theory was rejected by Hume on the ground of having no historical reference.
Reason (R): Social contract theory is the view that persons' moral obligations are dependent upon an agreement among them. But there is no historical evidence when the first contract was signed:
In the context of the two statements, which one of the following is correct?
(A) Both (A) and (R) are correct and (R) is the correct
(B) Both (A) and (R) are correct, but (R) is not the correct explanation of (R).
(C) (A) is correct, but (R) is not the correct.
(D) (A) is not correct, but (R) is correct.
41. Given below are two statements, one levelled as Assertion (A) and the other levelled as Reason (R) :
Assertion (A) : Substance is conceived on the basis of mutual independence.
Reason (R) : Substances are mutually independent from one another as in dualism and pluralism.
In the context of the two statements, which one of the following is correct ?

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (R).
 (B) Both (A) and (R) are correct, but (R) is not the correct explanation of (R).
 (C) (A) is correct, but (R) is not the correct.
 (D) (A) is not correct, but (R) is correct
- 42.** Given below are two statements, one levelled as Assertion (A) and the other levelled as Reason (R):
 Assertion (A): All events seem entirely loose and separate. They seem conjoined but never connected.
 Reason (R) : Causal relationships are contingent and probable.
 In the context of the two statements, which one of the following is correct?
 (A) Both (A) and (R) are correct and (R) is the correct explanation of (R).
 (B) Both (A) and (R) are correct, but (R) is not the correct explanation of (R).
 (C) (A) is correct, but (R) is not the correct.
 (D) (A) is not correct, but (R) is correct.
- 43.** What is the correct sequential order of a comprehensible sentence according to Nyaya ?
 (A) Yogyata, Sannidhi, Tatparya, Akanksha
 (B) Tatparya, Akanksha, Yogyata, Sannidhi
 (C) Akanksha, Tatparya, Yogyata, Sannidhi
 (D) Akanksha, Yogyata, Sannidhi, Tatparya
- 44.** Match the following two lists. Use the Code given below:
 List-1 List-II
 i. Shabda 1. Sankhya
 ii. Prakriti 2. Jainism
 iii. Anekantavada 3. Buddhism
 iv. Nirvana 4. Vedanta
- Code :
- | | I | II | III | IV |
|-----|---|----|-----|----|
| (A) | 2 | 3 | 4 | 1 |
| (B) | 1 | 4 | 3 | 2 |
| (C) | 4 | 1 | 2 | 3 |
| (D) | 3 | 2 | 1 | 4 |
- 45.** Given below are four philosophers Identify the correct order in which they appeared:

- (A) Kant, Levinas, Plato, Aristotle
 (B) Kant, Plato, Aristotle, Levinas
 (C) Plato, Aristotle, Kant, Levinas
 (D) Kant, Plato, Levinas, Aristotle

46. Arrange the following books in order in which they appeared. Use the Code given below:

- I. Magna Moralia
 II. Critique of Judgement
 III. German Ideology
 IV. Perpetual Peace

Code :

- (A) I,II, IV, II (B) II, III, IV,I
 (C) I, II, IV, III (D) I,IV, II, III

47. Match the following two lists. Use the Code given below:

- List - I List-II

- I Knowledge is a recollection. 1. Leibnitz
 II. Substance is causa sui. 2. Berkeley
 III. Monads are windowless. 3. Plato
 IV Êsse est percipi. 4. Spinoza

Code :

- | | I | II | III | IV |
|-----|---|----|-----|----|
| (A) | 2 | 1 | 3 | 4 |
| (B) | 2 | 1 | 4 | 3 |
| (C) | 3 | 4 | 1 | 2 |
| (D) | 1 | 3 | 4 | 2 |

48. Suppose you are a member of the Academic Council of a University and find that most of the members and the student members are reasonable except the Vice-Chancellor who used to give very little cognizance of the diverse perspectives of the members and the students..

What would not be the appropriate course of action for you?

- (A) Ask the members to rise up their attitudes towards the Vice-Chancellor.

