



All India Civil Services Coaching Centre

(Under the aegis of Government of Tamil Nadu)

TEST BOOKLET

Test 7 – CSAT Paper II

Time Allowed: 2 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 OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET
2. You have to enter your Name on the Test Booklet
3. This Test Book contains 80 items (questions). Each it 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.
4. You have to mark all your response ONLY on the separate sheet provided along with the Test Booklet.
5. All items Carry equal marks. There will be **penalty (negative marking)** for wrong answers marked by you in the Answer sheet.
6. There are four alternatives for the answers to every question. For each question for which a wrong answer has been given by the candidate, one third ($\frac{1}{3}$) of the marks assigned to that question will be deducted as penalty.
7. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will same penalty as above for that question.
8. If a question is left blank i.e., no answer is given by the candidate, there will be no penalty for that question.

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



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Directions for the next 3 questions (Q. nos. 1 to 3): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 1

The former tenant of our house, a priest, had died in the back drawing-room. Air, musty from having been long enclosed, hung in all the rooms, and the waste room behind the kitchen was littered with old useless papers. Among these I found a few paper covered books, the pages of which were curled and damp: The abbot, by Walter Scott, the Devout Communicant, and The Memoirs of Vidocq. I liked the last best because its leaves were yellow. The wild garden behind the house contained a central apple-tree and a few straggling bushes, under one of which I found the late tenant's rusty bicycle-pump. He had been a very charitable priest; in his will he had left all his money to institutions and the furniture of his house to his sister.

1. The author
 - (a) Was sad about the death of his tenant.
 - (b) Was looking for a book in the room of the old priest.
 - (c) Felt suffocated inside the house due to the musty air in the rooms.
 - (d) Saw some useless papers in the waste room behind the kitchen.
2. Consider the following statements:
 1. The tenant in the author's house was an avid reader.
 2. According to the author the priest was a philanthropic personality.
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

3. The priest
 - (a) Owned a bicycle-pump.
 - (b) Planted an apple tree.
 - (c) Had no relatives.
 - (d) Was a reserved man.

Directions for the next 3 questions (Q. nos. 4 to 6): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 2

Little Chandler's thoughts ever since lunch-time had been of his meeting with Gallaher, of Gallaher's invitation, and of the great city London where Gallaher lived. He was called Little Chandler because, though he was but slightly under the average stature, he gave one the idea of being a little man. His hands were white and small, his frame was fragile, his voice was quiet and his manners were refined. He took the greatest care of his fair silken hair and moustache, and used perfume discreetly on his handkerchief. The half-moons of his nails were perfect, and then he smiled you caught a glimpse of a row of childish white teeth.

4. Gallaher
 - (a) Had a very high social status.
 - (b) was a relative of Little Chandler's
 - (c) Liked little Chandler a lot.
 - (d) Invited Little Chandler.
5. Little Chandler
 - (a) Wondered about Gallaher's invitation.
 - (b) Had small and dark hands.
 - (c) Was a man with silken hair.
 - (d) Thought of himself as a small man.
6. Consider the following statements :
 1. Little Chandler was secretive about his usage of perfume.

2. Little Chandler had a beautiful smile. With reference to the above passage, which of the given statements is/are valid?
- (a) 1 only
 (b) 2 only
 (c) Both 1 and 2
 (d) Neither 1 nor 2
7. My son adores chocolates. He likes biscuits. But he hates apples. I told him that he can buy as many chocolates he wishes. But then he must have biscuits twice the number of chocolates and should have apples more than biscuits and chocolates together. Each chocolate cost Re 1. The cost of apple is twice the chocolate and four biscuits are worth one apple. Then which of the following can be the amount that I have spent on that evening on my son, if number of chocolates, biscuits and apples brought were all integers?
- (a) Rs. 34
 (b) Rs. 33
 (c) Rs. 8
 (d) None
8. Two identical sums of money are invested in different banks offering the same rate of interest one at SI and other at CI compounded annually. If the difference in the interest earned through SI and CI in the second and third year are Rs. 5 and Rs. 30 respectively, find the rate of interest.
- (a) 100
 (b) 50
 (c) 200
 (d) 300

Directions for questions 9 to 11:

Seven friends A, B, C, D, E, F and G studied in colleges X, Y and Z and are currently in different professions namely, Medicines, Fashion designing, Engineering, Business, Acting, Teaching and Architecture (not necessarily in the same order). At least two and not more than three friends had studied in the same college.

C is an architect and studied in college Y. E is not a businessman. Only G amongst the seven friends studied in college along with E. F is an engineer and

did not study in college Y. B is an actor and did not study in the same college as F. A did not study in college Z. Those who studied in college X are neither Fashion Designer nor teacher. None of those who studied in college Y is a teacher.

9. Which of the following groups represents the students of college Y?
- (a) C, E, G
 (b) A, C, D
 (c) A, B, C
 (d) D, B, C
10. Who is in Medicine?
- (a) G
 (b) E
 (c) D
 (d) A
11. Which of the following combination of person, college and profession is definitely correct?
- (a) E - X - Fashion Designing
 (b) F - X - Engineering
 (c) A - Y - Businessman
 (d) D - Z - Teaching
12. Statements:
 I. Some leaves are fruits.
 II. All branches are fruits.
 III. Some roots are branches
 Conclusions:
 I. Some roots are fruits.
 II. Some branches are leaves.
 III. No leaf is branch.
 IV. Some leaves are roots.
Codes:
 (a) Either II or III and I follow
 (b) Only I follows
 (c) Only either II or III follows
 (d) Only I and III follow
13. Atul is the son of Zamir. Alka is the daughter of Aman. Sheela is the wife of Aman. Mohan is the son of Sheela. How is Alka related to Mohan?
- (a) Sister
 (b) Uncle
 (c) Son
 (d) Father

Directions for questions 14 to 16:

Six lectures P, Q, R, S, T and U are to be organised in a span of seven days from Sunday to Saturday, only one lecture on each day according to the following schedule:

- (A) P should not be organised on Thursday.
 - (B) R should be organised immediately after U.
 - (C) There should be a gap of two days between S and T.
 - (D) One day there will be no lecture and Friday is not that day and just before that day S will be organised.
 - (E) Q should be organised on Tuesday and should not be followed by S.
14. On which day there will be no lecture?
- (a) Tuesday
 - (b) Saturday
 - (c) Wednesday
 - (d) Monday
15. How many lectures have been organized between R and S?
- (a) None
 - (b) Three
 - (c) Five
 - (d) Four
16. Which of the following information is not required in finding the complete sequence of organisation of lectures?
- (a) A only
 - (b) B only
 - (c) All are required
 - (d) C only

Directions for the next 3 questions (Q. nos. 17 to 21): Read the passage given below carefully and select the answers appropriate to the questions.

