

2010

Fill in the following information:

Name: _____

Roll No. _____

Centre: _____

SECTION-I: GENERAL PROFICIENCY TEST

Time: 1 ½ Hour

INSTRUCTIONS:

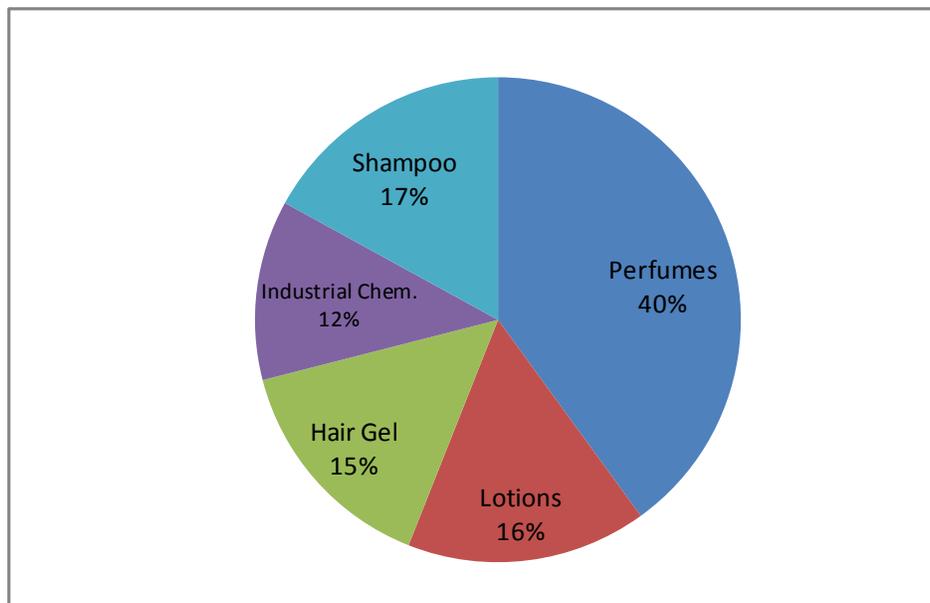
1. This section consists of 120 questions and all questions carry equal marks.
2. A separate Answer-Sheet has been provided which is contained within the Test-Booklet itself.
3. The Test-Booklet is sealed and do not break open the seal until asked to do so. You will be told when to start this section.
4. FILL UP THE NECESSARY INFORMATION ON THE ANSWER-SHEET BEFORE STARTING THE TEST.
5. THE ANSWERS ARE TO BE GIVEN IN THE ANSWER-SHEET ONLY AND NOT IN THE BOOKLET. BOTH SIDES OF THE ANSWER-SHEET ARE TO BE USED.
6. DO NOT USE ANY CALCULATING DEVICE LIKE SLIDE RULE, CALCULATOR OR MATHEMATICAL TABLES, ETC.
7. After each question, there are a number of given alternatives. Find the correct answer and mark it with a cross (x) in the appropriate box in the Answer-Sheet.
8. THERE ARE NEGATIVE MARKS FOR WRONG ANSWERS.
9. The Booklet will be collected along with the Answer-Sheet after this Section is over
10. ANSWERS, I.E., CROSS MARKS MUST BE IN INK. YOU MAY USE BALL PEN.

Refer to following table and answer questions 1 to 8 based on it.
 Production of various crops during various years
 (in million tones)

	2005	2006	2007	2008	2009
Rice	1125	1752	1344	1404	1640
Maize	650	820	766	958	874
Wheat	780	795	928	750	978
Pulse	1014	1162	978	1252	1360
Cotton	1777	1746	1664	1636	1542
Bajra	986	827	888	850	746

- By what percentage is the average production of wheat less than the average production of rice:
 a. 62.3 b. 71.7 c. 41.8 d. 38.6
- By what percentage has the production of wheat increased in 2007 over the previous year:
 a. 14.3 b. 16.7 c. 2 d. 15.8
- What is the average percentage increase in the production of rice:
 a. 7.6 b. 30.5 c. 6.1 d. 15.3
- In which year the percentage increase in the production of pulse was the greatest over the previous year:
 a. 2007 b. 2006 c. 2008 d. 2009
- Which year did the total production see the maximum percentage increase over the previous year:
 a. 2007 b. 2006 c. 2008 d. 2009
- Which year did bajra experience the maximum decrease in its production over the previous year and what was the percentage:
 a. 2008; 17.2% b. 2008; 3.2% c. 2009; 13.1% d. 2006; 16.1%
- By what percentage is the average production of maize less than the average production of all items taken together:
 a. 87.8 b. 92.2 c. 46.8 d. 171.5
- Which year did the total production has the second largest percentage increase over the previous year:
 a. 2007 b. 2008 c. 2006 d. 2009

Study the following diagram and answer questions 9 to 13.



