



J A G R A N  
**Josh**  
your guide to success

[WWW.JAGRANJOSH.COM](http://WWW.JAGRANJOSH.COM)

UPSC NDA Exam 2009-II General Studies  
Solved Paper

## Part A

### Synonyms

**Directions (Q. 1-8) :** Each of the following items consists of a word in capital letters, followed by four words or groups of words. Select the word or group of words that is most similar in meaning to the word in capital letters.

1. PESSIMISTIC  
(a) Indifferent (b) Ascetic  
(c) Unsettle (d) Not hopeful
2. ANALOGOUS  
(a) Unsuitable (b) Uncritical  
(c) Similar (d) Disproportionate
3. EXAGGERATE  
(a) Bluff (b) Overstate  
(c) Explain (d) Underestimate
4. EVIDENT  
(a) Prominent (b) Seen  
(c) Observed (d) Quite clear
5. PENALIZE  
(a) Persecute (b) Punish  
(c) Torture (d) Ruin
6. REMEDIAL  
(a) Punitive (b) Stringent  
(c) Corrective (d) Strict
7. TRIVIAL  
(a) Unimportant (b) Transparent  
(c) Important (d) Unexpected
8. INCREDIBLE  
(a) Hard to believe (b) Considerable  
(c) Inconsistent (d) Unsatisfactory

### Antonyms

**Directions (Q. 9-16) :** Each of the following items consists of a word or group of words in capital letters, followed by four words. Select the word that is furthest in meaning to the word or group of words in capital letters.

9. RELUCTANT  
(a) Optimistic (b) Unwilling  
(c) Enthusiastic (d) Excited
10. SCARCITY  
(a) Plenty (b) Prosperity  
(c) Facility (d) Simplicity
11. THICK SKINNED  
(a) Thankless (b) Sensitive  
(c) Pliant (d) Resolute
12. BLEAK  
(a) Bright (b) Confusing  
(c) Uncertain (d) Great
13. STERN  
(a) Violent (b) Generous  
(c) Mild (d) Forgiving

14. SUPERFICIAL  
(a) Profound (b) Difficult  
(c) Secretive (d) Mystical
15. ELEGANCE  
(a) Balance (b) Indelicacy  
(c) Clumsiness (d) Savagery
16. COARSE  
(a) Pleasing (b) Rude  
(c) Polished (d) Soft

### Rearranging Parts of a Sentence

**Directions (Q. 17-24) :** In the following items, some parts of the sentence have been jumbled up. You are required to rearrange these parts, which are labelled P, Q, R and S to produce the correct sentence. Choose the proper sequence and mark in your Answer Sheet accordingly.

Example 'Z' has been solved for you.

Z. Some people believe that the effect (P)/ is very bad (Q)/ on children (R)/ of cinema (S).

The correct sequence should be

- (a) P - S - R - Q (b) S - P - Q - R  
(c) S - R - P - Q (d) Q - S - R - P

**Explanation :**

The proper way of writing the sentence is "Some people believe that the effect of cinema on children is very bad". This is indicated by the sequence P - S - R - Q and so (a) is the correct answer.

17. About 200 years ago, in the south of India (P)/ an old king (Q)/ ruled over a kingdom (R)/ called Rajavarman (S).  
The correct sequence should be  
(a) Q - S - R - P (b) P - Q - R - S  
(c) Q - P - S - R (d) Q - S - P - R
18. His land (P)/ a wooden plough (Q)/ the Indian peasant still uses (R)/ to cultivate (S)/.  
The correct sequence should be  
(a) R - Q - P - S (b) Q - P - S - R  
(c) S - R - Q - P (d) R - Q - S - P
19. He was a man even if he had to starve (P)/ who would not beg (Q)/ borrow or steal (R)/ from anyone (S).  
The correct sequence should be  
(a) P - Q - R - S (b) P - R - Q - S  
(c) Q - R - S - P (d) Q - P - R - S
20. In the progress of (P)/ universities play a crucial role (Q)/ our civilization (R)/ in the present age (S).  
The correct sequence should be  
(a) S - Q - P - R  
(b) Q - R - S - P  
(c) Q - R - P - S  
(d) S - Q - R - P

21. Far out into the sea (P)/ for the next two weeks there were further explosions (Q)/ which hurled (R)/ ashes and debris (S).  
The correct sequence should be  
(a) Q - R - P - S (b) R - S - P - Q  
(c) Q - R - S - P (d) Q - R - P - Q
22. William Shakespeare in his lifetime (P)/ the great English dramatist (Q)/ wrote thirty-five plays (R)/ and several poems (S).  
The correct sequence should be  
(a) P - Q - R - S (b) R - S - P - Q  
(c) Q - S - R - P (d) Q - R - S - P
23. Whenever I am with an old friend of mine (P)/ in New Delhi (Q)/ to have dinner (R)/ I always try (S).  
The correct sequence should be  
(a) S - Q - P - R (b) Q - S - R - P  
(c) R - P - S - Q (d) P - R - Q - S
24. I don't know (P)/ must have thought (Q)/ what people sitting next to me (R)/ but I came away (S).  
The correct sequence should be  
(a) R - S - Q - P (b) R - Q - S - P  
(c) P - Q - R - S (d) P - R - Q - S
28. The sum and substance (a)/ of his speech (b)/ were essentially anti-establishment (c)/ No error (d).
29. It has been such a wonderful evening, (a)/ I look forward to meet you again (b)/ after the vacations (c)/ No error (d).
30. When the body committed a mistake, (a)/ the teacher made him to do (b)/ the sum again (c)/ No error (d).
31. Unless the government does not revise its policy of liberalization (a)/ the growth of the indigenous technology (b)/ will be adversely affected (c)/ No error (d).
32. Supposing if you get (a)/ a seat in the plane (b)/ you will not take more than two hours to reach Mumbai (c)/ No error (d).