Passage – 3

If the down-sizing of the bureaucracy continues, by the turn of the century, there should be fewer public service officials proportionate to the population, compared to the 1970s and 1980s even though some systems will continue to expand. Ideally, public servants at all levels and in

all areas of the world would be better trained, more professional, more aware of the world at large, more ethical, more productive, more humble and more responsive to citizens. Adequate compensation would be paid (a problem in some Asian and African nations, which is encouraging corruption).

In that eventuality, administered development would co-exist alongside private sector entrepreneurship and Private Voluntary Organizations (PVOs) and Non-Governmental Organisations (NGOs) with public officials providing an enabling environment and the necessary security, infrastructure, and financial regulation (unencumbered by red tape). One downside of this scenario - the upside of which is a true 'partnership'-is that it may open up opportunities for abuse.

If the new administrative environment emphasizes public-private partnerships and market-friendly strategies, those managers who remain in strictly government service will need to reorient themselves towards a more facilitative role. This may open up new opportunities for abuse, as existing informal techniques for avoiding and expediting myriad official regulations are supplemented by new rules aimed at making it easier for entrepreneurs to do business.

17. According to the passage, what will be the after effect of down-sizing of the bureaucracy?

- 1. Private Voluntary Organizations (PVOs) and Non-Governmental Organizations (NGOs) will take over major work of the bureaucracy to reduce their burden.
- 2. Members of bureaucracy will become facilitators.
- 3. Civil Servants will become more responsive to the citizens and redressal of grievances will become easy.

Choose the correct option from the codes given below:

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

18. According to the author, something is absent in our governance, due to which corruption is not being reduced. Which of the following statements related to it are correct?

1. We do not have speedy Judicial system which has encouraged corruption.
2. There is no system by which victims of corruption could be compensated.

Choose the correct option from the codes given below:

- (a) Only 1
- (b) Only 2
- (c) Both
- (d) None

19. What is the pre-condition for the success of Public-Private Partnership and market friendly strategy?

1. Bureaucratic approach and culture will have to be changed so that accountability could be brought in.
2. Civil Servants will have to play a facilitative role so that all important facilities for development of business could be created at the business site itself.

Choose the correct answer from the codes given below:

- (a) Only 1
- (b) Only 2
- (c) Both
- (d) None

20. Consider the following statements in respect of the above passage:

1. In Asian and African nations the biggest problem is corruption and the bureaucracy is encouraging it.
2. If the number of civil servants are considerably reduced, it will be easy to make them more value minded.
3. Less number of civil servants can do more because of better training.

Choose the correct option from the codes given below:

- (a) 1 and 2
- (b) Only 2
- (c) 2 and 3
- (d) 1 and 3

21. What is the correct inference drawn from the passage?

- (a) Reduction of bureaucracy will decrease the cost of governance.
- (b) There is a need of market friendly administration.
- (c) Reducing corruption is a pre-condition for development.
- (d) None of the above

Directions for the next 3 questions (Q. nos. 22 to 26): Read the passage given below carefully and select the answers appropriate to the questions.

Passage – 4

The cost of financing industrial growth has been generally borne by the poorer masses. An industrialist barely provides 10 to 20 per cent of margin money and the rest comes from public financial institutions, banks, investing public and other promotional institutions. The main contributors of these funds are the common people. Then, land which is acquired for industrial purposes is generally obtained or requisitioned at a very low compensation. As a result, poor agriculturists, including tribals-the development refugees-have lost their sources of livelihood without access to an alternative source. Another source for causing hardships to the common man by way of our type of industrial growth can be seen in the form of decline of some traditional occupations, especially of rural industrial enterprises. Large number of traditional utensil makers, potters, iron-smiths, weavers, producers of conventional building materials, etc., have lost their occupation because of the emergence of modern industrial substitutes.

Similarly, many cottage and artisan economic activities have suffered on account of the emergence of larger industrial units. This is not only the age-old question of technological unemployment which, in any case, may be taken care of by the spread-effects produced by industrial growth. This is a question of decline of certain conventional economic activities without the emergence of alternative sources of livelihood, or the rate of labour displacements has been faster than that of labour absorption in industry.

The new substitute products are also out of the reach of the majority of people on account of their high prices, non-availability of purchasing power to the majority and these goods not being in conformity with the life-style of the poorer sections. The ecological dis-economics of such growth is too well known to need recapitulation.

22. Consider the following statements related the above passage:

1. Some of the modern industries have made traditional artisans like potters and iron-smith, etc. jobless.
2. Present system has created more unemployment than generating additional employment.
3. Consumer goods are out of reach of poor people because of high cost involved.
4. There is shortage of essential commodities which affects the poor most.
5. Land acquisition at low compensation has rendered the poor land holder jobless.

Choose the correct option from the codes given below:

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

23. According to the author, what are the important factors for declining cottage industries?

1. Entry of foreign capital especially emergence of MNCs who provide better products.
2. Manufacturing industries are providing better substitutes for goods provided earlier by cottage industries.

Choose the correct option from the codes given below:

- (a) Only 1
- (b) Only 2
- (c) Both
- (d) None

24. According to the passage, how is the high expenditure of industries are being met at present?

1. It is the common man who meets the major portion of expenditure.

2. The owner of the enterprise just arranges a seed money and nothing else.
3. Public Sector Banks finance sometimes the entire expenditure by relaxing the banking regulations.