Consumption of Industrial Alcohol (in percent)

9. If the consumption of industrial alcohol for industrial chemicals was 1440, then what would be the consumption for shampoo:
- a. 2030 b. 2040 c. 2140 d. 2050
10. The ratio of the degrees of the sectors of perfumes and hair gel is :
- a. 3 : 5 b. 5 : 8 c. 3 : 8 d. 8 : 3
11. If the central angle of the lotions sector is decreased by 3.6° , it would be equal to the unchanged sector of
- a. Hair gel
b. Industrial Chemical
c. Shampoo
d. None of these
12. If the total consumption is 408000, how much is consumed by industrial chemicals and lotions together:
- a. 114040 b. 104244 c. 124240 d. 114240
13. Choose the statement/statements which is/are false :

- I. Industrial chemicals consumes three-tenths of the consumption of perfumes.
- II. One percent more of industrial alcohol is consumed by hair gel as compared to lotions.
- III. Industrial chemicals consumes the least as compared to the other sectors.
- IV. More than 50% consumption is by shampoo, industrial chemicals and lotions

- a. I and II b. II only c. II and IV d. I, II and III

To answer question 14 to 18 refer to following information:

From among the five doctors 1, 2, 3, 4 and 5; four engineers G, H, K, L and six teachers M, N, O, P, Q, R, some teams are to be selected. Of these 1, 2, G, H, O, P, Q are females and the rest are males. The formation of teams is subject to the following conditions:

Wherever there is a male doctor, there will be no female teacher

Wherever there is a male engineer, there will be no female doctor

There shall not be more than two male teachers in any team

- 14. If the team consists of two doctors, two female teachers and two engineers, all the following teams are possible except :
 - a. 12KLPQ b. 12GHPQ c. 12GHOQ d. OPGH12
- 15. If the team consists of two doctors, three female teachers and two engineers, the members of the team are :
 - a. 34OPQGH b. 12OPQGH c. 34KLOPQ d. 45GHOPQ
- 16. If the team consists of three doctors, two male engineers and two teachers, the members of the team could be :
 - a. 345KLMN b. 123KLMR c.. 345KLPR d.. 12HMRPQ
- 17. If the team consists of two doctors, one engineer and four teachers, all the following teams are possible except :
 - a. 12GMNOP b. 12KNRPQ c. 12HMOPQ d. 12HMRPQ
- 18. If the team consists of two doctors, two engineers and two teachers, all the following teams are possible except :
 - a. 35KLNLR b. 12GHMN c.. 34KLOP d. 12GHOP

To answer questions 19 to 23 refer to following information:

- (i) Parminder, Iqbal, Ramesh, Shubham, Tilak and Usha are six students procuring their Master's degree in six different subjects – Bio-technology, English, History, Punjabi, Physics, Statistics and Mathematics.
- (ii) Two of them stay in hostel-A, two stay in hostel-B and the remaining two stay at home.
- (iii) Usha and Shubham stay in hostel-A. Tilak stays in hostel-B and Iqbal stays at home.
- (iv) Ramesh does not stay in Hostel-B and studies Punjabi
- (v) Tilak studies Mathematics and Shubham studies Physics.
- (vi) The students studying Statistics and History do not stay in hostel-B.

19. Which of following pairs of students stay one each at hostel-A and at home ?

- a. Usha & Shubham
- b. Shubham & Ramesh
- c. Iqbal & Ramesh
- d. None of these

20. Who studies Bio-technology?

- a. Shubham
- b. Tilak
- c. Usha
- d. None of these

21. Which of the following pairs of students stay at home ?

- a. Parminder & Iqbal
- b. Iqbal & Ramesh
- c. Ramesh & Shubham
- d. None of these

22. Which of the following combinations of subject and place of stay is not correct ?

- a. Physics – Hostel A
- b. Bio-technology – Hostel A
- c. Punjabi - Home
- d. All are correct

23. Which subject does Iqbal study ?

- a. History
- b. Statistics
- c. History or Statistics
- d. None of these

Read the following information and answer questions 24 to 27 based on it.

- There are two married couples in the family of six people (U, V, W,, X, Y, Z)
- W is wife of V and mother of Z
- X is grandmother of U and mother of V
- Z is grand-daughter of Y

24. What is W to U?

- a. Mother
- b. Grandmother
- c. Daughter
- d. None of these

25. How many male members are there in the family?

- a. 2
- b. 3
- c. 4
- d. Cannot be determined

26. Which of the following is true?

- a. U is sister of Z b. U is brother of Z c. V has two daughters d. None of these

27. Who among the following is one of the couples?
a. W and X b. Y and V c. X and Y d. None of these

Study the following three passages and answer the questions given at the end of the passages. The answers should be based either on the author's views or inferences drawn from the given material.

