

PRELIMINARY QUESTIONS OF GS-II OCS-2016

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 – 1

Socrates tends in modern discussions to be associated with a particular idea of teaching: one that is based on questions, and involves no direct transfer of information but rather allows the pupil to see the truth for himself or herself. In fact, Plato's Socrates typically denies that he is a teacher at all. He knows nothing, so that he actually has nothing to impart to anyone, if he is wiser than anyone else, it is because he is aware of his own ignorance, and so realizes that he needs to do something about it. So he goes about asking other people questions, in the hope (so he says) that he may find someone who possesses the knowledge that he himself is aware of lacking. But, in the event, none of the people he questions ever turns out.

To know anything worth knowing, unless it is some particular kind of expertise, like shoemaking or medicine, so all that he succeeds in doing is showing himself, and the other person too, if he's prepared to listen properly, that the other person doesn't know what he thought he knew. However, there is always an invitation, whether explicit or implicit, for the newly self-aware person to continue the inquiry along with Socrates; and this does at last begin to resemble our notion of Socratic method the only difference being that we introduce it into a context which assumes that there are determinate truths to be learned, which we could mostly list if called upon to do so. Socrates, by contrast not only says he knows nothing, but means it; he is not merely waiting for the other person to catch up with him, and gently prodding him or her in the right direction with supposedly neutral questions, but is himself actively involved in the search. (We do in fact find Plato's Socrates endorsing the idea of education as turning the soul towards literally converting it to - the truth, but this is entirely compatible with the idea of learning as searching, and mainly serves to emphasize the idea that there are truths out there, as it were

waiting to be discovered : one idea that is surely Socratic.)

Questions of Passage – 1 :

1. **According to Socrates the idea of learning is :**

- (A) To enjoy life
- (B) To amass wealth
- (C) To discover truths
- (D) To discover that life is illusion

2. **Modern discussions hold that Socrates' particular idea of teaching:**

- (A) Allows direct transfer of information from teacher to student.
- (B) Allows persons to arrive at a truth through asking questions
- (C) Gives particular kind of expertise on shoemaking or medicine.

Makes a person seek information.

3. **The Socratic method of inquiry involves:**

- (A) The idea of learning as searching
- (B) Making the other person learn quickly
- (C) Asking suggestive questions
- (D) Testing if he is wiser than others

4. **"He knows nothing, so that he actually has nothing to impart to anyone" refers to :**

- (A) Plato
- (B) Aristotle
- (C) Xenophon
- (D) Socrates

5. **In Socratic thought wisdom is really knowledge about one's own:**

- (A) Intelligence
- (B) Ignorance
- (C) Expertise
- (D) Experience

Passage – 2

As things stand in the England of 1869, society is divided into three classes. There is no overarching vision of culture to unify and harmonize the different levels of social existence.

As a result, each is cut off from the rest, and lacking any vision other than self-interest, each remains immured in its own characteristic vices. Thus the aristocracy are, in Arnold's terms, Barbarians. They are noble in a sense, but chiefly interested in external display – their great houses, their codes of manners, their high spirits and their field sports. They remain woefully inadequate in intelligence, and can conceive of no form of existence than their own. No more can the middle classes, the Philistines. Again they are not wholly vicious. They display the virtues of hard work and philanthropy, but they have their own narrowness of vision, they are illiberal in spirit, and even in their philanthropy mechanistic and dismal. The lower Classes, the 'vast residuum' or Populace as Arnold terms them, are raw and half-developed. They have long remained hidden in poverty and squalor, but they are now emerging from their hiding places 'to assert an Englishman's heaven-born privilege of doing as he likes, and is beginning to perplex us by marching where it likes, meeting where it likes, bawling where it likes, meeting where it likes, bawling where it likes, breaking what it likes'. Arnold did not like liberty, which he found hard to distinguish from anarchy. Goodness knows what he would have said of popular taste or of social mores at the start of the third millennium.

For Arnold saw culture as the great unifier of society, releasing the best instincts of each class and harmoniously integrating them, and in our time the provider of the inward goals we all need to produce a drive to personal perfection, and hence our only defense against the anarchy of unrestrained individual choice and selfishness. (Remember that Arnold was the author of 'Dover Beach', and believed that public dogmatic religion had its day) He also saw the state, in a society pervaded with true culture, as that through which each person's best self would be realized in a way impossible when each simply pursued his or her individual goals.

Questions of Passage – 2 :

6. In the year 1869 social classes in England:

- (A) Were isolated
- (B) Were warring against each other
- (C) Were striving together for democracy
- (D) Had no idea of culture to unite them

7. Aristocracy who are called as Barbarians by Arnold were noble but they were guilty of:

- (A) Narrow mindedness
- (B) Exhibiting their wealth and achievements
- (C) Excessive interest in classical learning
- (D) Pride in their ancestry

8. Philistines of the middle classes:

- (A) were narrow of mind
- (B) were highly intelligent
- (C) Had no idea of culture
- (D) Hard working but mechanical and philanthropic but dismal

9. 'Vast residuum' is the term Arnold uses to refer to:

- (A) Populace
- (B) Barbarians
- (C) Philistines
- (D) Politicians

10. According to Arnold culture is unifier of society as it:

- (A) Releases the best instincts of each class
- (B) Integrates the best instincts of each class harmoniously
- (C) Quashes all differences
- (D) Permits doing as one likes freely

11. Given below are two statements, one leveled as Assertion (A), and the other leveled as Reason (R):

Assertion (A): Substance is that which is cause-sui, self-existent and the conception of which does not presuppose the conception of anything else.

Reason (R): The definition of substance implies that substance is self-caused, self-existent and self-conceived

In the context of the two statements, which one of the following is correct?