Choose the correct option from the codes given below:

- (a) 1, 2 and 3
- (b) 2 and 3
- (c) 1 and 2
- (d) None

25. What according to the view of the author is the after effect of faulty industrialisation?

- (a) It has effected price rise causing high rate of inflation.
- (b) More transfer of agricultural land for non agricultural purpose thereby rendering the poor farmer of his livelihood.
- (c) Rapid urbanisation which has led to urban migration.
- (d) All the above.

26. What is the correct inference of the above the passage?

- (a) There is a need to revisit balanced and sustainable industrialisation.
- (b) Our new industrial policy requires a relook.
- (c) Both 'a' and 'b' are correct.
- (d) Both 'a' and 'b' are incorrect.

Directions for the next 3 questions (Q. nos. 27 to 30): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 5

The fossil remains of the first flying vertebrates, the pterosaurs, have intrigued paleontologists for more than two centuries. How such large creatures, which weighed in some cases as much as a piloted hang-glider and had wingspans from 8 to 12 meters, solved the problems of powered flight, and exactly what these creatures were-reptiles or birds-are among the questions scientists have puzzled over. Perhaps the least controversial assertion about the pterosaurs is that they were reptiles. Their skulls, pelvises, and hind feet are reptilian. The anatomy of their wings

suggests that they did not evolve into the class of birds. In pterosaurs a greatly elongated fourth finger of each forelimb supported a wing like membrane. The other fingers were short and reptilian, with sharp claws. In birds the second finger is the principal strut of the wing, which consists primarily of feathers. If the pterosaurs walked on all fours, the three short fingers may have been employed for grasping. When a pterosaur walked or remained stationary, the fourth finger, and with it the wing, could only turn upward in an extended inverted V-shape along each side of the animal's body.

The pterosaurs resembled both birds and bats in their overall structure and proportions. This is not surprising because the design of any flying vertebrate is subject to aerodynamic constraints. Both the pterosaurs and the birds have hollow bones, a feature that represents a savings in weight. In the birds, however, these bones are reinforced more massively by internal struts. Although scales typically cover reptiles, the pterosaurs probably had hairy coats. T.H. Huxley reasoned that flying vertebrates must have been warm blooded because flying implies a high rate of metabolism, which in turn implies a high internal temperature.

Huxley speculated that a coat of hair would insulate against loss of body heat and might streamline the body to reduce drag in flight. The recent discovery of a pterosaur specimen covered in long, dense, and relatively thick hair like fossil material was the first clear evidence that his reasoning was correct. Efforts to explain how the pterosaurs became airborne have led to suggestions that they launched themselves by jumping from cliffs, by dropping from trees, or even by rising into light winds from the crests of waves. Each hypothesis has its difficulties. The first wrongly assumes that the pterosaurs' hind feet resembled a bat's and could serve as hooks by which the animal could hang in preparation for flight. The second hypothesis seems unlikely because large pterosaurs could not have landed in trees without damaging their wings. The third calls for high waves to channel updrafts. The wind that made such waves however might have been too

strong for the pterosaurs to control their flight once airborne.

27. It can be inferred from the passage that scientists now generally agree that the:
- (a) Structure of the skeleton of the pterosaurs suggests a close evolutionary relationship to bats.
 - (b) Fossil remains of the pterosaurs reveal how they solved the problem of powered flight.
 - (c) Pterosaurs were reptiles.
 - (d) Pterosaurs walked on all fours.
28. The author views the idea that the pterosaurs became airborne by rising into light winds created by waves as:
- (a) revolutionary
 - (b) unlikely
 - (c) unassailable
 - (d) probable
29. According to the passage, the skeleton of a pterosaur can be distinguished from that of a bird by the:
- (a) Size of its wingspan.
 - (b) Presence of hollow spaces in its bones.
 - (c) Anatomic origin of its wing strut.
 - (d) Presence of hook like projections on its hind feet.
30. The ideas attributed to T.H. Huxley in the passage suggest that he would most likely agree with which of the following statements?
- (a) An animal's brain size has little bearing on its ability to master complex behaviours.
 - (b) An animal's appearance is often influenced by environmental requirements and physical capabilities.
 - (c) Animals within a given family group are unlikely to change their appearance dramatically over a period of time.
 - (d) The origin of flight in vertebrates was an accidental development rather than the outcome of specialization or adaptation.

Directions for the next 3 questions (Q. nos. 31 to 33): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 6

The rate at which pollen settles is dictated principally by the size and density of the grain. The slower the settlement rate, the greater the dispersal range. Numerous species reduce the density of their pollen grains through air cavities in their walls. The grains of many species quickly dehydrate after release. There is a limit, however, to the lower range of pollen size. The smaller a particle becomes, the more difficult its capture, because as airflow carrying particles sweeps past surfaces, inertia represents a principal component of the mechanism for capture. Usually considered a "primitive" feature in textbooks, wind-pollination has, in fact, reappeared independently in many plant groups relatively recently in geological time.

General textbooks still often give the impression that the anemophilous syndrome is rather uninteresting, often defining it mainly as a combination of negatives: a lack of nectar, scent, petals, etc. Wind pollination has traditionally been viewed as a reproductive process dominated by random events—the vagaries of the wind and weather. This view seems justified by the potential hazards a pollen grain is subject to when transported over long distances.

Pollen loss through happenstance is compensated for in wind-pollinated plants to a large degree by pollen-to-ovule ratios that greatly exceed those of insect-pollinated species. And unlike the sticky pollen grains of plants pollinated by insects, the pollen grains of wind-pollinated plants are smooth and dry, to avoid clumping and precipitating, and the stigma of the female is huge, sticky, and feathery, the better to catch any floating pollen grains. Similarly, wind pollinated plants typically evolved to grow in stands, such as pine forests, corn fields and grasslands. Indeed the wind vector is only useful in large, near monoculture populations. However, recent research has shown that several remarkably sophisticated mechanisms for dispersal and

capture are characteristic of wind pollinated plants. Pollen release is often tied to the recognition of unambiguous environmental clues.