PASSAGE – A

The work which Gandhiji had taken up was not only the achievement of political freedom but also the establishment of a social order based on truth and non-violence, unity and peace, equality and universal brotherhood and maximum freedom for all. This unfinished part of his experiment was perhaps even more difficult to achieve than the achievement of political freedom. In the political struggle, the fight was against a foreign power and all one could do was either join it or wish it success and give it his moral support. In establishing the social order of this pattern, there was a likely possibility of a conflict arising between groups and classes of our own people. Experience shows that man values his possessions even more than his life because in the former he sees the means for perpetuation and survival of his descendants even after his body is reduced to ashes. A new order cannot be established without radically changing the mind and attitude of men towards property and, at some stage or the other, the 'haves' have to yield place to the 'have-nots'. We have seen in our time, attempts to achieve a kind of egalitarian society and the picture of it after it was achieved. But this was done, by and large, through the use of physical force.

In the ultimate analysis, it is difficult, if not impossible, to say that the instinct to possess has been rooted out or that it will not reappear in an even worse form under a different guise. It may even be that, like a gas kept confined within containers under great pressure, or water held by a big dam, once a barrier breaks, the reaction will one day sweep back with a violence equal in extent and intensity to what was used to establish and maintain the outward egalitarian form. This enforced egalitarianism contains, in its bosom, the seed of its own destruction.

The root cause of class conflict is possessiveness or the acquisitive instinct. So long as the ideal that is to be achieved is one of securing the maximum material satisfaction, possessiveness is neither suppressed nor eliminated but grows on what it feeds, Nor does it cease to be such – it is possessiveness, still, whether it is confined to only a few or is shared by many.

If egalitarianism is to endure, it has to be based not on the possession of the maximum material goods by few or by all but on voluntary, enlightened renunciation of those goods which cannot be shared by others or can be enjoyed only at the expense of others. This calls for substitution of spiritual values for purely material ones. The paradise of material satisfaction, that is sometimes equated with progress these days neither spells peace nor progress. Mahatma Gandhi has shown us how the acquisitive instinct inherent in man could be transmuted by the adoption of the ideal of trusteeship by those who 'have' for the benefit of all those who 'have not', so that, instead of leading to exploitation and

conflict, it would become a means and incentive for the amelioration and progress of society, respectively.

PASSAGE – B

Academics, activists and the average person-in-the-street seem to have joined together in an outcry against the role given to women in panchayats. Their participation is increasingly being described as rule by proxy. According to the dictionary, this means one person authorising another to act on his/her behalf. The term bears insinuations of total passivity on the part of women representatives. Needless to say this is a sweeping statement about the women who have become elected representatives under the 73rd Amendment and various State Acts. The number of those serving as members and chairpersons of rural councils at various levels is about one million.

Both in the media and elsewhere, there is a backlash against women's participation as elected representatives in the panchayat system. The allegation of proxy rule follows from the perception that it is the men who are ruling through their wives who are mere mouthpieces. It is true that women do get advice and help from their husbands.. But does this in itself constitute proxy rule? What about the kitchen cabinets of powerful politicians? What about the close kinship and other networks that leaders here and abroad draw upon for support? Even men politicians function in the context of patrilineal system where the heads of households and clans exercise significant authority over members. Party policies are another example of their responses as representatives being influenced by others. Why is it that no one calls them proxy representatives on these grounds?

Another means of disparaging newly elected women representatives is through mischievous allegations regarding sexual conduct. As we do our inter-state study of women and the panchayat system for the Ministry of Rural Development, we are confronted in case after case with insinuations of women representatives being of loose character. It is alleged, but rarely with evidence, that they have an improper relationship with some local official or a friend. It is remarkable here, that male political representatives can have multiple wives, keep mistresses and get away with it. But if a woman elected to some position happens to be articulate and socially mobile and goes about alone, her morality becomes instantly (even/deliberately) suspect. On the other hand, if she behaves more acceptably by having her husband accompany her, he is seen as the pati-member or pati-pradhan who has the real power. Clearly, women are caught in a double bind, between the opposition to their independence and the opposite charge of subservience.

None of the many critics seem to notice that it might be the woman representative who is actually helping her husband : that he might be receiving support and benefit because of her political activity. Further we have evidence of minor but significant shifts in the sexual division of labour, and also of enhancement of family prestige through the involvement of women. These are near invisible yet, but their eventual effect on patriarchal society will be drastic.

PASSAGE – C

The greatest enemy of mankind, as people have discovered, is not science, but war. Science merely reflects the prevailing social forces. It is found that, when there is peace, science is constructive; when there is war, science is perverted to destructive ends. The weapons which science gives us do not necessarily cause war; they make war increasingly terrible. Till now, it has brought us to the doorstep of doom. Our main problem, therefore, is not to curb science, but to stop war – to substitute law for force, and international government for anarchy in the relations of one nation with another. That is a job in which everybody must participate, including the scientists. But the bombing of Hiroshima suddenly woke us up to the fact that we have very little time. The hour is late and our work has scarcely begun. Now we are face to face with an urgent question – “Can education and tolerance, understanding and creative intelligence run fast enough to keep us abreast with our own mounting capacity to destroy?” That is the question which we shall have to answer one way or the other in this generation. Science must help us in arriving at the answer, but the main decision lies within ourselves.