- (A) Both (A) and (R) are correct, but (R) is not the correct explanation of (A).
- (B) Both (A) and (R) are correct, and (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



12. **Given below are two statements, one leveled as Assertion (A), and the other leveled as Reason (R):**
Assertion (A): Social contract theory is the view that persons' moral and / or political obligations are dependent upon a contract or agreement among them to form the society in which they live.
Reason (R): Social contract theory is rightly associated with modern moral and political theory and given its exposition and defense by Hobbes, Locke and Rousseau.
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, and (R) is not the correct (R).
(C) (A) is correct, but (R) is not the correct
(D) (A) is not correct, but (R) is correct
13. **Given below are two statements, one leveled as Assertion (A), and the other leveled as Reason (R):**
Assertion (A): Gandhi began to call the Indian movement Satyagraha, that is to say, the force which is born of Truth and Love or Non-violence.
Reason (R): Truth (satya) implies love, and firmness (agraha) engenders and therefore serves as a synonym for force.
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
14. **Three propositions are given in each of the alternatives. Assuming the propositions are true, select the alternative in which the third proposition logically follows from the first two statements:**
- (A) All crows are black. Some snakes are black. Some snakes are not black
- (B) All men are mortal. Socrates is a man. Socrates is mortal.
(C) Some animals are fierce. All lions are animals. All lions are fierce.
(E) Some policemen are soft-spoken. Some judges are soft-spoken. Some policemen are judges.
15. **Three propositions are given in each of the alternatives. Assuming the propositions are true, select the alternative in which the third proposition logically does not follow from the first two statements.**
- (A) All books are edifying some books are interesting. Some edifying books are interesting.
(B) All philosophers are fallible. Marx is a philosopher. Marx is fallible.
(C) All lions are fierce. Some animals are not lions
(D) Some politicians are reformists. Some judges are reformists. Some politicians are judges.
16. **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 falls to live up to, sometimes despite good intentions, sometimes disastrously.**
Which one of the following statements is the most appropriate answer?
- (A) We always live in an imperfect world
(B) Justice is the operative term of institutions.
(C) Justice is an ideal which the world falls to live up to
(D) Institutions fall to approximate ideal justice.
17. **The question of institutive justice raises issues of legitimacy, procedure, codification and interpretation, which are considered by legal theorists and by philosophers of law. Another definition of justice is an independent investigation of truth. In a court room,**



- lawyers, the judge and the jury are supposed to be **Independently investigating the truth of an alleged crime.**
- Which one of the following is the correct answer?
- (A) Justice is how it is codified.
(B) Justice is independently investigating the truth.
(C) Justice is the Interpretation of legal theorists and philosophers of law.
(D) Justice is what the jury decides.
18. **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.**
- Which one is the appropriate answer?
- (A) Trustee's duty is to distribute those resources in the manner their owner intended.
(B) Trustee can divert them for the promotion of his happiness.
(C) Trustee should not divert them for the promotion of the happiness.
(D) Trustee should not distribute those resources in the manner their owner intended.
19. **Indian secularism is a peculiar thing. In India, we confuse secular, secularization and secularism with one another. It moves away from the Western model of separation between Church and State and makes certain basic principles. One of them is that India as a state is secular but secular But as a nation it is communal. The other principles are – state is not religious and that all religions are equal before the state and so on.**
- Which one is the most appropriate feature of Indian secularism?
- (A) Indian secularism accepts separation between state and religion.
(B) India as state is secular but as a nation it is communal.
(C) Indian secularism accepts no religion.
(D) India is non-religious state.
20. **Modernization of Indian tradition has created a great transition from 'hierarchy' to 'equality', from 'holism' to 'individuality', from 'continuity' to 'historicity' and from 'transcendence' to this worldly 'rationalism' and 'secularism'. The process of transition has however been seldom smooth and involves tensions and even social break down creating urge to re-define modernity.**
- Which one of the following is the feature of Indian tradition?
- (A) Hierarchy, holism, continuity, and transcendence.
(B) Equality, individuality, historicity and secularism.
(C) Individuality, historicity, and continuity and transcendence.
(D) Holism, continuity, equality and individuality.
21. **You are the Principal of a School and you realize that the role of education is multiple and complex. Still here remains a problem with education regarding marketability, public good and so on. You propose education as welfare because basic education is one such public good for which there is a need to appropriate collectively and go beyond what the private markets would foster.**
- Which one of the following is the prerequisite of education as welfare?
- (A) Education as welfare is public good which lies in the private markets.
(B) Education as welfare depends on marketability.
(C) Education as welfare is multiple and complex.

(D) Education as welfare is public good which beyond the private markets.

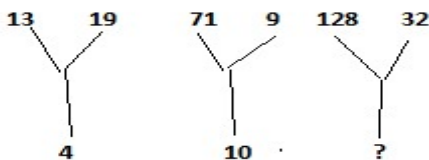
22. It has been observed that people from a particular district have been migrating to other cities. Upon closer examination, it came to the light that people of a particular minority group have been migrating. As a district magistrate of the city, how will you solve the problem?

- (A) Stop migration by force.
- (B) First create trust in law and order and give economic incentives to them.
- (C) Convince the majority group to be sympathetic to minority group
- (D) Give them proper education and motivate them not to migrate.

23. You are a senior teacher in a school in which there are number of students who are physically challenged. How will you like to convince the Principal and members of the school Committee to help such students?

- (A) Discuss the problems with such students and give them encouragement to solve their problems
- (B) Discuss the problems with the Principal and other members and get ramp constructed.
- (C) Leave the students on their own efforts.
- (D) Give emotional support to them

24. Find the missing character from the given alternatives:



- (A) 10
- (B) 15
- (C) 20
- (D) 25

25. In a certain code TEACHER is written as VGCEJGT. How is CHILDREN written in that code?

- (A) EJKNEGTP

- (B) EGKNFITP
- (C) EJKNFGTO
- (D) EJKNFTGP

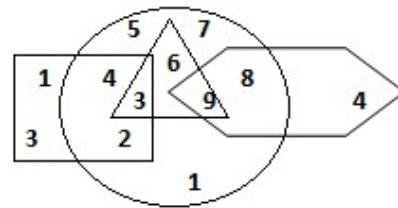
26. Pointing towards a person, a man said to a woman, "His mother is the only daughter of your father." How is the woman related to that person?