- (B) Ask the members to be assertive in their views and make the Vice-Chancellor agree with them.
- (C) Ask all the members to resolve their mutual differences and convince the Vice-Chancellor.
- (D) Keep low profile and let the Vice-Chancellor do everything.
49. Commonly used spice clove is obtained from the:
(A) Root (B) Stem
(C) Red fruit marrow (D) Flower bud
50. Which one of the following does not belong to the group?
(A) Moon (B) Jupiter
(C) Earth (D) Mars
51. Following are six statements :
(a) All champs are winners.
(b) Some champs are not losers.
(c) No champs are losers.
(d) Some champs are not all rounders.
(e) All brilliant are all rounders.
(f) No winner is loser.
- Which one of the following combinations is a valid argument?
(A) abf (B) afc (C) ced (D) cde
52. If X is the brother of Y and Y is the brother of Z then we can conclude that:
(A) Z is the brother of X
(B) Z is the brother of X and Y
(C) Z is the brother of Y
(D) None of them
53. In the following sentence fill in the blank with the appropriate word:
They did not know where they _____from..
(A) Had come (B) Have come
(C) Has come (D) Come
54. In the following sentence fill in the blank with the appropriate phrase :
The more electricity you use _____.
(A) Your bill will be higher
(B) Will your bill be higher

- (C) Will be higher your bill
(D) The higher your bill will be
55. The Gandhian Economic Programmes were based on:
(A) Theoretical principles of economic grasping
(B) Sharing all economic productions
(C) Fulfilling the wants of the people
(D) The ideal of self-sufficiency
56. Instrumental value' is the value that something has :
(A) In itself
(B) As a means to something else
(C) An end in itself
(D) As an emotional value
57. Iron necessary for the body, is abundantly found in:
(A) Milk (B) Eggs
(C) Cauliflowers (D) Green vegetables
58. Milk tastes sour when kept in the open for sometime due to the formation of:
(A) Malic acid (B) Citric acid
(C) Lactic acid (D) Carbonic acid
59. By selling a horse for Rs. 570, a tradesman would loose 5%. At what price must be sell it to gain 5%?
(A) Rs. 610 (B) Rs. 625
(C) Rs. 630 (D) Rs. 635
60. In a flower bed, there are 25 rose plants in the first row, 23 in the second row, 21 in the 3rd and so on. There are 3 rose plants in the last row. How many roses are there in the flower bed ?
(A) 10 (B) 12 (C) 11 (D) 13
61. Gopal sold his watch for Rs. 75 and got a percentage of profit equal to the cost price. The cost price of the watch is :
(A) Rs. 50 (B) Rs. 55
(C) Rs. 60 (D) Rs. 40
62. If 3 men and 5 women do a piece of work in 8 days and 2 men and 7 children do the same in 12 days. How many women can do as much work in 1 day as 21 children?
(A) 12 (B) 11 (C) 10 (D) 8
63. If one of the roots of the equation $x^2 - 19x + 88 = 0$ be 8, find the other root:

(A) 19 (B) 9 (C) 11 (D) 18

Direction (Q. Nos. 64 to 66): Study the following table carefully and answer the questions given below it.

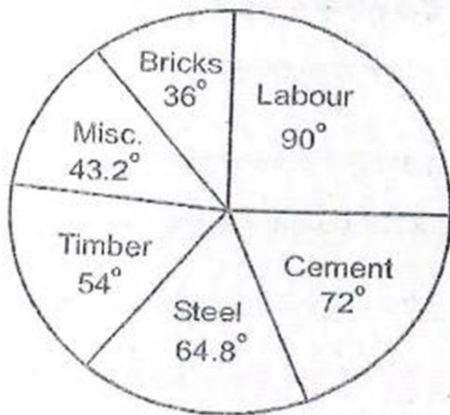
The number of candidates appeared and selected in a competitive examination from three states over the years:

States Years	A		B		C	
	A	S	A	S	A	S
2014	800	25	1000	35	1100	40
2015	700	20	980	30	900	25
2016	900	35	1100	30	800	30
2017	950	30	900	32	1000	30
2018	1000	40	1150	40	850	20

A: Appeared S: Selected

64. During which of the following years the percentage of candidates selected over appeared is the highest from State C?
(A) 2018 (B) 2014
(C) 2016 (D) None of these
65. Total number of candidates selected from State A is approximately what percentage of the total number of candidates selected from State B?
(A) 80 (B) 50 (C) 89 (D) 90
66. What is the ratio between the number of candidates selected from State A in 2015 to that from State C in 2017?
(A) 5:1 (B) 4:1
(C) 1:5 (D) 2:3

Direction (Q. Nos. 67 to 70) : The following Pie-diagram shows the cost of construction of a house in Delhi. Study the diagram carefully and answer the questions.