### Comprehension

**Directions (Q. 33-44) :** In this section, you have three short passages. After each passage, you will find several questions based on the passage. First, read a passage and then answer the questions based on it. You are required to select your answers based on the contents of the passage and opinion of the author only.

Examples 'I' and 'J' have solved for you.

#### PASSAGE (Example)

In our approach to life, be it pragmatic or otherwise, a basic fact that confronts us squarely and unmistakably is the desire for peace, security and happiness. Different forms of life at different levels of existence make up the teeming denizens of this earth of ours. And, no matter whether they belong to the higher groups such as human beings or to the lower groups such as animals, all beings primarily seek peace, comfort and security. Life is as dear to a mute creature as it is to a man. Even the lowliest insect strives for protection against dangers that threaten its life. Just as each one of us wants to live and not to die, so do all other creatures.

- I. The author's main point is that  
(a) different forms of life are found on the earth  
(b) different levels of existence are possible in nature  
(c) peace and security are the chief goals of all living beings  
(d) even the weakest creature struggles to preserve its life
- J. Which one of the following assumptions or steps is essential in developing the author's position ?  
(a) All forms of life have a single overriding goal  
(b) The will to survive of a creature is identified with a desire for peace  
(c) All beings are divided into higher and lower groups  
(d) A parallel is drawn between happiness and life and pain and death

#### **Explanation :**

- I. The idea which represents the author's main point is "peace and security are the chief goals of all living beings", which is response (c). So (c) is the correct answer.
- J. The best assumption underlying the passage is "The will to survive of a creature is identified with a desire for peace", which is response (b). So (b) is the correct answer.

#### PASSAGE I

No doubt, the 'green revolution' has led to self-sufficiency in food production but it has also brought with it the formidable problem of poisoning of food grains and other eatables. This is caused by excessive use of chemicals on

### Spotting Errors

#### **Directions (Q. 25-32) :**

- (i) In this section, a number of sentences are given. The sentences are in three separate parts and each one is labelled (a), (b) and (c). Read each sentence to find out whether there is an error in any part. No sentence has more than one error. When you find an error in any one of the parts (a), (b) or (c), indicate your response on the separate Answer Sheet at the appropriate space. You may feel that there is no error in a sentence. In that case, letter (d) will signify a 'No error' response.
- (ii) You are to indicate only one response for each item in your Answer Sheet. (If you indicate more than one response, your answer will be considered wrong.) Errors may be in grammar, word usage or idioms. There may be a word missing or there may be a word which should be removed.
- (iii) You are not required to correct the error. You are required only to indicate your response on the Answer Sheet.

Examples 'P' and 'Q' have been solved for you.

- P. The young child (a)/singed (b)/ a very sweet song (c)/No error (d)
- Q. We worked (a)/ very hard (b)/ throughout the season (c)/ No error (d).

#### **Explanation :**

In item P, the word 'singed' is wrong. The letter under this part is (b), so (b), is the correct answer. Similarly, for item Q, (d) is the correct answer, as the sentence does not contain any error.

25. Inflation and shortages (a)/ have made it very difficult for him (b)/ to make his both ends meet (c)/ No error (d).
26. The most studious boy (a)/ in the class (b) was made as the captain (c)/ No error (d).
27. I am participating (a)/ in the two-miles race (b)/ tomorrow morning (c)/ No error (d).

- crops and pesticide residues. It has also created havoc by exterminating the species of useful parasites and viruses which keep pests under control. Scientists are now worried about the resurgence of such formidable pests in menacing proportions which seem to undermine all that they have achieved in agricultural production.
33. From the reading of the passage, which one of these statements do you think is correct ?
- The 'green revolution' has solved all problems in agriculture
  - Application of chemical has resulted in everlasting preservation of grains
  - The 'green revolution' is a mixed blessing
  - Scientists are satisfied with achievements in agricultural production
34. The statement that "the green revolution has also created havoc by exterminating the species of useful parasites and viruses" means
- all parasites and viruses keep pests under control
  - Pesticides and chemicals kill parasites and viruses, which control pests
  - the pests are controlled by parasites
  - application of chemicals to grains has created havoc
35. Which one of the following statements best reflects the underlying implication of the passage ?
- Man's effort to control nature to his advantage has always created unseen dangers side by side
  - Research in one area leads to a challenge for further research in the same field
  - At present, research in preservation of agricultural production is at the cross-roads
  - The excessive use of chemicals and pesticides is dangerous
36. Which one of these phrases best helps to bring out the precise meaning of 'menacing proportions ?'
- To and extent which becomes threatening
  - Assuming dimension that cause concern
  - Unimagined dangerous proportion
  - Harmful size

### PASSAGE II

Water is the basis of life. Every animal and every plant contains a substantial proportion of free or combined water in its body, and no kind of physiological activity is possible in which this fluid does not play an essential part. Water is, of course, necessary for animal life, while moisture in the soil is equally imperative for the life and growth of plants and trees, though the quantity necessarily varies enormously with the species. The conservation and utilization of water is thus fundamental to human life. Apart from artesian water, the ultimate source in all cases is rain or snowfall.

37. Water is the basis of life, because
- it is seen everywhere on the earth
  - it is obtained from the sea and rain
  - it helps living things to exist
  - it is necessary for the birth and growth of all living things
38. No kind of physiological activity is possible without water, because
- water is a fluid
  - water plays very important role in it
  - water flows easily
  - water does not play any role at all

39. The passage is on
- the use of water in day-to-day life
  - the use of water in agriculture
  - the use of wastewater
  - the importance of water in human life

### PASSAGE III

The importance of early detection of tuberculosis (TB), regular treatment and nutritious food are just not known widely enough. Often TB victims discontinue the treatment when the symptoms disappear, without waiting for a complete, cure; the next attack is more virulent from bacteria which have thus become drug-resistant.