The devices that operate to prevent self pollination are also sometimes extremely intricate. Many species take advantage of the physics of pollen motion by generating aerodynamic environments within the immediate vicinity of their reproductive organs. Two biological features appear to be critical in this process: the density and size of the pollen grain and the morphology of the ovulate organ.

The shape of the female organ creates patterns of airflow disturbances through which pollen grains travel. The obstructing organ causes airflow to separate around windward surfaces and creates turbulence along leeward surfaces as ambient wind speeds increase. Because the geometry of female organs is often species-specific, airflow disturbance patterns that are also species-specific can be generated.

The speed and direction of this pattern combines with the physical properties of a species' pollen to produce a highly synergistic pattern of pollen collision on windward surfaces and sedimentation on leeward surfaces of reproductive organs. The aerodynamic consequences of this synergism can significantly increase the pollen capture efficiency of an ovulate organ.

31. In general, according to the author, pollen grains that would have the greatest dispersal range would have which of the following characteristics?

1. Small size
2. Dryness
3. Low-density

Codes:

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

32. Which of the following is the tone of the passage, in the most part?

- (a) Critical

- (b) Descriptive
- (c) Laudatory
- (d) Humorous

- (a) 17 years
- (b) 19 years
- (c) 21 years
- (d) 15 years

33. Based on the information set forth in the passage, all the following mechanisms serve to reduce pollen loss in wind-pollinated plants EXCEPT:
- (a) Retention of pollen within the male organ when weather conditions are not conducive to dispersal.
 - (b) Growth of plants in large populations with few species.
 - (c) Creation of species-specific air-flow disturbance patterns by the morphology of the ovulate organ.
 - (d) Development of intricate mechanisms to prevent self-pollination.

34. A train starts from Mumbai at 10 A.M. with a speed of 25 km/hr. And another train starts from there on the same day at 3 P.M. in the same direction with a speed of 35 km/hr. Find at what time from Mumbai both the trains will meet?
- (a) 5 A.M. the next day
 - (b) 3.45 A.M. next day
 - (c) 3.30 A.M. next day
 - (d) None of the above

35. If the length of the rectangle is increased by 50% and breadth is decreased by 20%. Then what is the percentage change in the area?
- (a) 20% decrease
 - (b) 20% increase
 - (c) 30% decrease
 - (d) 30% increase

36. What should come in place of question mark in the following series?
51975 9450 2100 600 240 160 ?
- (a) 80
 - (b) 240
 - (c) 320
 - (d) 300

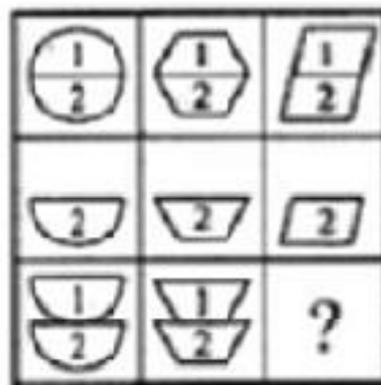
37. The average age of 80 girls was 20 years, the average age of 20 of them was 22 years, and that of another 20 was 24 years. Find the average age of remaining girls.

38. The average of 5 consecutive odd numbers is 43. What is the product of the lowest and the highest number?
- (a) 1653
 - (b) 1943
 - (c) 1833
 - (d) 1783

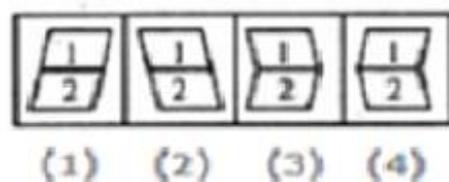
Direction for questions 39 and 40:

Select a suitable figure from the four alternatives that would complete the figure matrix:

39. Problem figure:



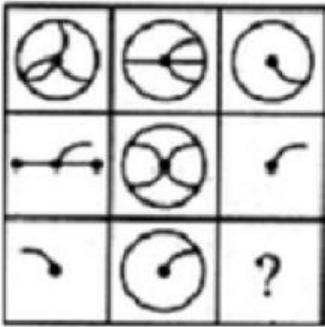
Answer figure:



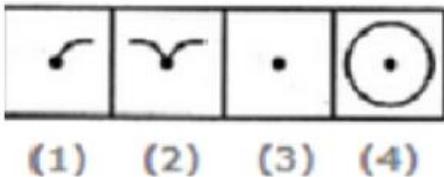
Codes:

- (a) 1
- (b) 2
- (c) 3
- (d) 4

40. Problem figure:



Answer figure:



Codes:

- (a) 1
- (b) 2
- (c) 3
- (d) 4

41. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures:



Answer Figures:



- (a) 1
- (b) 2
- (c) 3
- (d) 4

Directions for the next 3 questions (Q. nos. 42 to 44): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-7

We are all like a little liver cell that has wandered away from the place where it belongs. The little

liver cell escapes and wanders through all the tissues. When he finds the brain, he says, "This is a nice high place, there is good air here", but his neighbours say, "Get out, you are no good here," so the little cell is pushed out, and it wanders along to the lungs, but the same thing happens there. It says, "The world is very hard; nobody understands me." If it understood itself, it would know that it didn't belong there.

Finally, it wanders along through the tortuous passages of the blood vessels into the liver, and there it falls into a hole, a fatal catastrophe. The little cell says, "Damn it, the most unsuitable place, how did I get here?" But God says, "Hold it fast," and it turns out to be a liver cell! This is what you might call individuation!

42. Which of the following subjects seems to be the major concern of the passage mentioned above?

- (a) History
- (b) Physiology
- (c) Theology
- (d) Sociology

43. Which of the following statements can best describe the process of individuation, as mentioned in the passage?

- (a) To find one's true self
- (b) To become one with nature
- (c) To find the meaning of life
- (d) To surrender to God

44. Which of the following assumptions can be drawn about human nature from the given passage?

- (a) Humans have a tendency to be drawn towards apparently prestigious places, where they may not necessarily belong, so each must know his true place
- (b) Humans avoid being their true selves and find it painful to live with their reality, initially
- (c) Humans are always looking for God's help for individuation
- (d) Humans are prone to depression

Directions for the next question (Q. no. 45): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-8

The most important effect of machine production on the imaginative picture of the world is an immense increase in the sense of human power. This is only an acceleration of a process which began before the dawn of history when men diminished their fear of wild animals by the invention of weapons and their fear of starvation by the invention of agriculture. But the acceleration has been so great as to produce a radically new outlook in those who wield the powers that modern technology has created. In the old days, mountains and waterfalls were natural phenomena; now, an inconvenient mountain can be abolished and a convenient waterfall can be created.