- (A) Daughter
- (B) Sister
- (C) Mother
- (D) Wife

27. If you are facing north-east end move 10m forward, turn left and move 7.5 m then you are:

- (A) North of your initial position
- (B) South of your initial position
- (C) East of your Initial position
- (D) West of your initial position

28. Study the figure carefully and answer the question:



What is the product of the numbers which belong to three figures only?

- (A) 27
- (B) 162
- (C) 648
- (D) None of these

29. If the following five words are arranged in alphabetical order, which word will come in the third position?

- (A) Draw
- (B) Play
- (C) Read
- (D) Back

30. Study the following arrangement carefully to answer the question:

M 1 E \$ R B 3 A K 7 £ # 9 \$ U D I N 4 6 % F H 2 @ 8 W



- How many such consonants are there in the above sequence each of which is immediately followed by a number and immediately preceded by a vowel?
- (A) Nil
(B) One
(C) Two
(D) Three

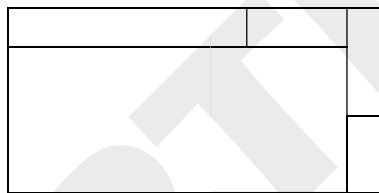
31. If it is possible to form a number which is perfect square of a two-digit odd number using the second, the fourth and the seventh digits of the number 739142658 using each only once, which of the following is the second digit of that two-digit odd number?

- (A) 4
(B) 5
(C) 7
(D) None of these

32. Find the missing character:

3C	2B	4A
27A	?	64B
9C	4A	16B

- (A) 8C
(B) 12B
(C) 16C
(D) 18C



33. If in an examination

hall, you find that the question paper is too tough to be answered satisfactorily by you, the best thing to do for you is to :

- (A) Tell the examiner that the questions are out of course.
(B) Provoke the candidates to walk out of the examination hall.
(C) Try to know something from your neighbor.
(D) Try to solve the questions as much as you know with a cool head.

34. **Statements: All politicians are honest. All honest are fair.**

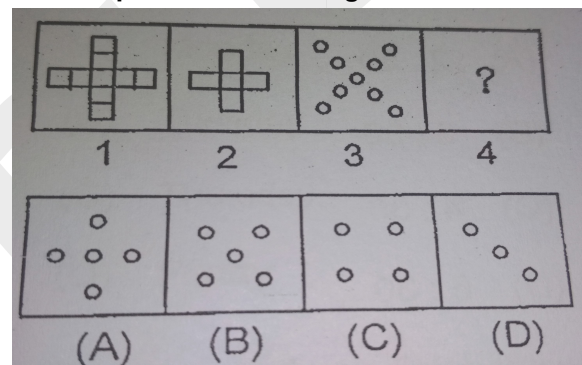
Conclusion:

- (i) Some honest are politicians.

- (ii) No honest is politician.
(iii) Some fair are politicians.
(iv) All fair are politicians.
Then which is true?

- (A) None follows
(B) Only (i) follows
(C) Only (i) and (ii) follows
(D) Only (i) and (ii) follows

35. Figures 1 and 2 are related in a particular manner. Establish the same relationship between figures 3 and 4 by choosing a figure from amongst the four alternatives, which would replace the question mark in fig 4?



36. Figure is the number of rectangles in the following figure?

- (A) 6
(B) 7
(C) 9
(B) 11

37. Choose the alternative which most closely resembles the mirror-image of the given combination:

INFORMATION

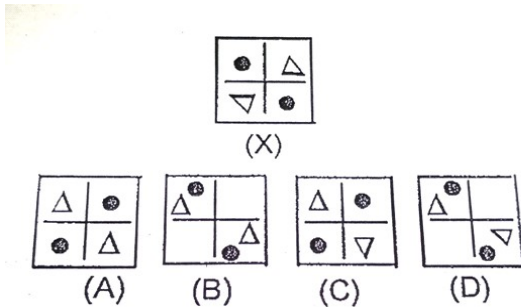
- (A) I N F O R M A T I O N S
(B) I N F O R M A T I O N S
(C) S N O I T A M R O F N I
(D) S N O I T A M R O F N I



38. Looking into a mirror, the clock shows 9:30 as the time. The actual time is :

- (A) 2:30
- (B) 3:30
- (C) 4:30
- (D) 6:30

39. Choose the correct water-image of the fig. X from the four alternatives (A), (B), (C)& (D):



40. If the arithmetic mean of three umbers is equal to 5 and their standard deviation is zero then the numbers are:

- (A) 4,5,6
- (B) 3,5,7
- (C) 5,5,5
- (D) 1,5,9

41. The first two words on the left of the sigh '::' are related in an certain way. The same relationship incids good for the second pair of words to the right of the sign '::' one of which is missing. Fin the missing one from among the alternatives:

Coconut : Shell :: Letter:?

- (A) Letter box
- (B) Stamp
- (C) Mail
- (D) Envelope

42. There are four words out of which three are alike in some manner, while the fourth one is different. Choose out the odd one:

- (A) Write
- (B) Read
- (C) Knowledge
- (D) Study

Direction (Q. Nos. 43 to 45) : Read the following information to answer these questions.

- (i) A, B, C, D, E, F and G are sitting in a circle facing at the centre and playing cards.
- (ii) E is neighbor of A and D
- (iii) G is not between F and C.
- (iv) F is to the immediate right of A

43. Which of the following does not have the pair of persons sitting adjacent to each other?

- (A) BA
- (B) CB
- (C) DE
- (D) GD

44. Which of the following pairs has the second person sitting immediately to the right of the first?

- (A) AB
- (B) CB
- (C) EA
- (D) DG

45. Who are the neighbors of B?

- (A) A and F
- (B) C and D
- (C) F and C
- (D) None of these

46. Nitin ranks eighteenth in a class of 49 students. What is his rank from the last?

- (A) 18
- (B) 19
- (C) 31
- (D) 32

47. Saturday was a holiday for Republic Day, 14th of the next month is again a holiday for Shivratri. What day was it on the 14th?