Anti-TB drugs are produced in India. The capability to meet the country's requirements of anti-TB drugs in full already exists. Yet millions of Indians suffer from TB and thousands of them die every year. Voluntary organizations and government agencies are doing commendable work. But we have so far tackled only the fringe of the problem. What is now needed is a nation-wide determination to fight TB. India eradicated smallpox with a national campaign. We can eradicate TB too.

40. Treatment is discontinued by TB victims, when
- they think that the disease is completely cured
  - the apparent signs of TB are no longer visible to them
  - they run out of resources like money or medicine
  - they are attacked by drug-resistant bacteria
41. Millions of Indians suffer from TB, because
- people discontinue the treatment too soon or do not start the treatment early enough
  - India does not produce anti-TB drugs of the required quality
  - anti-TB drugs are not available at a reasonable price
  - people do not have nutritious food
42. When the treatment of TB is discontinued too early
- the old symptoms reappear
  - the patient gradually gets better, although slowly
  - the disease appears in a new, more dangerous form
  - the patient must get good, nutritious food
43. 'The fringe of the problem' means
- the basic cause of the problem
  - the root of the problem
  - the side effects of the drugs
  - the edge of the problem, not the main point
44. Who or what become 'drug-resistant', according to the passage ?
- TB patients who are treated for a long time
  - People who do not want to take medicine for their illness
  - TB bacteria that have not been fully eradicated
  - Patients who have discontinued the treatment

### **Rearranging Sentences Into a Paragraph**

**Directions (Q. 45-50) :** In the following items, each passage consists of six sentences. The first sentence (S<sub>1</sub>) and the final sentence (S<sub>6</sub>) are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labelled P, Q, R and S. You are required to find out the proper sequence of the four sentences and mark accordingly on the Answer Sheet.

**Example 'X'** has been solved for you.

**X. S<sub>1</sub> :** There was a boy named Jack.

S<sub>6</sub> : At last she turned him out of the house.

P : So the mother asked him to find work.

Q : They were very poor.

R : He lived with his mother.

S : But Jack refused to work.

The proper sequence should be

(a) R - Q - P - S (b) P - Q - R - S

(c) Q - P - R - S (d) R - P - S - Q

*Explanation :*

The proper sequence in this example is R - Q - P - S, which is marked by (a). Therefore, (a) is the correct answer.

45. S<sub>1</sub> : Solar hot water systems that can supply hot water at an approximate temperature of 60°C continuously, have recently been introduced.

S<sub>6</sub> : Larger quantities of water can be heated by increasing the number of solar collectors.

P : A similar 200-litre system, but with two collectors, ideal for a family of five or six, would cost around Rs 7250.

Q : A 100-litre per day system, suitable for a family of two or three, would cost around Rs 4270.

R : These rates, however, do not include the plumbing acquired to connect the system to the kitchen, bathroom or toilet of the building, transportation, installation and taxes.

S : This includes the price of solar collector, a 100-litre insulated storage tank with fittings and an automatic water heater to be used during the monsoons or in an emergency.

The proper sequence should be

(a) R - P - Q - S (b) Q - S - P - R

(c) S - R - Q - P (d) Q - P - S - R

46. S<sub>1</sub> : Corruption has been accepted as a way of life in India.

S<sub>6</sub> : I think no serious effort has been made to eradicate the wide-spread evil in India.

P : It is quite rampant in our country.

Q : But it is pity that no one hesitates to accept it when he gets a chance.

R : They criticize and condemn others for taking bribe.

S : It is not uncommon to find people talking against corruption.

The proper sequence should be

(a) P - Q - S - R (b) P - S - R - Q

(c) S - P - Q - R (d) R - Q - S - P

47. S<sub>1</sub> : During college, Pamela Johnson had the opportunity to work with a famous anthropologist.

S<sub>6</sub> : She earned a doctorate and today holds a key government position.

P : When her son was three, she undertook the four-year hard work of post-graduate studies.

Q : But then she married, had a baby and became a full-time mother.

R : None the less, Pamela never lost sight of her desire to study and assist tribal people.

S : She enjoyed the experience and decided to major in Anthropology.

The proper sequence should be

(a) Q - P - R - S (b) S - R - Q - P

(c) R - S - Q - P (d) S - Q - R - P

48. S<sub>1</sub> : My friend Peter went to live in a village.

S<sub>6</sub> : It did not like to work.

P : But it was a very slow animal.

Q : So Peter bought a donkey for five pounds.

R : One day his new neighbour told him that he must buy a donkey.

S : Every family there had a donkey to carry things for them.

The proper sequence should be

(a) S - R - Q - P (b) S - P - R - Q

(c) Q - S - R - P (d) Q - R - S - P

49. S<sub>1</sub> : Miss Sullivan brought Helen Keller a doll.

S<sub>6</sub> : Her heart was filled with pleasure and pride.

P : After some efforts, she succeeded in making the letters correctly.

Q : When she had played with it for some time, Miss Sullivan spelt into her hand the letters d-o-l-l.

R : The child's attention was arrested by the gentle movement of the finger on her hand.

S : She tried to imitate the finger's motion.

The proper sequence should be

(a) Q - R - S - P (b) R - Q - P - S

(c) P - S - R - Q (d) S - R - Q - P

50. S<sub>1</sub> : When she was not yet an adult, Mother Teresa knew that she had a vocation to help the poor.

S<sub>6</sub> : She received permission for this after two years.

P : At the age of 18, she left her home to become a nun.

Q : There she taught at a convent high school and became its Principal.

R : She felt she must leave the job and go into slums to serve the poor.

S : After training at Dublin, she was sent to Kolkata where she took her final vows.

The proper sequence should be

(a) S - R - P - Q (b) P - Q - S - R

(c) R - S - Q - P (d) P - S - Q - R

## Part B

51. Consider the following statements with respect to the Radar Imaging Satellite (RISAT-2)

1. This is the first Indian satellite with microwave imaging configuration of board

2. The satellite will boost India's defence capabilities.

3. It can take images of the earth day and night, even under rainy and cloudy conditions.

Which of the statements given above is/are correct ?