PASSAGE – A

28. According to the passage, egalitarianism will not survive if
- it is based on voluntary renunciation
 - it is achieved by resorting to physical force
 - underprivileged people are not involved in its establishment
 - people’s outlook towards it is not radically changed
29. According to the passage, why does man value his possessions more than his life?
- He has an inherent desire to share his possessions with others
 - He is endowed with the possessive instinct
 - Only his possessions help him earn love and respect from his descendants
 - Through his possessions he can preserve his name even after his death
30. According to the passage, which was the unfinished part of Gandhiji’s experiment?
- Educating people to avoid class conflict
 - Achieving total political freedom for the country
 - Establishing an egalitarian society
 - Radically changing the mind and attitude of men towards truth and non-violence
31. Which of the following statements is ‘not true’ in the context of the passage?
- True egalitarianism can be achieved by giving up one’s possessions under compulsion
 - Man values his life more than his possessions
 - Possessive instinct is a natural part of human beings

- d. In the political struggle, the fight was against the alien rule
32. According to the passage, true egalitarianism will last if
- it is thrust upon people
 - it is based on truth and non-violence
 - people inculcate spiritual values along with material values
 - 'haves' and 'have-nots' live together peacefully
33. According to the passage, people ultimately overturn the form of a social order
- which is based on coercion and oppression
 - which does not satisfy their basic needs
 - which is based upon conciliation and rapprochement
 - which is not congenial to the spiritual values of the people
34. According to the passage, the root cause of class conflict is
- the paradise of material satisfaction
 - dominant inherent acquisitive instinct in man
 - exploitation of the 'have-nots' by the 'haves'
 - a social order where the unprivileged are not a part of the establishment
35. Which of the following statements is 'not true' in the context of the passage?
- A new order can be established by radically changing the outlook of people towards it
 - Adoption of the ideal of trusteeship can minimize possessive instinct
 - Enforced egalitarianism can be the cause of its own destruction
 - Idea of a new order is to secure maximum material satisfaction
36. According to the passage, which of the following statements is 'true'?
- A social order based on truth and non-violence alone can help the achievement of political freedom
 - In establishing the social order of Gandhiji's pattern, the possibility of a conflict between different classes of society hardly exists
 - It is difficult to change the mind and attitude of men towards property
 - In an egalitarian society, material satisfaction can be enjoyed only at the expense of others
37. According to the passage, what does "adoption of the ideal of trusteeship" mean?
- Equating peace and progress with material satisfaction
 - Adoption of the ideal by the 'haves' for the benefit of the society
 - Voluntary, enlightened renunciation of the possessive instinct by the privileged class

- d. Substitution of spiritual values by material ones by those who live in the paradise of material satisfaction

PASSAGE – B

- 38. The central point of information given in first paragraph of the passage is that women's participation in panchayats
 - a. has reached impressively high levels
 - b. shows that 'proxy' rule can be implemented successfully in India
 - c. is being widely criticized today
 - d. carries insinuations of total passivity on the part of the electorate
- 39. Describing women's role in governance as 'rule by proxy' amounts to saying that
 - a. rural elections are rigged
 - b. rural voters are still being manipulated through vote banks
 - c. the male dominated style of politics is being replaced by the women's style
 - d. husbands, rather than the women representatives have the real power
- 40. In second paragraph, the writer discusses the idea of proxy governance and points out that
 - a. all elected representatives function as proxies for the people they represent and whose influence they value
 - b. the influence of party policies, pressures from clan or caste groups which operates on individuals in real politics is no different from that of husbands on women representatives
 - c. it is unfair to call the effective functioning of a group of women representatives "a kitchen cabinet", since men in politics also form pressure groups and cliques
 - d. the dictionary meaning of proxy does not cover the wide range of indirect controls that actually exists in practical politics
- 41. In third paragraph the main item of information presented is that
 - a. women in rural politics are widely accused of sexual misconduct
 - b. the breakdown of traditional values has led to immorality among both men and women
 - c. the negative side of women entering politics is that men can be accused of having multiple wives or mistresses
 - d. articulate and socially mobile urban women are still suspect in rural contexts
- 42. The position of the author regarding the popular attitude towards women in rural politics is