- (A) Monday
- (B) Tuesday
- (C) Thursday
- (D) Friday



48. One person A can finish the work on 12 days and B can finish the same work on 10 days. The same work can be finished by A, B, C in 5 days. C can do it in the days:

- (A) 30
- (B) 60
- (C) 27
- (D) 17

49. The ratio of births of the students in 12 months of a year are as follows:

January	09	July	09
February	07	August	06
March	11	September	08
April	09	October	07
May	08	November	08
June	10	December	06

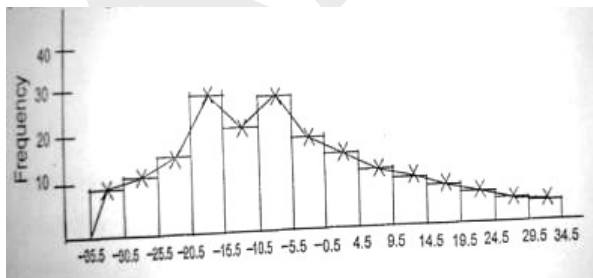
The probability that the student will born in the starting of six months is :

- (A) 44%
- (B) 54%
- (C) 35%
- (D) None of the above

50. The monthly income of six servants in a company are 15, 17.5, 17.5, 18, 28, 30 (Rs. Thousan(D). The number of servants which have income greater than mode and less than mean is:

- (A) 3
- (B) 1
- (C) 2
- (D) 0

51. The following figure is the change in blood pressure active drug situations:



The frequency curve is:

- (A) Symmetrical

(B) Negatively skewed

(C) Right skewed

(D) Right and negatively skewed

52. The occupancy rate in a city is provided as 81, 83, 83, 84, 84, 86, 88, 86, 87, 87, 87, 88, 89, 89, 90, 90, 90, 90, 91, 91, 91, 92, 92, 94, 94, 95, 96, the value of the median is approximately:

- (A) 89
- (B) 90
- (C) 89.5
- (D) None of the above

53. $2^{2x+4} = 16^x$ then X^4 is:

- (A) 8
- (B) 16
- (C) 81
- (D) None of the above

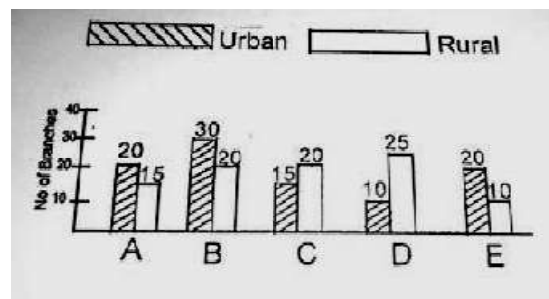
54. Among the five peoples the monthly income is Rs. 15,000; Rs.26,000; Rs.16,000; Rs. 19, 000; Rs.50,000. The number of persons which has less than the mean f the income is:

- (A) 2
- (B) 3
- (C) 4
- (D) 1

55. For the lines $Y= 3X-2$ and $Y = 8 - 2X$, the point of intersection of two lines is:

- (A) (2,5)
- (B) (2, 4)
- (C) (1, 4)
- (D) (2, 3)

56. The diagram shows the number of branches of five different banks in Urban and Rural areas:

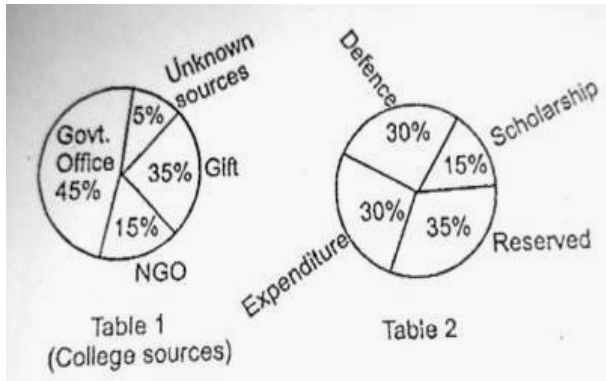




The ratio of the urban branches to the rural branches in bank D is :

- (A) 5 : 2
- (B) 2 : 5
- (C) 2 : 7
- (D) None of the above

57. A collage has deposited Rs. 6 lac from different sources presented in Table 1 and can use it in different sources presented in Table 2 :



If scholarship is given by the money obtained from gift sources, then money percentage used from it is :

- (A) 42
- (B) 43
- (C) 50
- (D) 47

58. The minimum value of X for which L. C. M. is 300 for observations 20, 25, X is :

- (A) 45
- (B) 30
- (C) 15
- (D) None of the above

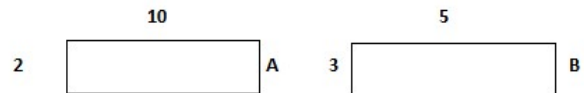
59. For the data given below:

Class Interval	Frequency
2 - 4	1
4 - 6	2
6 - 8	3
8 - 10	4
10 - 12	A
12 - 14	3
14 - 16	2

The mean is 10, the value of A is:

- (A) 14
- (B) 11
- (C) 12
- (D) None of the above

60. The monthly income of two families A and B are shown by the following figure:



If the income of family B is Rs. 15, 000; then the income of family A is:

- (A) Rs. 15,000
- (B) Rs. 20,000
- (C) Rs.37,000
- (D) Rs.7,500

61. Primary data are:

- (A) Less reliable compared to secondary data
- (B) Always more reliable compared to secondary data.
- (C) Depends on the care with which data have been collected.
- (D) Depends on the agency collecting data.