(a) 1 only (b) 2 and 3

(c) 1, 2 and 3 (d) 1 and 2

52. Consider the following statements about *Astra* :

1. This anti-aircraft missile is procured by India from Russia.

2. It is a single-stage, smokeless, solid-propelled missile.

3. It may be launched from different altitudes.

Which of the statements given above are correct ?

(a) 1 and 2

(b) 2 and 3

(c) 1, 2 and 3

(d) 1 and 3

53. Which one of the following is not a component of the scheme Innovation in Science Pursuit for Inspired Research (INSPIRE) launched by the Union of India ?  
 (a) Scheme for early attraction of talents for science  
 (b) Scholarship for higher education  
 (c) Assured opportunity for research careers  
 (d) Vocational training after higher education
54. Who among the following has been presented the Leontief Award, 2009 for his/her outstanding contributions to the field of economic theory ?  
 (a) Montek Singh Ahluwalia  
 (b) Prof. Bina Agarwal  
 (c) Prof. Amartya Sen  
 (d) Jagdish Bhagwati
55. Areawise, which one of the following is the largest Lok Sabha constituency ?  
 (a) Kutch (b) Kangra  
 (c) Ladakh (d) Patna Sahib
56. Indian Military Training Team (IMTRAT) imparts training to army officers of  
 (a) Nepal (b) Bangladesh  
 (c) Maldives (d) Bhutan
57. Consider the following statements  
 1. The Green Governance Awards have been instituted by Bombay Natural History Society (BNHS).  
 2. Tata Chemicals has won the Green Governance Award, 2008 for its project on conservation of the whale shark.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
58. The tourism phrase *Paradise Unexplored* refers to  
 (a) Jammu and Kashmir  
 (b) North-East India  
 (c) Chhattisgarh  
 (d) Uttarakhand
59. Consider the following statements  
 1. Muhammad Hamdulla Sayeed, elected from Lakshadweep parliamentary constituency, is the youngest MP in the 15th Lok Sabha.  
 2. Agatha K. Sangma is the youngest Union Minister in the 15th Lok Sabha who represents Shillong parliamentary constituency.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
60. Consider the following statements about the accident of AF 447, which crashed over the Atlantic Ocean on 1st June, 2009  
 1. The Airbus A330-200 was on its way to Rio de Janeiro from Paris.  
 2. The scheduled flight usually crosses the Tropic of Cancer on its way to its destination.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
61. Which one of the following statements about Chandragupta II is not correct ?  
 (a) Kalidas and Amarsingh were famous scholars in his court  
 (b) He expanded his empire both through matrimonial alliances and conquests  
 (c) He married a Naga princess, named Kubera Naga  
 (d) He married his daughter Prabhawati to an Ahom prince
62. Mahatma Gandhi undertook 'fast unto death' against the Communal Award. He, however, discontinued the fast, because  
 (a) the Congress leaders successfully prevailed upon Mahatma Gandhi to accept the Award  
 (b) the British Government withdrew the Communal Award  
 (c) of the conclusion of the Poona Pact  
 (d) the weaker classes openly opposed the Award
63. Consider the following statements with regard to Champaran Satyagraha (1917)  
 1. The Champaran Satyagraha marked Mahatma Gandhi's first appearance in Indian politics as a leader of the masses.  
 2. Young nationalists like Rajendra Prasad and J.B. Kriplani and worked with Mahatma Gandhi at Champaran.  
 3. It was during this movement that Mahatma Gandhi formulated his philosophy of Satyagraha.  
 Which of the statements given above is/are correct ?  
 (a) 3 only (b) 1 and 2  
 (c) 2 and 3 (d) 1 and 3
64. The Passive Resistance Association was first formed by Mahatma Gandhi in South Africa in 1906 to organize a campaign against the introduction of  
 (a) Poll Tax  
 (b) Certificate of Registration  
 (c) Legislations against Indian Businessmen  
 (d) Legislations to disenfranchise the Indians
65. What was the effect of the Government of India Act of 1935 on the national movement ?  
 (a) It strengthened the movement  
 (b) It weakened the movement by satisfying the people  
 (c) It weakened the movement, because separate electorate for the Muslims and Hindus created dissensions  
 (d) It weakened the movement, because the Act introduced federal system
66. Which one of the following statements about Trusteeship is not correct ?  
 (a) 'Trusteeship' provides a means of transforming the capitalist order of society into an egalitarian one  
 (b) It is based on the faith that human nature is never beyond redemption  
 (c) It does not recognize any right of private ownership of property, except so far as it may be permitted by society for its own welfare  
 (d) It excludes legislative regulation of the ownership and use of wealth
67. The Speaker of the Lok Sabha can resign his office by addressing his resignation to  
 (a) the President  
 (b) the Prime Minister  
 (c) the Deputy Speaker of the Lok Sabha  
 (d) the Chief Justice of India
68. Who can initiate impeachment proceedings against the President of India ?  
 (a) Only Lok Sabha  
 (b) Only Rajya Sabha  
 (c) Either House of the Parliament  
 (d) Any Legislative Assembly
69. The highest body that approves Five-Year Plans in India is  
 (a) Planning Commission  
 (b) National Development Council  
 (c) Interstate Council  
 (d) Union Cabinet.