- a. sympathetic
 - b. critical
 - c. a balanced consensus position
 - d. based on a technical interpretation of the legislation
43. The author feels that the role to be played by elected women representatives is such that
- a. most positions are being cornered by urbanized and socially mobile women
 - b. intra-family tensions are more or less unavoidable
 - c. those who can manipulate the proxy system can get away with immorality
 - d. a certain degree of independence and articulateness is needed to do the job well
44. What observers of women in rural politics do not pay sufficient attention to, is
- a. the increasing rate of trickling down of development funds to intended recipients
 - b. the need for more vigilant participation by women to prevent a few from misusing their position to favour their husbands
 - c. the implications for social structure in the subtle changes in the sexual division of labour
 - d. the possibility that husbands in many cases are actually benefiting from this involvement of wives
45. The “double bind” referred to in third paragraph arises from the
- a. need for women to balance the time and energy needed for public and private affairs
 - b. the conflict between the family role and political role when husband and wife are both elected members
 - c. criticism that is directed against their independence and against their acting conventionally
 - d. the idealistic desire to be honest and pressure to join the existing web of corruption in politics
46. Women’s political activity leads to changes in the division of labour, in family prestige, etc. These effects
- a. are only subtle and short term negative features which will disappear soon
 - b. though small, are deep rooted and will have a significant impact on society
 - c. are still only subtle tendencies that might not progress for a very long time
 - d. are very likely to lead to another round of backlash to protect the position of women
47. The word “insinuation”, in the context of the passage, means

- a. implication
- b. logical conclusion
- c. pre-condition
- d. likely-consequence

PASSAGE – C

48. According to the writer, the real enemy of mankind is not science but war, because
- a. science merely invents the weapons with which war is fought
 - b. science during wars becomes destructive
 - c. the weapons that science invents necessarily lead to war
 - d. the weapons invented by science do not cause war, though these make it more destructive
49. War can be stopped if
- a. science is not allowed to lead us to utter destruction
 - b. we replace force and lawlessness by law and international government
 - c. science is restricted to be utilized only during war time
 - d. weapons invented by science are not used to launch a war.
50. According to the writer, the main problem we are faced with is to
- a. stop science from reflecting social forces
 - b. stop scientific activities everywhere
 - c. abolish war
 - d. prevent scientists from participating in destructive activities
51. Our mounting sagacity to destroy can be kept under control by
- a. encouraging social forces
 - b. education and broad-mindedness
 - c. insight and constructive thinking
 - d. both b and c (as above) together
52. The expression 'bring to the doorstep of doom' means
- a. carry close to death and destruction
 - b. lead to the threshold of a new destiny
 - c. indulge in a ruinous activity
 - d. introduction to an unpredictable destiny

53. Which one of the following statements is not implied in the passage?

- a. People needlessly blame science for war
- b. Science is misused for destructive purposes
- c. Neither science nor the weapons it invents add to the horrors of war
- d. The role of science in ensuring world peace is subsidiary to that of man

SAMPLE

54. Which of the following is opposite in meaning to the word 'anarchy' in the middle of the passage?
- a. Law and order
 - b. Political dominance
 - c. Economic prosperity
 - d. Communal harmony
55. The phrase 'our work has scarcely begun' implies that our work
- a. has not yet begun
 - b. has only just begun
 - c. has been half-way through
 - d. has begun, but not yet completed
56. The expression 'keep us abreast' in the passage means
- a. keep at a distance
 - b. keep side by side
 - c. hold out a challenge
 - d. prevent from escaping
57. Which of the following would be the most suitable title for the passage:
- a. science and social forces
 - b. science and the horrors of war
 - c. science and world peace
 - d. science and the new generation

In questions 58 to 67 four parts of each sentence are given as a, b, c, and d. These are in a sequence. You have to select the part which is not acceptable in Standard English.

- 58.
- a. Many a man
 - b. have realized that real happiness
 - c. lies in making sacrifices
 - d. and not in personal gains.
- 59.
- a. Honestly speaking
 - b. I like him not because
 - c. he is handsome but that
 - d. he is kind.
- 60.
- a. The teacher
 - b. emphasized on
 - c. the point
 - d. again and again.

- 61.
- a. The students
 - b. will be giving
 - c. their final
 - d. examination shortly.
- 62.
- a. You arrived
 - b. here this morning
 - c. didn't you?
 - d. Where are you living?
- 63.
- a. He accepted
 - b. all the things
 - c. which providence gave him
 - d. with thankful good humour.
- 64.
- a. Nothing has
 - b. or could be
 - c. more unfortunate
 - d. than his departure.
- 65.
- a. They were quarrelling between themselves
 - b. when all of a sudden it
 - c. occurred to them that someone was watching
 - d. all the five of them.
- 66.
- a. When at last we got to
 - b. the theatre, the much
 - c. publicised play
 - d. was already begun.
- 67.
- a. One of the biggest
 - b. industrial houses
 - c. in Maharashtra
 - d. are declaring a lock out.

For questions 68 to 77 select the most appropriate pair of words from the given choices to meaningfully complete the sentence/s.

68. The factor that keeps a country strong in and happy during peaceful times is unity; it is the most heritage of the people.