45. In which of the following manner has the effect of machine production, most prominently impacted humans?
- (a) It has made them feel more powerful in terms of their possibilities
 - (b) It has made them feel more powerful in terms of conquering their fears
 - (c) It has made them feel more powerful in terms of conquering more land
 - (d) It has made them feel more powerful in terms of winning wars against enemies
46. The number of mangoes in three baskets is in the ratio of 3 : 4 : 5. In which the ratio the number of mangoes in the first two baskets must be increased so that the new ratio becomes 5:4:3?
- (a) 1 : 1
 - (b) 2 : 1
 - (c) 3 : 1
 - (d) None of these

Directions for the next 2 questions (Q. nos. 47 to 48): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-9

If the history of medical genetics teaches us one lesson, it is to be wary of precisely such slips between biology and culture. Humans, we now know, are largely similar in genetic terms - but with enough variation in us to represent true diversity. Or, perhaps more accurately we are culturally or biologically inclined to magnify variations, even if they are minor to the larger scheme of the genome. Tests that are explicitly designed to capture variances in abilities will likely capture variances in abilities - and these variations may well track along racial lines. But to call the score in such a test 'intelligence', especially when the score is uniquely sensitive to the configuration of the test, is to insult the very quality it sets out to measure.

47. According to the passage, which of the following is pointed out as an error by the author?
- (a) Humans are culturally and biologically inclined towards racism
 - (b) Humans design tests which are preconditioned to lead to certain results only
 - (c) Intelligence is not present in all races in equal measure
 - (d) Not being intelligent is considered a form of insult
48. According to the passage, which of the following is true about variation in genetic terms among humans?
- (a) Such variation is extremely prominent in humans
 - (b) Such variation is present in humans
 - (c) Such variation is trivial
 - (d) Such variation must never be noted as it may lead to racial outlooks

Directions for the next 2 questions (Q. nos. 49 and 50): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-10

Much of Political Theory has been informed by a conflict of the domain of Public and Private. Indeed, the right usage of these terms is itself a

conflict for many. In general we can say that the most essential feature of a Private body is its ability to retain ownership over 'Property'. Property vis-a-vis a Private subject does not arise as a consequence of the action of the Public realm on the Private individual, but as a subsequence of having arrived at a particular stage in the evolution of Public life, where it became a necessary condition for the continuation of the Public life itself, according to this approach Private Subject and Property evolved as tools to enhance the Public life, rather than a response of an individual against the actions of the Public. Counter-intuitive as it may sound to the thinkers across various political spectrums, this is the only approach that makes a grammar of rights possible around Privacy and Property, and hence a constitutional legitimization of Private Capital.

49. Which of the following is the author's primary motive, in the passage?
- (a) To advocate the use of Private Property
 - (b) To explain the origins of Private Property
 - (c) To legitimize Private Capital
 - (d) To link the rise of Private Property with the decline of Public life
50. Which of the following is correct according to the passage?
- (a) The constitutional legitimization of private capital is necessary
 - (b) The concept of private property evolved as a response to an assault by the public on the individual
 - (c) The concept of 'private' arose during the evolutionary phase of public life itself
 - (d) All rights are individual rights

Directions for the next 3 questions (Q. nos. 51 to 53): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-11

This is a classic case of confusion in terms, weeding a stubborn error; which results in dissonant communication and sharing of experience of mental health issues, hence hindering therapy. So when we refer to Depression as Repression, we make the same error of mistaking a squirrel for a

rat. It is admitted that Depression and Repression both have the same principal feature, which is their mutual relationship to accomplishing a task, objective or norm without it meaning anything existentially. In Repression, the subject holds on to performing the task with self coercion that incite pangs of conscience, as an antidote to which the subject develops social features which can only be legitimized in a homogenous in group, hence circumscribing a comfort zone, everything outside which is considered a threat to social order and subsequently to the moral peace of the subject. Depression, on the other hand, is not only a giving up of a meaningless task but also giving up the hope of finding meaning in any task at all, this leads to counter social consequences, in which a person is rejected by all forms of social orders as valueless and eventually falling into an abyss of isolation and dejection.

51. The following inferences have been made according to the passage.
- (1) Communication is of therapeutic value in mental health issues
 - (2) Sharing of experience of irritation at terrible weather will be therapeutic for the subject
- Which of the following is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 and 2
52. In which of the following cases, is it possible to create communities based on an occupational identity, according to the passage?
- (a) Depression only
 - (b) Repression only
 - (c) Both Repression and Depression
 - (d) Neither Repression or Depression
53. According to the passage the following inferences have been made.
- (1) In Repression, social order is founded on moral peace
 - (2) In Repression, moral peace is founded on social order
 - (3) In Repression, moral peace is absent without social order

(4) In Repression, moral peace is present without social order

Which among the following is the correct set of inferences?

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

Directions for the next 3 questions (Q. nos. 54 to 56): Read the passage given below carefully and select the answers appropriate to the questions.

PASSAGE-12

Max Weber sought to design a plebiscitary democracy in which charismatic legitimating, a “basically authoritarian principle” would be amenable to “an anti-authoritarian interpretation.” Weber’s insight was that the mechanism of popular recognition could be made to work in reverse. In the classical model of the charismatic leader, the fact of ruling is taken to be primary, with the recognition of his authority subsequently validating, which is to say legitimizing their state of domination. But if such recognition was granted beforehand (by casting a vote, for example), then it could be considered a source of legitimacy rather than a consequence of it.