70. Which among the following is the exclusive jurisdiction of the State Government ?  
 (a) Corporation tax  
 (b) Customs duty  
 (c) Sales tax  
 (d) Income tax
71. Which one of the following theories of Communism is not a doctrine of Karl Marx ?  
 (a) Dialectical Materialism  
 (b) Historical Materialism  
 (c) Class Struggle  
 (d) Theory of New Democracy
72. Consider the following statements  
 1. Report of the Administrative Reforms Commission, headed by late Morarji Desai, recommended the establishment of Lokpal and Lokayukta institutions.  
 2. Lokpal is the highest institution in India to investigate corruption at higher places in Government.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
73. Which among the following is an extraconstitutional growth in Indian democracy ?  
 (a) Attorney General of India  
 (b) Autonomous Districts  
 (c) Political Parties  
 (d) Deputy Chairman of the Council of States
74. Socialism is opposed to  
 (a) social security scheme  
 (b) equal distribution of wealth  
 (c) unrestricted competition  
 (d) collective ownership and management
75. Who among the following was the first Muslim Military Commander who annexed Bihar and Bengal by overthrowing the Sena dynasty ?  
 (a) Mahmud Gawan (b) Bakhtiyar Khilji  
 (c) Adil Shahis (d) Shams-ud-din
76. Which one of the following was the official language of Gupta period ?  
 (a) Pali (b) Magadhi  
 (c) Prakrit (d) Sanskrit
77. The agenda for the Round Table Conferences held in London was to  
 (a) discuss the report of the Simon Commission  
 (b) form a Constitution for India  
 (c) find a solution of the communal problem in India  
 (d) find a solution for the problems of the 'depressed classes' of India
78. Freedom of the press in India is  
 (a) available to the people under the law of the Parliament  
 (b) specifically provided in the Constitution  
 (c) implied in the right of freedom of expression  
 (d) available to the people of India under executive order
79. Consider the following statements  
 1. The vernal equinox falls on March 21.  
 2. On equinox, the sun is directly overhead at the equator.  
 3. The changes in the day length on equinox result from the changes in the tilt of the earth with respect to the sun.  
 Which of the statements given above is/are correct ?  
 (a) 1 and 2 (b) 1 only  
 (c) 1, 2 and 3 (d) 2 and 3

80. Tropical cyclone of Philippines is termed as  
 (a) Typhoon (b) Willy-willy  
 (c) Hurricane (d) Baguio
81. Chambal river is a part of  
 (a) Sabarmati basin (b) Ganga basin  
 (c) Narmada basin (d) Godavari basin
82. Match List-I with List-II and select the correct answer using the code given below the Lists

	List-I (Industry)		List-II (Location)
A.	Petrochemicals	1.	Ranchi
B.	Aluminium	2.	Hyderabad
C.	Electronics	3.	Vadodara
D.	Heavy Engineering	4.	Koraput

Code :

- |     | A | B | C | D |
|-----|---|---|---|---|
| (a) | 3 | 4 | 2 | 1 |
| (b) | 1 | 2 | 4 | 3 |
| (c) | 3 | 2 | 4 | 1 |
| (d) | 1 | 4 | 2 | 3 |

83. Which one of the following separates North and South Islands of New Zealand ?  
 (a) Foveaux Strait (b) Bass Strait  
 (c) Cook Strait (d) Torres Strait
84. Consider the following statements  
 1. The earth's rotation axis is not at 90° to its orbital plane.  
 2. The earth's rotation axis is inclined at 23.5°.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
85. Consider the following statements  
 1. The difference between the moisture-holding capacity of air and its actual humidity is called saturation deficit.  
 2. The temperature to which air has to be cooled in order to reach saturation is called dew point.  
 Which of the statements given above is/are correct ?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2
86. What is the reason for India being a major producer of different varieties of fruits and vegetables ?  
 (a) Its large population size  
 (b) Its large land area  
 (c) Variation in its agro-climatic conditions  
 (d) Diversity in socio-cultural phenomenon
87. Which one of the following is the correct order in which the gases from the atmosphere disappear as one moves away from the surface of the earth ?  
 (a) Carbon dioxide—Oxygen—Nitrogen  
 (b) Oxygen—Nitrogen—Carbon dioxide  
 (c) Carbon dioxide—Nitrogen—Oxygen  
 (d) Nitrogen—Oxygen—Carbon dioxide
88. Which of the following regarding Revised Macro Management of Agriculture Scheme (2008–2009) is/are correct ?  
 1. Allocate funds to States and Union Territories on a criterion based on gross cropped area and area under small and marginal holdings.  
 2. The assistance is provided to the States and Union Territories as 100% grant.  
 Select the correct answer using the code given below  
 Code :  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

89. Consider the following statements related to stratification of atmospheric layers

1. All storms and cloudiness are restricted to stratosphere.
2. Cirrus clouds are formed on the top layers of troposphere.
3. Stratosphere is also an 'isoclinical layer'.

Which of the statements given above are correct ?

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

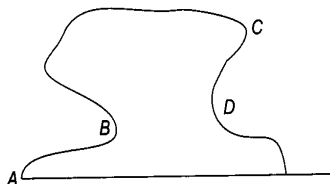
90. What is the process that tends to build up the land surface by deposition of solid material in its lower areas, known as ?

- (a) Abrasion                      (b) Agglomeration  
(c) Aggradation                (d) Attrition

91. What is the sequential order of vegetation types observed while moving from Assam Valley to Rajasthan Plains ?

- (a) Tropical Wet Evergreen  
Tropical Moist Deciduous  
Tropical Dry Deciduous  
Tropical Thorn Forest  
(b) Tropical Thorn Forest  
Tropical Dry Deciduous  
Tropical Moist Deciduous  
Tropical Wet Evergreen  
(c) Tropical Moist Deciduous  
Tropical Wet Evergreen  
Tropical Dry Deciduous  
Tropical Thorn Forest  
(d) Tropical Dry Deciduous  
Tropical Thorn Forest  
Tropical Moist Deciduous  
Tropical Wet Evergreen

92. The below diagram is of a mushroom rock. In which of the points in the diagram is the intensity of wind strongest ?



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

93. What does the imaginary line passing through Lake Ontario, Lake Erie, Lake Huron and Lake Superior represent ?

- (a) The southern boundary of Canada  
(b) The northern limit of iron and steel industry of USA  
(c) The internal waterway route to USA  
(d) The internal waterway route to Canada

94. What is the reason for the major hot deserts of the world lying in the western part of the tropical latitude ?

- (a) They are influenced by trade winds  
(b) They lie in the rain-shadow area of the mountains  
(c) They are influenced by monsoon winds  
(d) They are influenced by dry winds

95. Consider the following statements

1. International Date Line is drawn zigzag to avoid landmass.
2. International Date Line is 180° W as well as 180° E of Greenwich.