67. If the total amount spent on construction of house is 4 crores, what amount is spent on bricks ?
(A) 4 lacs (B) 40 lacs (C) 1 Crore (D) None of these
68. If the total amount spent on construction of house is Rs. 1 crore, find the excess amount spent on cement as compared to steel:
(A) Rs. 20 lacs (B) Rs. 1 lac (C) Rs. 2 lacs (D) Rs. 10 lacs
69. The ratio of expenditure between bricks to cement is :
(A) 1:2 (B) 2:3 (C) 1:3 (D) 1:4
70. What is the difference in percentage of expenditure on cement and labour?
(A) 10 (B) 5 (C) 2 (D) 3

Direction (Q. Nos. 71 to 80): Read the following two passages and answer the questions that follow each passage. Your answer to these questions should be based on the passages only.

Passage-1

Truly Nature is the mother of all life, because it provides us all our basic needs for survival. Throughout the day, we rely on natural resources such as soil, minerals, air, water, sunlight, coal, petroleum, natural gas, fossil fuels, oil and so on. Plants and animals are also necessary if we must live. They are also natural resources for us.

'Natural resources', as the words suggest, means the basic wealth which occurs naturally on Earth. It is not man-made. But sadly, it is man who misuses them and actually destroys them. It takes several thousands of years for some natural resources like fossil fuels, coal, and oil to form. Since all these are so important for our existence, naturally we must preserve them and use them with great care and respect.

Some of these resources are available in plenty. Some of them have the ability to renew themselves. On the other hand, some cannot renew themselves and are called non-renewable sources. Water, for example, keeps changing but is not destroyed and so it is a renewable source of energy. It takes the form of vapour and comes back as rain to earth. Water, therefore, is a renewable natural resource. We use throughout the day for many purposes. Water is necessary to produce electricity, for irrigation, for industrial and other activities. Its scarcity would cause loss of vegetation, create an adverse effect on flora and fauna and erosion of soil, to say the least.

Since human beings depend upon the natural resources for their existence, the resources must be used wisely. If not it would create an imbalance in the environment. Our very existence would be in danger if we do not create and maintain an eco-friendly atmosphere.

71. Natural resources are:

- (A) Produced by man for himself
- (B) Produced by man for Nature
- (C) Produced by Nature for man
- (D) Produced by Nature for itself

72. One set of the following resources are all natural:

- (A) Coal, gas, oil, water
- (B) Sunlight, gas, oil, fruit juices
- (C) Medicines, oil, precious gems, plastic
- (D) Water, air, rock, cosmetics

73. A renewable natural resource is :

- (A) An important part of Nature
- (B) Available throughout the year
- (C) Cheaper than other resources
- (D) Always found in one of its form or another

74. Man must:

- (A) Live as the master of Nature
- (B) Live as a friend of Nature
- (C) Live as a consumer of Nature
- (D) Live outside Nature

75. The world is taking many steps:

- (A) To utilize and maintain natural resources at the same time

- (B) To make all natural resources increase
- (C) To create new natural resources
- (D) To stop all use of natural resources

Passage - 2

Education is a process of learning. Some people become equipped with knowledge and teach, while others learn. For centuries, artistic skills were passed on from one generation to another in an informal way. Today teaching and learning is mostly formal, starting from the period in school and then in higher institutions. The cultural and social education that we need is learnt from at home and in society. Both formal and informal education are necessary for an all-rounded development. So, education gives us various skills in diverse fields. These skills are very important to our life and decide the quality of our existence. These skills can be acquired by formal training in institutions and more importantly, through the experiences of our life. Thus education means acquiring knowledge both to become skilled professionally and to live life in a righteous and cultured way. Both aspects, formal or professional education and informal or cultural education, are necessary for a well developed society. As far as education in higher institutions is concerned, increasingly, there is a preference for professional courses. One wants to become an engineer or doctor or scientist or management executive or take up some specific profession. So education has become very specialized. The options have also increased enormously. Formal education has become necessary for obtaining specific jobs. In all the fields computers play a key role. So to know how to use the computer is very important. Education is the bed-rock of a society. In a society where people are illiterate and uncultured, there is neither sound economic development nor safe and peaceful living. Law and order, scientific research, safety and security against crime, successful commerce and trade, the uplift of economically weaker people, are all possible only if the members of the society are educated and properly and usefully employed. Not only does education securing economic and social progress and raise people's productivity and creativity, it enriches people's understanding of themselves and world.