54. Which of the following is the correct use of the term ‘amenable’, in the passage?

- (a) To be reconciled
- (b) To be persuaded and controlled
- (c) To be incorporated
- (d) To be vulnerable

55. Which of the following is the essence of Weber’s insight?

- (a) A democracy can be designed to check the authoritarian instincts of a charismatic leader
- (b) Democracy is a source of legitimacy for the authoritarian ruler
- (c) Democracies can never do away with charismatic and authoritarian rulers
- (d) Democracies always lead to authoritarianism

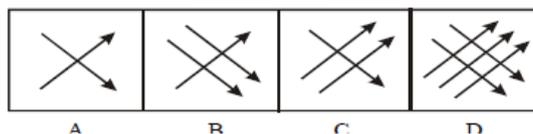
56. According to the passage, what is true about legitimacy in a plebiscitary democracy?

- (a) Plebiscitary Democracy is both the source and consequence of legitimacy
- (b) Plebiscitary Democracy is a result of the legitimacy
- (c) Plebiscitary Democracy is the source of legitimacy
- (d) Plebiscitary Democracy is a consequence of legitimacy

Direction for questions 57 to 59:

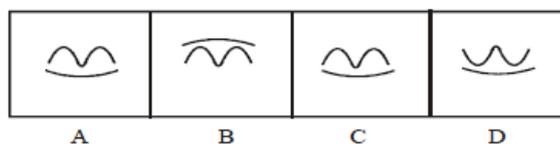
Three out of the four figures in each question belong to one class or category. Only one figure is different. Mark your answers as (a), (b), (c) or (d).

57. Problem figure:



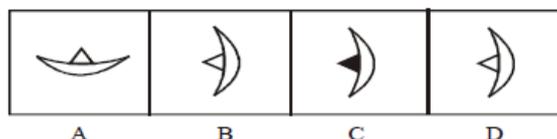
- (a) A
- (b) B
- (c) C
- (d) D

58. Problem Figure:



- (a) A
- (b) B
- (c) C
- (d) D

59. Problem Figure:



- (a) A
- (b) B
- (c) C
- (d) D

60. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

a_c_ba_ca_cb

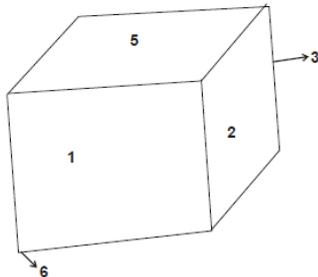
- (a) a b c c
- (b) a c b a
- (c) b c a a
- (d) b c b a

61. Choose the correct relationship depicting diagram.

Smokers, Lawyers, Non-smokers

- (a) 
- (b) 
- (c) 
- (d) 

62. If the following cube is turned twice to the right () then what will the hidden numbers be?



Codes:

- (a) 1, 2, 6
 - (b) 2, 3, 5
 - (c) 3, 4, 6
 - (d) 1, 2, 5
63. Read the statements below and then choose the best answer to the question from the list of lettered choices that follows.

The new Dance Tunes CD has proved to be very popular. It has sold 80,000 copies over the last year. How are these two sentences related?

- (a) The first sentence explains the meaning of the second.
- (b) The second sentence provides evidence of the first.

- (c) The second sentence explains why the CD is popular.
- (d) The first sentence contradicts the second.

Directions for the next 3 questions (Q. nos. 64 to 66): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 13

The Dutch cartographer, Abraham Ortelius, first suggested in 1596 that the Americas were "torn away from Europe and Africa"; but there was little evidence to support his hypothesis. In England in 1620, Francis Bacon also noted that the similarity of many of the edges of various continents suggested that they once might have fit together like puzzle pieces. Evidence mounted gradually over the course of the next few centuries that continents were once joined: fossils of similar plant and animal species found on widely separated continents, long and linear zones of deformed rocks occurring at the edges of continents, and certain geologic and glacial features shared across different continents.

German meteorologist Alfred Wegener proposed in 1912 that the continents were all joined in a common landmass, he named Pangaea, which began breaking up approximately 200 million years ago. In fact, precursors of this theory existed in maps depicting the joined continents, which had, it may be noted, been drawn almost a century earlier, but it was Wegener who was the first to combine the accumulating evidence for continental drift into a common framework-to weave seemingly dissimilar, unrelated facts into a theory. His proposal was not well received, however; it remained unclear how the continents actually moved, and science had not developed accurate radiometry to date the fossils or the linear belts of rock at the edges of continents.

Geologist Arthur Holmes proposed in 1929 that the hot and melted rocks that made up the mantle of the Earth, the layer just beneath the Earth's thin crust, flowed upward, downward, and laterally, pushing apart regions of ocean floor or allowing nearby regions to collide and overrun each other; but again little evidence existed to support the

idea. In the following decades, magnetic studies of the ocean floor, showing that the orientation of rocks had changed over the course of recent geologic time, helped confirm Holmes' ideas that ocean plates were the cause of the rifts and valleys on the ocean floor, as well as of the larger movement of landmasses.

By the early-1960s, a wealth of new evidence (much of it from studies of the ocean floor) formed a picture of what caused continents to drift. The sedimentary rocks of an oceanic origin were different from predial samples previously found, and geologists reasoned from this that continents were not simply upwellings of ocean floor.

Continents are built of blocks of crust varying in age, size, rock composition, structure, and fossil assemblage (fauna and flora), with relatively stable, older interiors (the oldest rocks of which are more than 3 billion years old); the sea floors are significantly younger. The theory of mantle convection currents and sea-floor spreading became the prevailing explanation of how large plates of the Earth's crust continually move upward, downward, and to the side, allowing the separation of and collision of landmasses well above the moving ocean plates.

In 1994, however, Seiya Uyeda concluded that subduction (the gravity-controlled sinking of a cold, denser oceanic slab into the subduction zone) plays a more fundamental role than seafloor spreading in shaping the earth's surface features" and "running the plate tectonic machinery." Current analysis of seismic waves and other geophysical studies continue to vastly expand our understanding of the Earth's interior and the components of plate tectonics theory.