62. Cumulative Frequency Curve is:

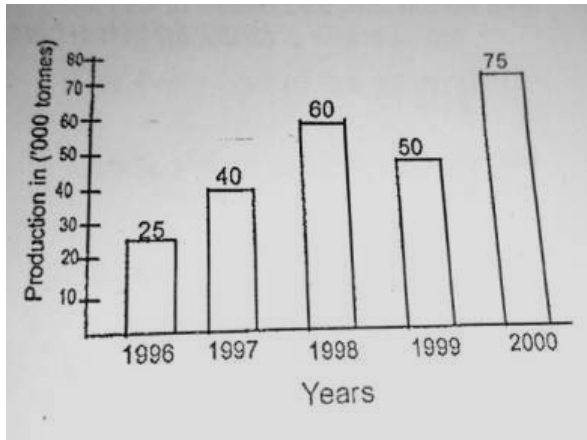
- (A) Increasing
- (B) Decreasing
- (C) Increasing and decreasing
- (D) None of the above

63. Following is not the method of collecting primary data:

- (A) Direct Personal Interview
- (B) Indirect Oral Interview
- (C) Mailed Questionnaire Method
- (D) Using Government Publications

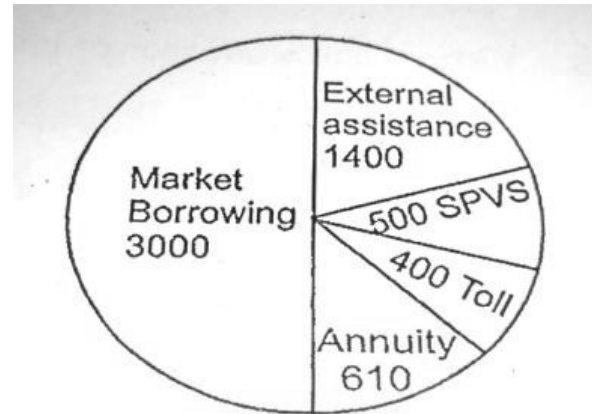


Direction (Q. Nos.64 to 66) : Study the bar-chart and answer the questions based on it. Production of fertilizers by a company (in '000 tonnes) over the years.



- 64. What was the percentage decline in the production of fertilizers from 1998 to 1999?**
- (A) 10%
(B) 20%
(C) $16\frac{2}{3}\%$
(D) 25%
- 65. The average production of 1997 and 1998 was exactly equal to the average production of which of the following pairs of years?**
- (A) 1998 and 1999
(B) 1997 and 2000
(C) 1997 and 1999
(D) 1996 and 2000
- 66. In how many of the given years was the production of fertilizers more than the average production of the given years?**
- (A) 1
(B) 2
(C) 3
(D) 4

Direction (Q. Nos.67 to 69) : The following Pie-chart shows the sources of funds to be collected by National Highways Authority of India for a project. Study the pie-chart and answer the questions that follow the sources of funds to be arranged by NHAI for a project (in crores Rs):



- 67. 50% of the funds are to be arranged through:**
- (A) SPVS
(B) External assistance
(C) Toll
(D) Market borrowing
- 68. The central angle corresponding to SPVS is:**
- (A) 30°
(B) 180°
(C) 36°
(D) 84°
- 69. The ratio of the funds to be arranged through SPVS and that through market borrowing is:**
- (A) 1:6
(B) 7:15
(C) 1 : 5
(D) 6 : 1
- 70. Mode is :**
- (A) Least frequent value
(B) Middle most value
(C) Most frequent value
(D) None of the above

Direction (Q. Nos.71 to 75) : Read the following passage and answer the questions the follow. Your answers should be based on the given passages only.

Passage – 1

An "Ecosystem" is a region with a specific and recognizable landscape form such as forest grassland, desert, wetland or coastal area. The

nature of the ecosystem is based on its geographical features such as hills, mountains, plains, rivers, lakes, coastal areas or islands. It is also controlled by climatic conditions such as the amount of sunlight, the temperature and the rainfall in the region. The geographical, climatic and soil characteristics form the non-living (abiotic) component. These features create conditions that support a community of plants and animals that evolution has produced to live in these specific conditions. The living part of the ecosystem is referred to as its biotic component. Ecosystems are divided into terrestrial or land based ecosystems, and aquatic ecosystems in water. These form the two major habitat conditions for the Earth's living organisms. All the living organisms in an area live in communities of plants and animals. They interact with their non-living environment, and with each other at different points in time for a large number of reasons. Life can exist only in a small proportion of the earth's land, water and its atmosphere. At a global level the thin skin of the earth on the land, water and its atmosphere. At a global level the thin skin of the earth on the land, the sea and the air, forms the biosphere. At a sub-global level, this is divided into bio-geographical realms: Eurasia called the Palaearctic realm, South and South-East Asia (of which India forms a major part) is the Oriental realm; North America is the Nearctic realm; South America forms the Neotropical realm; Africa the Ethiopian realm, and Australia the Australian realm.

These ecozones are broad biogeographic divisions of the Earth's land surface, based on distributional patterns of terrestrial organisms. Ecozones delineate large areas of the Earth's surface within which organisms have been evolving in relative isolation over long periods of time. Ecozone designations are used to indicate general groupings of organisms based on their shared biogeography. Ecozones correspond to the floristic kingdoms of botany or zoogeographic regions of zoology.

At a national or state level, this forms biogeographic regions. There are several distinctive geographical regions in India - the Himalayas, the Gangetic Plains, the Highlands of Central India, the Western and Eastern Ghats, the semi-arid desert in the West, the Deccan Plateau, the Coastal Belts, and the Andaman and

Nicobar Islands. These geographically distinctive areas have plants and animals that have been adapted to live in each of these regions. At an even more local level, each area has several structurally and functionally identifiable ecosystems such as different types of forests, grasslands, river catchments, mangrove swamps in deltas, seashores, islands, etc to give only a few examples. Here too each of these forms a habitat for specific plants and animals. Ecosystems have been formed on land and in the sea by evolution that has created species to live together in a specific region. Thus ecosystems have both non-living and living components that are typical to an area giving its own special characteristics that are easily observed.