76. Education is complete when :

- (A) It is thoroughly informal
- (B) It is thoroughly formal
- (C) It is both formal and informal
- (D) It makes us skilled

77. A society with high ideals will have:

- (A) Economic and social progress and cultural values

- (B). Employment and schools
 - (C) Law courts and colleges
 - (D) Hospitals and schools
78. A professional course equips a person to :
- (A) Get a place in society.
 - (B) Win the respect of relatives in the family
 - (C) Become knowledgeable
 - (D) Take up a specific profession
79. Education is :
- (A) For the professionals of a society
 - (B) The foundation of a society
 - (C) Knowledge about engineering and medicine
 - (D) All-rounded
80. Specialized education means :
- (A) Education taught by specialists
 - (B) Education given in colleges
 - (C) Education given in universities
 - (D) Education for specific fields of human activity

GS-II OF OCS - 2019 PRELIMINARY EXAM.
ANSWER KEYS & CRYPTIC SOLUTIONS

1. C
2. C
3. A
4. A
5. C
6. D
7. C
8. B
9. B
10. B
11. D
12. A
13. B
14. D
15. A
16. B
17. D
18. A
19. A
20. C
21. A
22. C
23. D
24. C
25. C

$$\begin{aligned} a + b &= 100 \\ a - b &= 100 \\ \hline 2a &= 137, a = \frac{137}{2} \\ \Rightarrow \frac{137}{2} + b &= 100 \\ b &= 100 - \frac{137}{2} = \frac{200-137}{2} \\ &= \frac{63}{2} \end{aligned}$$

$$\left(\frac{137}{2}\right)^2 - \left(\frac{63}{2}\right)^2 = 3700 \text{ Ans.}$$

26. A

Explanation: $\frac{4x+5x+6x}{3} = 25$

$$\Rightarrow \frac{15x}{3} = 25, 15x = 25 \times 3$$

$$\Rightarrow x = \frac{25 \times 3}{15} = 5$$

$$\text{Largest no. } 6x - 6 \times 5 = 30 \text{ Ans.}$$

27. D

Explanation: ATQ

$$\Rightarrow x \times 16 = x + 225$$

$$\Rightarrow 16x - x = 225$$

$$\Rightarrow 15x = 225$$

$$\Rightarrow x = \frac{225}{15} = 15 \text{ Ans.}$$

28. C

Explanation: According to formula

$$\pm a \pm b \pm \frac{ab}{100}, \text{ Increase (+ve)}$$

$$\text{Decrease (-ve)}$$

$$30 + 30 + \frac{30 \times 30}{100} = 60 + 9 = 69 \text{ Ans.}$$

29. A

Let,

$$\text{CP} = 100\%, \text{MP} = 125\%, \text{Discount} = 12\%$$

Discount = 12% on MP

$$= \frac{12}{100} \times 125 = 15$$

$$\text{Sp, } 125\% - 15\% = 110\%$$

$$\text{Profit} = 10\%$$

30. B

$$T_2 = 100 \text{ M, } t = \frac{18}{5} \text{ S}$$

Speed of train = $x \text{ km/S}$

$$\text{Main Speed } \frac{6 \text{ km}}{h} = 6 \times \frac{18}{5} \text{ m/s}$$

$$\text{Speed} = \frac{D}{t} = \frac{100}{\frac{18}{6}}, \frac{500 \text{ m}}{18 \text{ s}}$$

$$= \frac{500^{100}}{18} \times \frac{18}{5} \text{ km/hr} = 100 \text{ km/hr}$$

Apposite speed = $T_s + M_s$

$$100 \text{ km/hr} = T_s + 6$$

$$T_s = 100 - 6 = 94 \text{ km/hr Ans}$$

31. C	A	B	C
-8	$(4x - 8)$	$(7x - 8)$	$(9x - 8)$
Purpose AIQ	$4x$	$7x$	$9x$
$(4x - 8) + (7x - 8) + (9x - 8) = 56$			

$$20x = 56 + 24$$

$$x = \frac{80}{20} = 4$$

$$4x = 16, 7x = 28, 9x = 36$$

32. B

$$\frac{\text{Sita}}{100\%} \xrightarrow{+17\%} \frac{\text{Gita}}{117\%} \xrightarrow{-25\%} \text{Anu } 75\% \text{ of } 117\%$$

$$= 1842.75$$

$$\Rightarrow \frac{75^3}{100^4} \times 117\% = 1842.75$$

$$\Rightarrow 1\% = \frac{1842.75}{3 \times \frac{117}{100}} \times 4 \times 100$$

$$\Rightarrow 100\% = 2100$$

33. D

A - Fill - 12 min

B - Fill - 15 min

Total Capacity = 60 Lt (LCM of 12, 15)

A fill in 1 min $60/12 = 5$ litter.