- a. devastation..... .prolific
- b. difficulty perilous
- c. poverty..... absorbing
- d. adversity..... precious

69. Leisure should be utilized not in away but in in some pleasurable activity.

- a. idling..... engaging
- b. wishing..... absorbing
- c. running involving
- d. sending believing

70. If I had a good of being the Principal of a college, I would make it my to make it a model educational institution.

- a. promise attention
- b. fortune..... endeavour
- c. luck..... approach
- d. destiny claim

71. Self-help is whereas outside help is enfeebling. A nation that depends on others' dole and help, perishes.

- a. invigorating perpetually
- b. encouraging eventually
- c. establishing constantly
- d. rewarding morally

72. Jagdish was older and stronger than any other boy in our class. He bullied with smaller and weaker boys in the class, though he wasnot to interfere much with those who were as old or as strong as he.

- a. empowerment critical
- b. arrogance stupid
- c. vengeance profane
- d. impunity careful

73. A hobby has been defined as an activity or interest for pleasure and and not as a main occupation.

- a. continued vocation
- b. sustained positiveness
- c. pursued relaxation
- d. proclaimed amusement

74. In these days, when prices of all articles of daily consumption are higher and higher, fair-price shops have become an necessity.

- a. getting alarming
- b. reaching absolute
- c. soaring indispensable
- d. growing elastic

75. To the vast store of energy in the young hearts, universities have the NSS programme as a part of extra mural activities.

- a. harness employed
- b. extend announced
- c. utilize demarcated
- d. harness introduced

76. My speech was to be the best. It was with frequent applause and cheers.

- a. numbered enriched
- b. ranked complied
- c. merited bereft
- d. adjudged punctuated

77. History is a store-house of the of the past and with its help we can understand the present and the future.

- a. symptoms organize
- b. wisdom foresee
- c. analysis establish
- d. culture civilise

Question 78 to 82 contain passages consisting of six sentences. The first (S_1) and the sixth sentence (S_6) are given in the beginning. The four middle sentences in each passage have been removed and jumbled up. These are labeled as P, Q, R AND S. Select the proper sequence of the four sentences so as to make a meaningful passage.

78. S_1 : I got on a colourful bus, filled with all kinds of strange people.

S_6 : It was a gate that neither separated nor connected anything.

P : We arrived at a gate like the one is Salvador Dali's paintings.

Q : The bus rode across dirty expanses without roads.

R : At first I wasn't aware that the bus roof was loaded with drugs.

S : Everyone as filled with dust and often the wheels would sink into the soft soil.

The proper sequence should be :

- a. SPQR
- b. QRSP
- c. RQSP
- d. RSPQ

79. S₁ : For the average Indian tourist, the mention of Indonesia conjures visions of Bali and little else

S₆ : It is a pity, since otherwise this largest archipelago in the world has much to offer to the international visitor.

P : With cash flow problem, the airline has had to cut down its overseas operations.

Q : Tourism has not been much of a priority in this predominantly muslim country of 210 million people.

R : The air connectivity through the national airline is also diminishing.

S : This aspect is evident in the low budget allocated each year to this sector.

The proper sequence should be :

- a. QSRP
- b. RPSQ
- c. QRSP
- d. SQPR

80. S₁ : Man cannot survive except through his mind. He comes on earth unarmed.

S₆ : To plant, he needs a process of thought; to hunt, he needs weapons; and to make weapons – the process of thought.

P : Man has no claws, no fangs, no horns, and no great strength of muscle.

Q : Animals obtain food by force.

R : He must plant his food or hunt it.

S : His brain is his only weapon.

The proper sequence should be :

- a. SQPR
- b. PRQS
- c. QSPR
- d. PQSR

81. S₁ : Bill Clinton is the US President.

S₆ : Looking at him, a lot of people are turning vegetarian.

P : But that is not true of Mr. Clinton.

Q : This had led him to be a vegetarian.

R : His philosophy is 'be simple'.

S : Men as powerful as him usually have lavish tastes.

The proper sequence should be :

- a. SPQR
- b. SPRQ
- c. RQPS
- d. PQSR

82. S_1 : Large parts of Karnataka are located in the drought prone rain shadow of the Western Ghats characterized by low and unreliable rainfall.
 S_6 : Once water is made available for irrigation, the economic picture of the area would be transformed.
P : The project occupies a triangular area lying between the Krishna and Bheema rivers.
Q : The upper Krishna Project is being executed in the drought prone north eastern part of Karnataka about 456 kms from Bangalore in the districts of Gulburga, Raichur, Bagalkot and Bijapur.
R : The area, though being subjected to vagaries of the monsoons, has highly fertile land.
S : The population in this area subsists mainly on agriculture.