64. The author most likely mentions the work of the Dutch cartographer Abraham Ortelius in order to:

- (a) Show that the idea of plate tectonics is not new, although most evidence supporting it dates to the 20th century.
- (b) Compare the state of Dutch and English cartography in the 16th century.

- (c) Draw a strong contrast between Ortelius' pioneering views and those of Wegener and Holmes.
- (d) Show that cartography was sufficiently advanced in the 16th century that predictions could be made about continental drift.

65. According to the author, the primary significance of the discovery that molten uprisings continually reshape the ocean floor is that:

- (a) These uprisings provide a mechanism for the continental drift that has clearly occurred.
- (b) It shows how sensitive the Earth's crust is to geologic activity taking place beneath it.
- (c) Ocean floor movement lends strong support to the idea that the supercontinent Pangea once existed.
- (d) The movement of deep ocean plates offers an explanation for magnetic and seismic measurements that have perplexed scientists for decades.

66. What is the primary concern of the author in writing the passage?

- (a) To propose that modern maps are inaccurate compared to ancient maps.
- (b) To discuss the gradual development and acceptance of the theory of plate tectonics.
- (c) To criticise the concept of Pangaea as proposed by some scientists.
- (d) To argue that all the continents will once again join together and become one.

Directions for the next 3 questions (Q. nos. 67 to 70): Read the passage given below carefully and select the answers appropriate to the questions.

Passage – 14

The National Bank for Agriculture and Rural Development was carved out from the Reserve Bank of India by an Act of the Parliament and continues to be a unique institution for bringing about Integrated Rural Development. It is an apex development financial institution entrusted with agricultural credit responsibilities, institutional development and also supervisory activities over

regional rural banks and cooperative credit institutions. Owned jointly by the Reserve Bank of India and the Central Government, its mission is to promote sustainable and equitable agriculture and rural prosperity through effective credit support, related services, institution development and other innovative initiatives. It is the only institution in India which raises funds from urban areas for deployment only in rural areas. It has a staff strength of 3000 officers and 1800 other staff with financial and technical specialists, agricultural experts and highly qualified officers stationed in 400 districts and in all State Capitals. It also provides training facilities for Cooperatives, RRBs and Commercial Banks at six training institutions.

True to its mandate, NABARD has been providing financial assistance, by way of refinance, to Commercial Banks, Cooperative Banks & RRBs, for supporting production and investment activities in agriculture/ allied activities as also activities under the rural non - farm sector. Refinance has accordingly been provided to RFIs by way of supplementary finance to enable them to finance agricultural credit in larger volumes and to large number of farmers, to provide resources to banks at relatively cheaper rates compared to their own cost of raising resources and to channelize the flow of rural credit in the desired directions and sectors.

67. According to the passage, what are the salient features of National Bank for Agricultural and Rural Development?

1. It channelises its funds through various banks for promotion of agro industries and agro business.
2. The Union Parliament created NABARD for financing Integrated Rural Development Programme (IRDP).
3. It has administrative control over rural banks and cooperative financial institutions.

Choose the correct option from the codes given below:

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

68. Consider the following assumption regarding the above passage:

1. NABARD is a unique institution in the sense that it generates its resources from cities for the rural development programme.
2. It has its presence in all districts and in majority of the states.
3. NABARD is a central government undertaking and has been carved out of Reserve Bank of India.

Choose the correct option from the codes given below:

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

69. Consider the following statements that establishes a link between NABARD and other banks:

1. NABARD strengthens the capacity building programmes of banks.
2. NABARD provides assistance to banks at comparatively lower rate, than it generates its own resources and in the process pays higher interest.

Choose the correct option from the codes given below:

- (a) Only 1
- (b) Only 2
- (c) None
- (d) Both

70. According to the passage, what is the significance of NABARD being an apex developmental financial institution?

- (a) It has control over financial activities of various banks throughout the country.
- (b) It supervises the activities of RRB, Cooperative banks and is responsible for agricultural loans.
- (c) regulates the cash flow between itself and other banks through refinancing.
- (d) Both 'b' and 'c' above.

71. If 'LEVEL' is written as 'MFWFM', how can we write 'VELEL'?

- (a) WFMFM
- (b) FMFMW
- (c) WFMFM

(d) WMMFW

72. Which one of the four boxes given below is created by folding the given key design in the question figure?

Question Figure



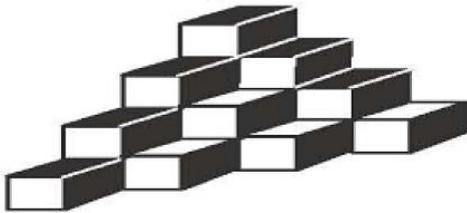
Answer Figures



(A) (B) (C) (D)

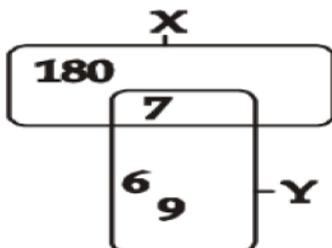
- (a) A
(b) B
(c) C
(d) D

73. How many cubes are there in the group?



- (a) 10
(b) 16
(c) 18
(d) 20

74. Which elements are not a part of either set X or Y?



- (a) All the elements
(b) 180
(c) 7, 6 and 9
(d) None of the elements

Directions for the next 3 questions (Q. nos. 75 to 77): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 15

Five times as many workers may be needed to construct a power plant as to operate it. The numbers may be even more disproportionate for a major pipeline or dam. When the construction ends, a substantial reduction in population is virtually guaranteed. Hence, there may be no justification for providing an infrastructure necessary to maintain adequate levels of service during the construction period.

Money necessary to build water systems, schools and roads and to fund salaries and maintenance costs is mismatched by traditional taxing programs. The construction project is usually not subject to local property tax until it nears completion, which may be five years after the impact has occurred. Alternative sources of tax revenue cannot begin to cover the cost of providing the necessary services. Even if some governments have money, they may not be the right governments. Some entities may suffer the impact of development without being able to tax it. For example, a development may be located in the county just outside the limits of an incorporated city. The county will be entitled to tax the property while the city may receive most of the project population and demand for services.