3. A ship sailing westward from Greenwich when crossing International Date Line would put back the date by a day.

Which of the statements given above is/are correct ?

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

96. The earth's crust is the thinnest

- (a) under the mountain ranges  
(b) under continental masses  
(c) at ocean bottoms  
(d) at mid-oceanic ridges

97. Which one of the following African countries is not land-locked ?

- (a) Benin                          (b) Chad  
(c) Lesotho                      (d) Mali

98. The Tropic of Cancer does not pass through

- (a) Orissa                        (b) Tripura  
(c) Chhattisgarh                (d) Rajasthan

99. Which of the following crops would be preferred for sowing in order to enrich the soil with nitrogen ?

- (a) Wheat                        (b) Mustard  
(c) Sunflower                  (d) Gram

100. Which of the following plants is referred to as a living fossil ?

- (a) Ephedra                      (b) Cycas  
(c) Ginkgo                        (d) Adiantum

101. The major combustible component of gobar (cow-dung) gas is

- (a) methane                      (b) carbon dioxide  
(c) hydrogen                      (d) propane

102. Which one of the following vegetables is not obtained from wild cabbage ?

- (a) Lettuce                        (b) Broccoli  
(c) Kale                            (d) Kohlrabi

103. Softening of mature ripe fruits is due to

- (a) dissolution of middle lamella  
(b) degradation of primary wall  
(c) delignification  
(d) removal of suberin deposits in the cell wall

104. Which part of saffron plant is used to obtain the spice 'saffron' ?

- (a) Dry stigma                      (b) Leaves  
(c) Fruits                            (d) Petals

105. Release of which one of the following chemicals is responsible for causing fatigue after muscular activity in human beings ?

- (a) Glucuronic acid                (b) Uric acid  
(c) Pyruvic acid                      (d) Lactic acid

106. Jaundice in human beings is the result of

- (a) incomplete metabolism of biliverdin  
(b) complete metabolism of biliverdin  
(c) incomplete metabolism of bilirubin  
(d) complete metabolism of bilirubin

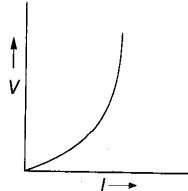
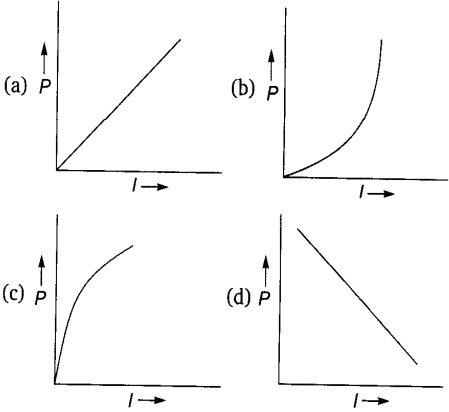
107. Which of the following regions/cells in the human body is involved in controlling blood sugar level ?

- (a) Pituitary gland  
(b) Islets of Langerhans  
(c) Hypothalamus  
(d) Spleen

108. The Haffkine Institute, Mumbai, is known for its work on the production of

- (a) plague vaccine                (b) leprosy vaccine  
(c) tetanus vaccine                (d) polio vaccine