The proper sequence should be :

- a. RSQP b. PQSR
c. QPRS d. PSQR

83. Let the set consisting of the squares of the positive integers be called u ; thus u is the set 1, 4, 9,..... If a certain operation on one or more members of the set always yields a member of the set, we say that the set is closed under that operation. Then u is closed under :

- a. addition b. multiplication c. division d. none of these

84. Let $S = (x-1)^4 + 4(x-1)^3 + 6(x-1)^2 + 4(x-1) + 1$. Then S equals:

- a. $(x-2)^4$ b. $(x-1)^4$ c. x^4 d. $(x+1)^4$

85. Let r be the result of doubling both the base and the exponent of a^b , $b \neq 0$. If r equals the product of a^b by x^b , then x equals :

- a. $2a$ b. $4a$ c. 2 d. 4

86. Two tangents are drawn to a circle from an exterior point A; they touch the circle at points B and C, respectively. A third tangent intersects segment AB in P and AC in R, and touches the circle at Q. If $AB = 20$, then the perimeter of triangle APR is :

- a. 42 b. 40.5 c. 40 d. not determined by the given information

87. The set of points satisfying the pair of inequalities $y > 2x$ and $y > 4 - x$ is contained entirely in quadrants:

- a. I and II b. II and III c. I and III d. III and IV

88. If $3x^3 - 9x^2 + kx - 12$ is divisible by $x - 3$, then it is also divisible by :

- a. $3x^2 - 4$ b. $3x^2 + 4$ c. $3x - 4$ d. $3x + 4$

89. Points P and Q are both in the line segment AB and on the same side of its midpoint. P divides AB in the ratio 2:3, and Q divides AB in the ratio 3:4. If $PQ = 2$, then the length of AB is :

- a. 70 b. 75 c. 80 d. 85

90. Thirty-one magazines are arranged from left to right in order of increasing prices. The price of each magazine differs by Rs. 2 from that of each adjacent magazine. For the price of the magazine at the extreme right, a customer can buy the middle magazine and an adjacent one. Then:

- a. The adjacent magazine referred to is at the left of the middle magazine.
b. The middle magazine sells for Rs. 36.
c. The most expensive magazine sells for Rs. 64.
d. None of these is correct.

91. If $\log_{10} 2 = a$ and $\log_{10} 3 = b$, then $\log_5 12$ equals :

- a. $\frac{a+b}{1+a}$ b. $\frac{2a+b}{1+a}$ c. $\frac{a+2b}{1+a}$ d. $\frac{2a+b}{1-a}$

92. In racing over a given distance d at uniform speed, A can beat B by 20 meters, B can beat C by 10 meters, and A can beat C by 28 meters. Then d , in meters, equals:

- a. 58 b. 100 c. 116 d. 120

93. Any five points are taken inside or on a square of side 1. Let a be the smallest possible number with the property that it is always possible to select one pair of points from these five such that the distance between them is equal to or less than a . Then a is :

- a. $\sqrt{3}/3$ b. $\sqrt{2}/2$ c. $2\sqrt{2}/3$ d. 1

94. The expression $\sqrt{\frac{4}{3}} - \sqrt{\frac{3}{4}}$ is equal to :

- a. $\frac{\sqrt{3}}{6}$ b. $-\frac{\sqrt{3}}{6}$ c. $\frac{\sqrt{-3}}{6}$ d. $5\frac{\sqrt{3}}{6}$

95. Given the set of n numbers, $n > 1$, of which one is $1 - (1/n)$, and all the others are 1. The arithmetic mean of the n numbers is :

- a. 1 b. $n - \frac{1}{n}$ c. $n - \frac{1}{n^2}$ d. $1 - \frac{1}{n^2}$

96. A man drives 150 kilometers to the seashore in 3 hours and 20 minutes. He returns from the shore to the starting point in 4 hours and 10 minutes. Let r be the average rate for the entire trip. Then the average rate for the trip going exceeds r , in kilometers per hour, by :

- a. 5 b. $4\frac{1}{2}$ c. 4 d. 2

97. If $a = \log_8 225$ and $b = \log_2 15$, then a , in terms of b , is :

- a. $b/2$ b. $2b/3$ c. b d. $3b/2$

98. The angles of a pentagon are in arithmetic progression. One of the angles, in degrees, must be :

- a. 108 b. 90 c. 72 d. 54

99. Three machines P, Q, and R, working together, can do a job in x hours. When working alone P needs an additional 6 hours to do the job; Q, one additional hour; and R, x additional hours. The value of x is :

- a. $\frac{2}{3}$ b. $\frac{11}{12}$ c. $\frac{3}{2}$ d. 2

100. A man on his way to dinner shortly after 6:00 p.m. observes that the hands of his watch form an angle of 110° . Returning before 7:00 p.m. he notices that again the hands of his watch form an angle of 110° . The number of minutes that he has been away is :

- a. $36\frac{2}{3}$ b. 40 c. 42 d. 42.4

101. If both x and y are integers, how many solutions are there of the equation $(x-8)(x-10) = 2^y$?

- a. 1 b. 2 c. 3 d. more than 3

102. Which one of the following points is not on the graph of $y = \frac{x}{x+1}$?

- a. $(0, 0)$ b. $(-\frac{1}{2}, -1)$ c. $(\frac{1}{2}, \frac{1}{3})$ d. $(-1, 1)$

103. Triangle ABD is right-angled at B. On AD there is a point C for which $AC = CD$ and $AB = BC$. The magnitude of angle DAB, in degrees, is :

- a. $67\frac{1}{2}$ b. 60 c. 45 d. 30

104. Given the four equations :

- (a) $3y - 2x = 12$, (b) $-2x - 3y = 10$,
(c) $3y + 2x = 12$, (d) $2y + 3x = 10$.