The 1960s and 1970s witnessed a new boomtown era in the West. The typical contemporary boomtown is fuelled by a quest for energy in the form of a fossil-fuelled electric generating plant, a hydroelectric dam or a new mine. The energy project is typically located near a small community or is forced to start a community from scratch.

Often, the boomtown is poorly planned and underfinanced. Long-time residents find their community changed for the worse and newcomers find the town an undesirable place to live. The boomtown is characterized by inadequate public services, undesirable labour conditions, confusion in community structure, and deterioration of the

quality of life arising from rapid population growth due to a major economic stimulus. Accelerated growth is the most distinguishing characteristic of a boomtown.

Studies have shown that large-scale development in sparsely populated areas causes major social problems. Housing, street and water systems construction, school development and police and fire protection lag far behind population growth.

Rent and property tax increases join with a rise in the general cost of living to harm persons on fixed incomes. Education in the community may suffer. One result of boomtown living is higher incidence of divorce, depression, alcoholism and attempted suicide. Until recently, planners have ignored or understated such problems. While the boomtown promotes an "us against them" mentality - the old timers versus persons brought to the community by the boom - the fact remains that all parties suffer. Newcomers may blame old timers for a lack of support just as old-timers may blame them for a deterioration of community life. Consequences of the boomtown also harm the project developer. The undesirable community results in poor worker productivity and frequent worker turnover, factors that delay construction and push projects over budget. Problems of rapid growth in some boomtowns are compounded by the fact that most of the population disappears with the completion of project construction.

75. Which of the following are the possible ways in which a boomtown is affected by poor planning and under-financing?

1. Unsatisfactory labour conditions.
2. Inadequate police protection.
3. Poor community relations.

Codes:

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

76. The passage suggests that there is often a lack of services associated with boomtowns. The author claims that all of the following are possible causal factors for the lack of services associated with a boomtown EXCEPT:

- (a) The expected loss of a substantial number of residents after the completion of a project.
- (b) Lack of support from long-time residents.
- (c) The location of an energy project just outside the limits of an incorporated city.
- (d) The time lag between the beginning of project construction and the onset of tax payments for it.

77. The tone of the author's discussion of traditional taxing programs in regard to boomtowns can best be described as:

- (a) Outraged
- (b) Concerned
- (c) Disbelieving
- (d) Complacent

Directions for the next 3 questions (Q. nos. 78 to 80): Read the passage given below carefully and select the answers appropriate to the questions.

Passage 16

Thunderstorms generally develop in the late afternoon or evening hours, when moist, daytime air rises into the upper atmosphere, as temperature get cool and become denser, night-time air slides in underneath. Clouds of water droplets, generally super-cooled (droplets whose temperature has fallen below 0 degrees Celsius but have not yet frozen), condense around dust particles in the air until a critical density is reached, at which point it begins to rain. Cloud-to-ground lightning occurs when a discrepancy in electric charge develops between a cloud and the earth. For reasons that are not widely agreed upon, a charge begins to build up in this mixed water and ice region. When this discrepancy reaches a certain "breakdown potential," the surge of electric charge known as lightning moves downward between the negative and positive charge centres in 50-yard sections called step leaders. Eventually, it encounters something on the ground that is a good connection, and, with the circuit complete, the charge is lowered from cloud to ground. This entire event usually takes less than half a second. It is by preventing the requisite charge polarization that scientists hope someday to discourage the creation of cloud-to-

ground lightning, thereby making storms safer and easier to 'weather'.

Many authorities adhere to a hypothesis for cloud electrification theory which emphasizes that the charging process occurs when a super-cooled droplet of water collides with an ice particle of precipitation size (a hailstone)-the precipitation model. At this moment a large portion of the droplet freezes-resulting in a negative charge on the forming hailstone- while a smaller portion, still lingering in its super-cooled state, dissociates itself taking on a positive charge. The relatively heavy hailstone, responding to gravity, then begins to fall, while the extremely light super-cooled droplet is carried by updrafts to higher regions of the cloud.

Assuming the veracity of this account of charge separation, scientists guess that they would be able to discourage polarization by reducing the quantity of super-cooled water in a cloud. To this purpose they have conducted preliminary seeding experiments, in which they have attempted to initiate the freezing of excess water by dropping large quantities of dry ice and silver iodide into potential thunderclouds, the results of which are, however, as yet inconclusive. A more recent convection model of the polarization process is offered by Bernard Vonnegut and Charles B.

Moore, who contend that the primary cause of electrical charge formation in clouds is the capture of ionized (electrically charged) gas molecules by water droplets. The ions, so the theory goes, are absorbed by the droplets and transported by updrafts and downdrafts to various portions of the cloud. Vonnegut and Moore suggest that, in order to combat the effects of this transport of ions, it would be necessary to modify the properties of ions beneath accumulating clouds.

In support of this explanation of cloud polarization they conducted a series of "space charge" experiments. Suspending a high-voltage wire above nine miles of Illinois countryside, Vonnegut and Moore released large quantities of ions into the atmosphere below, forming clouds. By means of airplanes specially equipped for electrical measurements, they determined that the ions

were being distributed to differing regions of the clouds.

78. Which of the following options best summarizes the author's main point in the passage?

- (a) Several recent breakthroughs have increased our understanding of the causes of lightning.
- (b) Charge polarization in clouds can result both from the freezing of super-cooled droplets and from the modification of ion properties.
- (c) The standard explanation of the causes of lightning is inaccurate and should be modified.
- (d) Scientists are not yet agreed on either the causes of cloud-to-ground lightning or the methods of controlling it.

79. What does the term "breakdown potential" as used in the passage refers to?

- (a) A charge polarity sufficient to cause lightning.
- (b) The intensity of the lightning bolt.
- (c) The distance between the negatively charged earth and the positively charged cloud.
- (d) The duration of the lightning event.

80. According to the passage, scientists agree that lightning can occur when:

- (a) Ions are transported by updrafts to higher regions of a thundercloud.
- (b) Super-cooled droplets collide with hailstones in clouds.
- (c) A difference in charge exists between a cloud and the ground.
- (d) Dry ice is released into a potential thunder cloud.