The living community of plants and animals in any area together with the non-living components of the environment such as soil, air and water, constitute the ecosystem. Some ecosystems are fairly robust and are less affected by a certain level of human disturbance. Others are highly fragile and are quickly destroyed by human activities. Mountain ecosystems are extremely fragile as degradation of forest cover leads to severe erosion of soil and changes in river courses. Island ecosystems are easily affected by any form of human activity which can lead to the rapid extinction of several of their unique species of plants and animals. Evergreen forests and coral reefs are also examples of species rich fragile ecosystems which must be protected against a variety of human activities that lead to their degradation. River and wetland ecosystems can be seriously affected by pollution and changes in surrounding land use.

Ecosystems are however frequently disrupted by human actions which lead to the extinction of species of plants and animals that can live only in the different natural ecosystems. These are called 'keystone' species. Extinction occurs due to changes in land use. Forests are deforested for timber, wetlands are drained to create more agricultural land and semi arid grasslands that are used as pastures are changed into irrigated fields. Pollution from industry and waste from urban settings can also lead to extinction of several species. The reason for the depletion of natural resources is twofold - our rapidly exploding population that needs to sustain itself on resources, and the growth of affluent societies,

which consume and waste a very large proportion of resources and energy. Increasing extraction of resources is at the cost of natural ecosystems, leading to a derangement of their important functions. Each of us in our daily lives use a variety of resources. If tracked back to their source, one finds that the resources were originally obtained from nature and natural ecosystems. Our insensitively to using resources carefully has produced societies that nature can no longer sustain. If one thinks before wasting resources such as water, reusing and recycling paper, using less plastics that are non-degradable, culminatingly this can have positive implications on the integrity of our natural resources base and conserve the resources that nature provides.

71. The main point in these passages is that a balanced and successful ecosystem:

- (A) Is not affected by human interference.
- (B) Is produced by human intelligence.
- (C) Is the habitat for non-human life only
- (D) Is the natural result of a symbiotic existence between man and other forms of life.

72. Bio-geography refers to :

- (A) The geography- specific distribution of plant and animal life
- (B) The life of plants and animals as influencing each other
- (C) The life of plants as determined by their predators.
- (D) The geographical conditions as affected by its inhabitants

73. Degradation of our ecosystems results in:

- (A) Disease in animal and plant life
- (B) Infections and diseases in human life
- (C) Loss of natural resources
- (D) Lower productivity for states

74. 'Key-stone' species:

- (A) Decide the well-being of all life
- (B) Species that thrive in human habitat
- (C) Refer to plant and animal life relating to specific ecosystems.
- (D) Specific use of species of animal and plant life.

75. Which of the following comprises a holistic ecosystem?

- (A) Minerals and Water bodies.
- (B) Abiotic and Biotic components
- (C) Abiotic component that is carefully preserved.
- (D) The diversity of Biotic components.

Direction (Q. Nos.76 to 80) : Read the following passages and answer the questions that follow. Your answer should be based on the given passages only.

Passage - 2

Health is a state of complete physical, mental and social well being which is essential for leading a productive life, and is not merely the absence of disease or infirmity. Provision for health should be considered a fundamental human right and attainment of highest level of health is a most important social goal. Since health is influenced by a number of factors such as adequate food, housing, basic sanitation, healthy life styles, protection against environmental hazards and communicable diseases; the frontiers of health extend beyond the narrow limits of medical care. It is thus clear that "medical care". Health care covers a broad spectrum of personal health services ranging from health education and information through prevention of disease, early diagnosis and treatment and rehabilitation.

Health care services they be defined as "all those and community health services, including medical care and related education and research directed towards the protection and promotion of the health of the community."

The term "health services" implies organization, delivery, staffing.

Health services should be organized to meet the needs of entire population and not merely selected groups. Health services should cover the full range of preventive, curative and rehabilitation, services. Health services are now seen a part of the basic social services of the community. The best way to provide health care to the vast majority of underserved rural people and urban poor is to develop effective "primary health care" services supported by an appropriate referral system. Primary health care is based on four principles. They are as follows:

- (A) Equitable distribution : Health service should be accessible to all the sections of the society with special attention to the needy and vulnerable groups. It is well known, that

rural population, in most developed countries, are widely scattered and do not have adequate transportation facilities. City hospitals are beyond the reach of most rural people and are usually patronized by those in their immediate vicinity. Primary health care aims to correct this imbalance and bring health services as near people's home as possible and is supported by a higher level of health care, to which the patient can be referred.

- (B) Community participation: the involvement of individual families and communities in promotion of their health and welfare, including self - care, is an essential ingredient of primary health care. Community involvement also implies that the community should participate in the planning, implementation and maintenance of health services.
- (C) Multi-sectarian approach: Joint effort of the health sector and other health related sectors viz. education, food and agriculture, social welfare, animal husbandry, housing and public works, rural reconstruction etc are needed for attainment of health.
- (D) Appropriate technology: Appropriate technology is not cheap primitive technology for poor, primitive people. It calls instead for scientifically sound materials and methods that are socially acceptable, directed against relevant health problems.

The term "public health" came into general use around 1840. It arose from the need to protect "the public" from the spread of communicable diseases. Later, it appeared in 1848 in the name of a law, the Public Health Act in England to crystallize the efforts organized by society to protect, promote and restore the people's health. In 1920, C. E. A. Winslow, a former Professor of Public Health at Yale University, gave the of quoted definition of public health. The WHO expert Committee on Public Health Administration, adapting Winslow's earlier definition has defined it as: "the science and art of preventing disease, prolonging life, and promoting health and efficiency through organized community efforts for the sanitation of the

environment, the control of communicable infections, the education of the individual in personal hygiene, the organization of medical and nursing services for early diagnosis and preventive treatment of disease, and the development of social machinery to ensure for every individual a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birthright of health and longevity."

76. Health refers to:

- (A) Complete physical, mental and social well-being irrespective of one's economy.
(B) Complete physical, mental and social well-being in an economically stable society.
(C) Availability of nutrition to all at low cost.
(D) Availability of nutrition and shelter to all.