The pair representing perpendicular lines is:

- a. (a) and (d) b. (a) and (c)
c. (a) and (b) d. (b) and (d)

105. Three numbers a, b, c , none zero, form an arithmetic progression. Increasing a by 1 or increasing c by 2 results in a geometric progression. Then b equals:

- a. 16 b. 14 c. 12 d. 10

106. In counting n colored balls, some red and some black, it was found that 49 of the first 50 counted were red. Thereafter, 7 out of every 8 counted were red. If, in all, 90% or more of the balls counted were red, the maximum value of n is:

- a. 225 b. 210 c. 200 d. 180

107. Two men at points R and S, 76 kilometers apart, set out at the same time to walk towards each other. The man at R walks uniformly at the rate of $4\frac{1}{2}$ kilometers per hour; the man at S walks at the constant rate of $3\frac{1}{4}$ kilometers per hour for the first hour, at $3\frac{3}{4}$ kilometers per hour for the second hour, and so on, in arithmetic progression. If the men meet x kilometers nearer R than S in an integral number of hours, then x is:

- a. 10 b. 8 c. 6 d. 4

108. A gives B as many rupees as B has and C as many rupees as C has. Similarly, B then gives A and C as many rupees as each then has. C, similarly, then gives A and B as many rupees as each then has. If each finally has 16 rupees, with how many rupees does A start?
- a. 26 b. 28 c. 30 d. 32
109. Six straight lines are drawn in a plane with no two parallel and no three concurrent. The number of regions into which they divide the plane is:
- a. 16 b. 20 c. 22 d. 24
110. Given the line $y = \frac{3}{4}X + 6$ and a line L parallel to the given line and 4 units from it. A possible equation for L is :
- a. $y = \frac{3}{4}x + 1$ b. $y = \frac{3}{4}x$ c. $y = \frac{3}{4}x - \frac{2}{3}$ d. $y = \frac{3}{4}x - 1$
111. A person starting with 64 rupees and making 6 bets, wins three times and loses three times, the wins and losses occurring in random order. The chance for a win is equal to the chance for a loss. If each wager is for half the money remaining at the time of the bet, then the final result is:
- a. a gain of Rs.27 b. a loss of Rs.37 c. neither a gain nor a loss
d. a gain or a loss depending upon the order in which the wins and losses occur
112. A jobber buys an article at "Rs.24 less $12\frac{1}{2}\%$ ". He then wishes to sell the article at a gain of $33\frac{1}{3}\%$ of his cost after allowing a 20% discount on his marked price. At what price, in rupees, should the article be marked?
- a. 30.00 b. 33.60 c. 40.00 d. none of these
113. Given $2^x = 8^{y+1}$ and $9^y = 3^{x-9}$; the value of $x + y$ is:
- a. 18 b. 21 c. 24 d. 27
114. A farmer bought 749 sheep. He sold 700 of them for the price paid for the 749 sheep. The remaining 49 sheep were sold at the same price per head as the other 700. Based on the cost, the percent gain on the entire transaction is:
- a. 6.5 b. 6.75 c. 7.0 d. 7.5
115. Two numbers are such that their difference, their sum, and their product are to one another as 1:7:24. The product of the two numbers is:

a. 6

b. 12

c. 24

d. 48

116. In a ten-kilometers race First beats Second by 2 kilometers and First beats Third by 4 kilometers. If the runners maintain constant speeds throughout the race, by how many kilometers does Second beat Third?

a. $2\frac{1}{4}$

b. $2\frac{1}{2}$

c. $2\frac{3}{4}$

d. 3

117. If $\frac{a+b}{b+c} = \frac{c+d}{d+a}$, then:

a. a must equal c

b. $a + b + c + d$ must equal zero

c. either $a = c$ or $a + b + c + d = 0$, or both

d. $a(b + c + d) = c(a + b + d)$

118. A watch loses $2\frac{1}{2}$ minutes per day. It is set right at 1 P.M. on March 15. Let n be the positive correction, in minutes, to be added to the time shown by the watch at a given time. When the watch shows 9 A. M. on March 21, n equals:

a. $14\frac{14}{23}$

b. $14\frac{1}{14}$

c. $13\frac{101}{115}$

d. $13\frac{83}{115}$

119. Consider the statements:

I: $(\sqrt{-4})(\sqrt{-16}) = \sqrt{(-4)(-16)}$,

II: $\sqrt{(-4)(-16)} = \sqrt{64}$ and

III: $\sqrt{64} = 8$.

Of these the following are incorrect

a. none

b. I only

c. II only

d. III only

120. The symbol 25_b represents a two-digit number in base b . If the number 52_b is double the number 25_b , then b is:

a. 7

b. 8

c. 9

d. 11