109. The weight of a body is 9.8 N at the place where  $g = 9.8 \text{ ms}^{-2}$ . Its mass is  
 (a) zero (b) 9.8 kg  
 (c) 10 kg (d) 1 kg
110. If a light body and a heavy body have equal momentum, then  
 (a) the lighter body has greater kinetic energy than the heavier body  
 (b) the lighter body has lesser kinetic energy than the heavier body  
 (c) the kinetic energy of the lighter body is equal to the kinetic energy of the heavier body  
 (d) the kinetic energy of both the bodies are independent of momentum
111. An object of mass 5 kg is attached to the end of a rope. If the rope is pulled upward with an acceleration  $0.30 \text{ ms}^{-2}$ , what is the tension in the rope?  
 (a) 30.5 N (b) 40.5 N  
 (c) 50.5 N (d) 60.5 N
112. When a mass  $m$  is hung on a spring, the spring stretched by 6 cm. If the loaded spring is pulled downward a little and released, then the period of vibration of the system will be  
 (a) 0.27 s (b) 0.35 s  
 (c) 0.49 s (d) 0.64 s
113. A book is kept on the surface of a table. If the gravitational pull of the earth on the book is the force of action, then the force of reaction is exerted by  
 (a) the book on the table  
 (b) the book on the earth  
 (c) the table on the book  
 (d) the table on the earth
114. Kinetic viscosity of a given liquid is the ratio of the  
 (a) coefficient of viscosity to the density  
 (b) coefficient of viscosity to the surface tension  
 (c) density to the coefficient of viscosity  
 (d) surface tension to the coefficient of viscosity
115. When oil floats on water, the surface tension of water  
 (a) vanishes immediately  
 (b) decreases considerably  
 (c) increases considerably  
 (d) remains unaffected
116. Consider two hollow glass spheres, one containing water and the other containing mercury. Each liquid fills about one-tenth of the volume of the sphere. In zero gravity environment  
 (a) water and mercury float freely inside the sphere  
 (b) water forms a layer on the glass, while mercury floats  
 (c) mercury forms a layer on the glass, while water floats  
 (d) water and mercury both form a layer on the glass
117. In the relation  $\alpha = \beta t + \lambda$ ,  $\alpha$  and  $\lambda$  are measured in meter (m) and  $t$  is measured in second (s). The SI unit of  $\beta$  must be  
 (a) m (b) ms  
 (c) s (d)  $\text{ms}^{-1}$
118. An object is kept 5 cm in front of a concave mirror of focal length 15 cm. What will be the nature of the image?  
 (a) Virtual, not magnified  
 (b) Virtual, magnified  
 (c) Real, not magnified  
 (d) Real, magnified
119. The density of cast iron having specific gravity 7.20 is  
 (a)  $7.20 \text{ kg/m}^3$  (b)  $720 \text{ kg/m}^3$   
 (c)  $72 \text{ kg/m}^3$  (d)  $7200 \text{ kg/m}^3$
120. What is the telescope designed to search for earth-size planets in the nearby region of our galaxy, termed as?  
 (a) Hubble telescope (b) Kepler telescope  
 (c) Copernicus telescope (d) Newton telescope
- 121.
- 
- A current  $I$  in a lamp varies with voltage  $V$  as shown in the figure given above. Which one of the following is the variation of power  $P$  with current  $I$ ?
- 
122. Net charge in a current-carrying conductor is  
 (a) always positive  
 (b) always negative  
 (c) zero  
 (d) either positive or negative
123. The audible frequency range of a human ear is  
 (a) 20 Hz to 200 Hz (b) 2 Hz to 20 Hz  
 (c) 200 Hz to 2000 Hz (d) 20 Hz to 20000 Hz
124. Which one of the following is the resistance that must be placed parallel with  $12 \Omega$  resistance to obtain a combined resistance of  $4 \Omega$ ?  
 (a)  $2 \Omega$  (b)  $4 \Omega$   
 (c)  $6 \Omega$  (d)  $8 \Omega$
125. An electric iron of resistance  $20 \Omega$  takes a current of 5 A. The heat developed in joules in 30 s is  
 (a) 5 kJ (b) 10 kJ  
 (c) 15 kJ (d) 20 kJ
126. A house, served by a 220 V supply line, is protected by a 9 A fuse. What is the maximum number of 60 watt bulbs that can be turned on in parallel?  
 (a) 11 (b) 22  
 (c) 33 (d) 44
127. An object is placed at a distance of 12 cm from a convex lens on its principal axis and a virtual image of certain size is formed. If the object is moved further 8 cm away from the lens, a real image of the same size as that of the virtual image is formed. Which one of the following is the focal length of the lens?  
 (a) 15 cm (b) 16 cm  
 (c) 18 cm (d) 20 cm

128. Different objects at different distances are seen by the eye. The parameter that remains constant is  
 (a) the focal length of the eye lens  
 (b) the object distance from the eye lens  
 (c) the radii of curvature of the eye lens  
 (d) the image distance from the eye lens
129. A spring has length ' $l$ ' and spring constant ' $k$ '. It is cut into two pieces of lengths  $l_1$  and  $l_2$  such that  $l_1 = nl_2$ . The force constant of the spring of length  $l_1$  is  
 (a)  $k(l+n)$  (b)  $k$   
 (c)  $k/(n+1)$  (d)  $k[(n+1)/n]$
130. A vessel contains oil of density  $0.8 \text{ gm/cm}^3$  over mercury of density  $13.6 \text{ gm/cm}^3$ . A homogeneous sphere floats with half of its volume immersed in mercury and the other half in oil. The density of the material of the sphere in CGS unit is  
 (a) 3.3 (b) 6.4  
 (c) 7.2 (d) 12.8
131. Water flows out of the hole of a bucket and follows a parabolic path. If the bucket falls freely under gravity, the water flow (ignoring air resistance)  
 (a) follows a straight-line path relative to the falling bucket  
 (b) follows a parabolic path relative to the falling bucket  
 (c) stops  
 (d) decreases but continues to flow
132. 1 gm of ice at  $0^\circ\text{C}$  is mixed with 1 gm of steam at  $100^\circ\text{C}$ . After thermal equilibrium, the temperature of the mixture is  
 (a)  $0^\circ\text{C}$  (b)  $50^\circ\text{C}$   
 (c)  $80^\circ\text{C}$  (d)  $100^\circ\text{C}$
133. Which one of the following elements exists in liquid state at room temperature ?  
 (a) Mercury (b) Lead  
 (c) Sodium (d) Calcium
134. Aluminium is more reactive than iron but aluminium is less easily corroded than iron, because  
 (a) oxygen forms a protective oxide layer  
 (b) it is a noble metal  
 (c) iron undergoes reaction easily with water  
 (d) iron forms ions
135. According to which one of the following laws it is indicated that when two or more gases react with one another, their volumes bear a simple ratio ?  
 (a) Law of mass action  
 (b) Law of multiple proportions  
 (c) Law of reciprocal proportions  
 (d) Law of combining volumes
136. Equal quantities (50 mL) of the following four samples of water are placed in four beakers of 100 mL capacity. Their boiling points are determined accurately using the same thermometer. Which sample of water will have the lowest boiling point as compared to other three samples ?  
 (a) Distilled water  
 (b) Bottled mineral water  
 (c) Well water  
 (d) Seawater
137. Dry ice is used for making cold-baths in laboratories by mixing with volatile organic solvents. Identify the form of dry ice from the following.  
 (a) Gaseous carbon dioxide (b) Liquid carbon dioxide  
 (c) Solid carbon dioxide (d) Solid hydrogen oxide
138. Acid turns blue litmus red and base turns red litmus blue. A student tested a liquid with a red litmus paper which remained red with no change. This shows that the liquid  
 (a) is not a base  
 (b) is not an acid  
 (c) is neither an acid nor a base  
 (d) must be pure water
139. Arrange the following bases in increasing order of their, basic strength  
 1. Sodium hydroxide  
 2. Magnesium hydroxide  
 3. Aluminium hydroxide  
 4. Ammonium hydroxide  
 Select the correct answer using the code given below  
 Code :  