77. Animal husbandry contributes to the good health of a society.

- (A) By providing better economy.
(B) By providing employment in rural areas.
(C) By providing better economy and nutrition
(D) By providing better economy, nutrition and sport.

78. Disease is:

- (A) Detrimental to physical health
(B) Contributive to the spread of infectious maladies.
(C) A factor to be eliminated in health care.
(D) A natural part of human life.

79. The awareness of the need for good sanitation:

- (A) Leads to sound public health.
(B) Reduces infection in children.
(C) Is not needed in cities.
(D) Is not possible in rural areas.

80. Rehabilitation after treatment of disease:

- (A) Avoids infection in others
(B) Strengthens the statements of the patient.
(C) Is done only to refugees
(D) Adapts the patient to his or her normal pattern of diet work and life.

GS-II OF OCS-2016 PRELIMINARY EXAM. ANSWER KEYS & CRYPTIC SOLUTIONS

1. C

Explanation: Plato's Socrates endorsing the idea of education as turning the soul towards -literally converting it to-the truth.

2. B

3. A

4. D

Explanation: The passage is about Plato's Socrates philosophical thought.

5. B

Explanation: He knows nothing, so that he actually has nothing to impart to anyone: if he is wiser than anyone else, it is because he is aware of his own ignorance.

6. B

7. B

8. D

Explanation: They display the virtues of hard work and philanthropy, but they have their own narrowness of vision, they are illiberal in spirit, and even in their philanthropy mechanistic and dismal.

9. A

Explanation: It is referred to populace in the paragraph

10. B

11. A

12. C

13. C

14. B

Explanation: By rule of syllogism

A+E=E (Not O type)

A+A=A

E+A=E

Where -----

E+E=No conclusion

A=Universal Affirmative type statement

E=Particular Affirmative type statement

O=Particular Negative type statement

15. D

Explanation:

E+E=No conclusion

Refer to question no.14

16. D

Explanation: These institutions may be justified by their approximate instantiation of justice, or they may be deeply unjust when compared with ideal standards.

17. B

Explanation: Another definition of justice is an independent investigation of truth.

18. A

Explanation: Option A defines the role of trustee in a most corrective and legitimate way.

19. B

20. B

21. D

22. B

Explanation: Option B is the best possible solution for migration among four alternative choices.

23. B

24. C

Explanation:

$13 + 19 = 32 \gg 4 \times 8 = 32$

$71 + 9 = 80 \gg 10 \times 8 = 80$

$128 + 32 = 160 \gg 20 \times 8 = 160$

25. D

Explanation:

$\left[\begin{array}{l} +2\text{TEACHER}+2 \\ \text{VGCEJGT} \end{array} \right]$

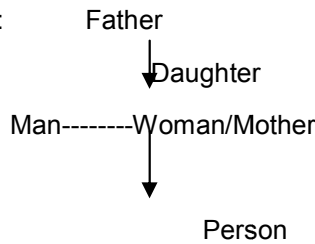
So, CHILDREN



EJKNFTGP

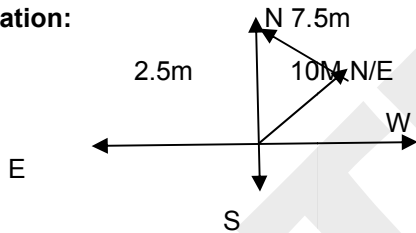
26. C

Explanation:



27. A

Explanation:



Using Pythagorean theorem $10^2 + (7.5)^2 = (12.5)^2$

28. A

Explanation: According to the diagram, $9 \times 3 = 27$

29. B

Explanation: B,D,P,R(Alphabetical order)

30. C

Explanation: M1E \$ R B 3 A K 7 £ # 9 \$ U D I N 4
6 % F H 2 @ 8 W

31. D

Explanation: 739142658

Using 2nd (3) ,3rd (1) & 4th (6) digits the different numbers formed are -----316, 361, 613, 631, 163,136

Among these numbers only 361 is a perfect square of 19.

32. A

Explanation: $2^3=8$

33. D

34. D

Explanation: Converse of statement-1-----Some honest are politicians.

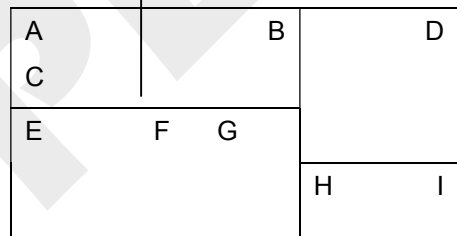
By using syllogism,conclusion of sttaemrnt-1&2-----
All politicians are fair.

Converse—some fair are politicians.

35. B

36. C

Explanation:



J

K

L

Rectangle ADLJ type =1

Rectangle ABFE type=2

Rectangle AJKC type=1

Rectangle ACEG type=1

Rectangle EGKJ type=1

Rectangle CDLK type=1

Rcetangle CDIH type=1

Rectangle HIKL type=1

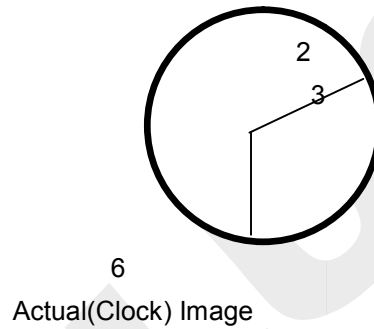
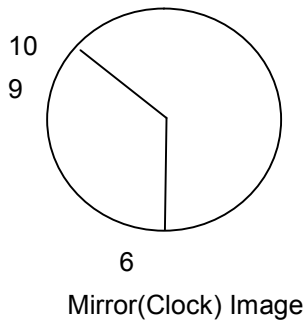
Total rectangles=9

37. C

Explanation: In case of mirror image the position of letters twisted with a leftward lateral movement.

38. A

Explanation:



39. C

Explanation: Water image is inverted shape of the actual image.

40. C

Explanation: Standard deviation (σ) = $X - X_M$
Option C satisfies the equation for s.d(σ)=0.