B fill in 1 min $60/15 = 4$ litter.

Both fill in 1 min = 9 litter.

Total time taken = 20 min X 9 litter

= 180 litter (filled)

Costae water 180-60 = 120 litter

In 20 min 120 litter waste

$$1 \text{ m} = \frac{120}{20} = 6 \text{ litter waste}$$

$$\frac{60}{6} = 10 \text{ minute Ans}$$

34. C

$$91.8 \times \frac{35}{100} = 32.13 = 32 \text{ laks.}$$

35. C

$$\text{Hyd} - 21\% \text{ of } 25.5 \text{ L} = 5.355$$

$$\text{Bexq} - 10\% \text{ of } 29.2 \text{ L} = \underline{2.92}$$

2.435 Ans.

36. D

$$\text{Mu} - 82.4 \times \frac{38}{100} = 31.31$$

$$\text{Kol} - 91.8 \times \frac{35}{100} = 32.13 \text{ Ans.}$$

37. C

$$\text{Kol} - 32.13 \text{ L} \quad \text{Hy} - 5.35 \text{ L}$$

$$\text{Mu} - 31.31 \text{ L} \quad \text{Benj} - 2.92 \text{ L}$$

$$\text{Dr} - 17.19 \text{ L}$$

$$\text{Che} - 13.72 \text{ L}$$

Kolkata and Mumbai

38. D

Hyderabad (Refer no-37)

39. A

Hyderabad (Refer No. 37)

40. A

41. B

42. B

43. D

44. C

45. C

46. C

47. C

48. C

49. D

50. A-Moon

51. B

52. D

$$\frac{x}{+} \leftarrow \frac{y}{+} - Z$$

53. A

54. D

55. D

56. B

57. B

58. C

59. C

$$C_p = 100\% , \text{ lass} = 5\%$$

$$S_p = 95\%$$

$$\text{Prafect} = 5\% - S_p = 105\%$$

$$95\% = 570$$

$$105\% = \frac{570}{105} \times 105 = 630$$

60. B

. 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25

Total 12 bed Ans

61. A

Option to question.

(A) $50 + 50 \times 50 = 75$ Ans.

62. C

63. C

$$x^2 - 19x + 88 = 0$$

$$x^2 - 11x - 8x + 88 = 0$$

$$x(x - 11) - 8(x - 11) = 0$$

$$(x - 11)(x - 8), x = 11, x = 8 \text{ Ans}$$

64. C

2014 - 4%

2015 - less 3%

2016 - less 4 %

2017- 3%

2018- Less 3%

Ans is 2014.

65. D

$$\frac{150}{167} \times 100 = 89.8\% = 90\% \text{ Ans}$$

66. D

$$\frac{20^2}{30_3} = 2 : 3$$

67. B

$$360^\circ = 4 \text{ cr}$$

$$36^\circ = \frac{4}{360} \times 36 = 40 \text{ Lakh (Ans)}$$

68. C

Cement - 72°

$$\frac{\text{Steel} - 64.8^\circ}{7.2^\circ}$$

$$360^\circ = 1 \text{ cr.}$$

$$7.2^\circ = \frac{1}{360} \times 7.2 = 2 \text{ Lakhs Ans.}$$

69. A

$$\frac{\text{Bricks}}{\text{Cements}} = \frac{36^1}{72_2} = 1 : 2$$

70. B

$$\text{Cement} - \frac{72^2}{360_{10_1}} \times 100^{10} = 20$$

$$\text{Labour} = \frac{90^1}{360_{4_1}} \times 100^{25} = 25$$

$$25 - 20 = 5 \text{ Ans}$$

71. B

72. A

73. D

74. B

75. A

76. C

77. A

- 78. D
- 79. D
- 80. D

APTI PLUS