	A	B	C	D
(a)	4	2	1	3
(b)	4	1	2	3
(c)	4	3	2	1
(d)	1	2	3	4
140. Consider the following statements  
 1. Soap cannot be used in acidic water.  
 2. Ionic part of a soap is  $-\text{COO}^- \cdot \text{Na}^+$ .  
 3. Soap dissolves in water faster than detergent.  
 Which of the statements given above is/are correct ?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 3 only (d) 1 only
141. Match List-I with List-II and select the correct answer using the code given below the Lists
- |    | List-I<br>(Material) | List-II<br>(Important Ingredient)      |
|----|----------------------|--|
| A. | Cement               | 1. Sodium salt of fatty acids          |
| B. | Glass                | 2. Carbon black                        |
| C. | Ink                  | 3. Silica in the form of quartz        |
| D. | Soap                 | 4. Aluminates and silicates of calcium |
- Code :  

	A	B	C	D
(a)	4	3	2	1
(b)	1	2	3	4
(c)	1	3	2	4
(d)	4	2	3	1
142. The concentration of hydrochloric acid in a given solution is  $10^{-8} \text{ M}$ . What is the value of pH for this solution ?  
 (a) 7 (b)  $> 7$  but not 14  
 (c)  $< 7$  (d) 14
143. Diamond is a  
 (a) good conductor and soft  
 (b) non-conductor and soft  
 (c) non-conductor and hard  
 (d) good conductor and hard
144. Consider the following statements regarding aluminium paint  
 1. It is fairly good heat-resistant.  
 2. It possesses good electrical resistance.  
 3. It cannot be used for hot water pipe.  
 Which of the statements given above is/are correct ?  
 (a) 1 and 3 (b) 1 only  
 (c) 1 and 2 (d) 2 and 3

145. Following statements are made in connection with carbon dioxide ( $\text{CO}_2$ )

1.  $\text{CO}_2$  is a poisonous gas.
2.  $\text{CO}_2$  is an acidic oxide.
3.  $\text{CO}_2$  turns limewater milky.

Which of the statements given above is/are correct ?

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

146. Which of the following is the best example of the law of conservation of mass ?

- (a) When 12 gm of carbon is heated in vacuum, there is no change in mass  
(b) Weight of platinum wire is the same before and after heating  
(c) A sample of air increases in volume when heated at constant pressure but mass remains unchanged  
(d) 12 gm of carbon combines with 32 gm of oxygen to give 44 gm of carbon dioxide

147. Which one of the following is not a mixture ?

- (a) Air                              (b) Mercury  
(c) Milk                             (d) Cement

**Directions (Q. 148-150) :** The following three (3) items consist of two statements, one labelled as 'Assertion (A)' and the other as 'Reason (R)'. You are to examine these two

statements carefully and select the answers to these items using the code given below

Code :

- (a) Both A and R are individually true and R is the correct explanation of A  
(b) Both A and R are individually true but R is not the correct explanation of A  
(c) A is true but R is false  
(d) A is false but R is true

148. **Assertion (A) :** The Americans refused to pay taxes imposed by the British Parliament during the American War of Independence.

**Reason (R) :** The Americans has no representation in the British Parliament.

149. **Assertion (A) :** There was a country-wide agitation against the Simon Commission.

**Reason (R) :** The members of the Simon Commission discontinued their work in face of the country-wide agitation.

150. **Assertion (A) :** On a wet floor of a bathroom, a small circular area around a pinch of foam appears to be dry.

**Reason (R) :** Soap molecules reduce surface tension and increase surface area of the thin layer of water on the wet floor.

**Answers : General Studies**

1	(d)	51	(c)	101	(a)
2	(c)	52	(a)	102	(a)
3	(b)	53	(d)	103	(a)
4	(d)	54	(b)	104	(a)
5	(b)	55	(c)	105	(d)
6	(c)	56	(d)	106	(c)
7	(a)	57	(a)	107	(b)
8	(a)	58	(b)	108	(d)
9	(c)	59	(c)	109	(d)
10	(a)	60	(b)	110	(c)
11	(b)	61	(d)	111	(c)
12	(a)	62	(c)	112	(c)
13	(c)	63	(b)	113	(c)
14	(a)	64	(b)	114	(c)
15	(c)	65	(a)	115	(b)
16	(d)	66	(a)	116	(b)
17	(a)	67	(c)	117	(d)
18	(d)	68	(c)	118	(b)
19	(c)	69	(b)	119	(d)
20	(a)	70	(c)	120	(a)
21	(c)	71	(d)	121	(b)
22	(d)	72	(c)	122	(c)
23	(b)	73	(d)	123	(d)
24	(d)	74	(c)	124	(c)
25	(c)	75	(b)	125	(c)
26	(c)	76	(d)	126	(c)
27	(b)	77	(a)	127	(b)
28	(c)	78	(c)	128	(c)
29	(c)	79	(c)	129	(a)
30	(a)	80	(a)	130	(c)
31	(a)	81	(b)	131	(b)
32	(a)	82	(a)	132	(d)
33	(c)	83	(c)	133	(a)
34	(b)	84	(c)	134	(d)
35	(d)	85	(c)	135	(b)
36	(a)	86	(c)	136	(a)
37	(d)	87	(b)	137	(c)
38	(b)	88	(c)	138	(b)

39	(d)	89	(d)	139	(c)
40	(b)	90	(b)	140	(a)
41	(a)	91	(a)	141	(a)
42	(c)	92	(b)	142	(c)
43	(d)	93	(a)	143	(c)
44	(c)	94	(d)	144	(a)
45	(d)	95	(c)	145	(b)
46	(b)	96	(d)	146	(a)
47	(d)	97	(a)	147	(b)
48	(a)	98	(a)	148	(a)
49	(a)	99	(d)	149	(c)
50	(d)	100	(c)	150	(a)