41. D

Explanation: Shell is the outer layer of the coconut; similarly letter is posted in envelope.

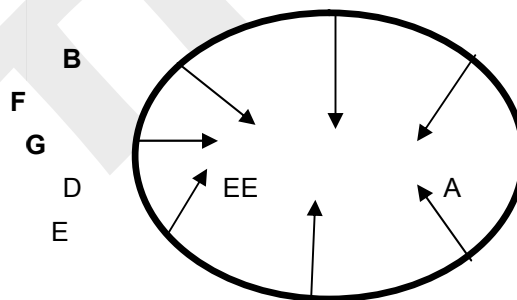
42. C

43. A

44. C

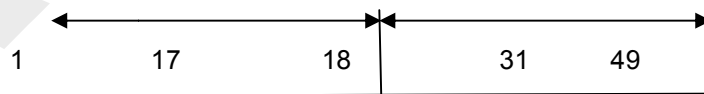
45. C

Explanation:



46. D

Explanation:



Nitin

Nitin ranks from the last = $49 - 18 + 1 = 32$

47. C

Explanation: Jan 26th Sat Jan 31st Thurs Feb 7 Thurs Feb 14 Thurs

48. B

Explanation:

Let C finishes the work in x days.

C finishes in 1 day = $1/x$ part of work.

A+B+C in 1 day finish $(1/12+1/10+1/x)$ part of the work.

According to question, $1/12+1/10+1/x=1/5$

So $1/x=1/60, x=60$

49. B

50. B

Explanation: Mean = $\frac{15+17.5+17.5+18+28+30}{6}$

= $125/6=20.83=X_{\text{Mean}}$

Mode = 17.5 = X_{Mode}

According to question only 18 is larger than mode but less than mean.

51. C

Explanation: The frequency curve is rightly skewed due to long tail towards right direction.

52. A

Explanation: For n(27) is odd number, $X_{\text{Median}} = (\frac{n+1}{2})^{\text{th}}$ number = $(\frac{27+1}{2}) = 14^{\text{th}}$ number of the series i.e 89.

53. B

Explanation: $2^{2x+4} = 16^x$

$2^{2x+4} = 2^{4x}$

So, $2x+4=4x$

$2x=4, x=2$

$2^4=16$

54. B

Explanation: $X_{\text{mean}} = \frac{15,000+20,000+16,000+19,000+18,000+17,000}{6} = \frac{1,42,000}{6} = \text{Rs, } 23,667$

Income less than mean are 15,000, 16,000 & 19,000.

55. B

Explanation: $y=3x-2$ ------(1)

$y=8-2x$ ------(2)

Equating eqⁿ-1 & 2 and solving $x=2, y=4$

56. B

Explanation: $10/25=2/5$

57. B

Explanation: $(\frac{61ac \times 15}{61ac \times 35}) \times 100 = \frac{90,000}{2,10,000} \times 100 = 42.857\% = 43\% (\text{Approx})$

58. C

59. B

Explanation:

Class Interval	Frequency(f_i)	Mid-point(x_i)	$f_i x_i$
2-4	1	$3(\frac{2+4}{2})$	3
4-6	2	5	10
6-8	3	7	21
8-10	4	9	36
10-12	A	11	11A
12-14	3	13	39
14-16	<u>2</u>	15	30
	15+A		Total= $\sum f_i x_i = 139+11A$

$$X_{\text{mean}} = \frac{\sum_{i=1}^7 f_i x_i}{15+A} = \frac{139+11A}{15+A} = 10$$

So, $139+11A=150+10A$

$A=11$

60. B

61. B

Explanation: Primary data are more reliable than secondary data. It is because primary data are collected by doing original research and not through secondary sources that may subject to some errors or discrepancies and may even contain out-dated information.

Secondary data are less reliable than primary data. It is so, since, based on research work done by others and not by the researcher himself. Here, verification of published information cannot be always confirmed accurately as all references used may not be available or mentioned in detail.

62. A

Explanation: A cumulative frequency graph, also known as an Ogive, is a curve showing the cumulative frequency for a given set of data. The cumulative frequency is plotted on the y-axis against the data which is on the x-axis for un-grouped data. When dealing with grouped data, the Ogive is formed by plotting the cumulative frequency against the upper boundary of the class. An Ogive is used to study the growth rate of data as it shows the accumulation of frequency and hence its growth rate.

63. D

Explanation: Examples of secondary data are research reports, government reports, censuses, weather reports, the Internet, reference books, organizational reports and accounting documents.

64. C

Explanation: $\frac{60-50}{60} \times 100 = 16\frac{1}{6}\%$

65. D

66. B

Explanation: Average = $\frac{25+40+60+50+75}{5} = \frac{250}{5} = 50$ ('000tonnes)

Less than average (1996,1997)=2years

67. D

68. A

Explanation: $\frac{500}{3000+610+400+500+1400} \times 360^\circ = \frac{500}{5910} \times 360^\circ = 30.456 \text{ degree} \cong 30^\circ$

69. A

Explanation: $\frac{500}{3000} = 1:6$

70. C

Explanation: The mode of a set of data values is the value that appears most often. It is the value x at which its probability mass function takes its maximum value. In other words, it is the value that is most likely to be sampled.

71. B

72. A

Explanation: At a global level the thin skin of the earth on the land, the sea and the air, forms the biosphere. At a sub-global level, this is divided into bio-geographical realms : Eurasia called the Paiaearctic realm; South and South-EastAsia (of which India forms a major part) is the Oriental realm; North America is the Nearctic realm; South America forms the Neotropical realm; Africa the Ethiopian realm; and Australia the Australian realm.

73. C

74. D

75. B

Explanation: The geographical, climatic and soil characteristics form its non-living (abiotic) component. These features create conditions that support a community of plants and animals that evolution has produced to live in these specific conditions. The living part of the ecosystem is referred to as its biotic component.

76. A

77. C

78. A

79. A

80. D