

**(General Ability)**  
**PART—A**

**SPOTTING ERRORS**

**Directions :** In this section, you have to spot errors in sentences. Read each sentence to find out whether there is an error in any underlined part. Errors, if any, are only in the underlined parts. No sentence has more than one error. Letters (a), (b) and (c) have been placed beneath the underlined parts for their identification. When you find an error in any one of the underlined parts, indicate your response on the separate Answer Sheet in the relevant column. You may feel that there is no error in the sentence. In that case, letter (d) will signify a 'No error' response.

1. The pile of books are missing. No error  
(a) (b) (c) (d)

2. Either he or I are wrong. No error  
(a) (b) (c) (d)

3. Please tell to him to do his work. No error  
(a) (b) (c) (d)

4. Though he is good he is mischievous. No error  
(a) (b) (c) (d)

5. The thief hit me suddenly and hardly. No error  
(a) (b) (c) (d)

6. The number of books in our library is less. No error  
(a) (b) (c) (d)
7. The general said, “Soldiers, do not fire till I will give the order.” No error  
(a) (b) (c) (d)
8. Neither of the candidates are good. No error  
(a) (b) (c) (d)
9. This machine is more efficient than any other equipments in the workshop.  
(a) (b) (c)
- No error  
(d)
10. The tin deposits in that area would probably be exhausted in to near future.  
(a) (b) (c)
- No error  
(d)
11. The operation of this machine is different to that of the other. No error  
(a) (b) (c) (d)

**SENTENCE IMPROVEMENT**

**Directions :** Look at the underlined part of each sentence. Below each sentence three possible substitutions are given for the underlined part. If one of them, i.e., (a), (b) or (c) is better than the underlined part, indicate your response on the Answer Sheet against the corresponding letter. If none of the substitutions improves the sentence, indicate (d) as your response on the Answer Sheet.

12. I don't remember exactly when did I go to Simla last year.

- (a) when I did go
- (b) when I was going
- (c) when I went
- (d) No improvement

13. Even he worked hard, he failed in the examination.

- (a) Since
- (b) Although
- (c) For
- (d) No improvement

14. He was asked to arbitrate with two merchants in a dispute.

- (a) to arbitrate between
- (b) to arbitrate at
- (c) to arbitrate
- (d) No improvement

15. He is definitely the cleverer among the two.

- (a) in
- (b) of
- (c) than
- (d) No improvement

16. He is resembling his father.

- (a) has resembled
- (b) was resembling
- (c) resembles
- (d) No improvement

17. Would you mind closing the window?

- (a) to close
- (b) in closing
- (c) for closing
- (d) No improvement

18. I can be grateful if you could write to me about it.

(a) would be

(b) should be

(c) must be

(d) No improvement

21. He is knowing the secret.

(a) knows

(b) has been knowing

(c) was knowing

(d) No improvement

19. A majority of the passengers could have been saved if the driver had applied the brakes in time.

(a) - had been saved

(b) may have been saved

(c) could have saved

(d) No improvement

22. The meeting has been put off to Friday next.

(a) put on

(b) put out

(c) put for

(d) No improvement

20. He is living in this house for the past ten years.

(a) was living

(b) had been living

(c) has been living

(d) No improvement

23. If you will come with me I shall be happy.

(a) come with me

(b) had come with me

(c) came with me

(d) No improvement

**FILL IN THE BLANKS**

**Directions :** Each of the items in this section contains a blank followed by words listed as (a), (b), (c) and (d). Choose the most appropriate word to fill in the blank and indicate your response in the Answer Sheet accordingly.

- 24.** When the police arrived, the thief — away.
- (a) strolled
  - (b) moved
  - (c) galloped
  - (d) ran
- 25.** His — as an officer was not quite satisfactory.
- (a) acting
  - (b) doing
  - (c) deed
  - (d) record
- 26.** The two children stood at the — of the table.
- (a) conclusion
  - (b) terminal
  - (c) end
  - (d) termination
- 27.** The old man was — weak to open the door.
- (a) very
  - (b) far
  - (c) much
  - (d) too

**ANTONYMS**

**Directions :** Each question in this section consists of a word printed in capital letters followed by words listed as (a), (b), (c) and (d). Choose from these the word that has most nearly the meaning **opposite** to the word in capital letters and indicate your response in the Answer Sheet accordingly.

**28. FRAIL**

(a) strong

(b) big

(c) old

(d) weak

**29. INDIGENOUS**

(a) genuine

(b) foreign

(c) indigent

(d) indignant

**30. POVERTY**

(a) prosperity

(b) adversary

(c) adversity

(d) diversity

**31. WHOLESOME**

(a) complete

(b) unhealthy

(c) incomprehensible

(d) few

**COMPREHENSION**

**Directions :** Read the following short passages. After each passage, you will find several questions based on what is stated or implied in the passages. Answer the questions that follow each passage.

**PASSAGE—I**

In a free country, the man who reaches the position of leader is usually one of outstanding character and ability. Moreover, it is usually possible to foresee that he will reach such a position, since early in life one can see his qualities of character. But this is not always true in the case of a dictator; often he reaches his position of power through chance, very often through the unhappy state of his country. It is possible that Hitler would never have become the leader of Germany if that country had not been driven to despair.

**32.** In a free country, one who becomes a leader

(a) must be of outstanding character and ability

(b) must show qualities of character from an early age

(c) is generally of a remarkable character and ability

(d) must see that his country is free from despair

**33.** Hitler became a leader because

(a) he exhibited leadership qualities

(b) Germany was a free country

(c) Germany was in despair

(d) Germans wanted a dictator

**34.** The passage seems to suggest that

(a) despair sometimes leads to dictatorship

(b) Hitler was no leader

(c) a leader is chosen only by a free country

(d) a leader foresees his future position

PASSAGE—II

The dog is a very intelligent animal and it can be trained for many duties. Some dogs work with the police and the army as sentries and trackers, and there are medals that are awarded to dogs for bravery in action. Other dogs act as seeing-eyes for the blind, and some breeds are specially trained for rescue work among mountains and snow. Jobs like herding sheep and cattle and guarding homes are also done by them. Whenever man lives and works in the Arctic Circle, in the desert, in the jungle, in the moors or mountains, the dog is his faithful companion and help. A common mongrel may possess these qualities just as much as the aristocratic bloodhound.

**35.** The passage tells us that dogs

- (a) can be trained to do different kinds of work
- (b) are capable of difficult work
- (c) are of different types
- (d) alone are a great help to man

**37.** The passage implies that

- (a) only dogs are faithful but not man
- (b) man would have felt helpless without dogs
- (c) the dog has certain qualities that make it man's trustworthy companion
- (d) dogs can do almost anything

**36.** Medals are awarded to some dogs for

- (a) their brave deeds
- (b) working with the police
- (c) serving as sentries
- (d) being able to perform difficult work

**38.** The phrase 'aristocratic bloodhound' in the passage means

- (a) the dog kept by wealthy people
- (b) a pedigree dog
- (c) a dog fond of blood
- (d) any big dog

**SELECTING WORDS**

**Directions :** In the following passage at certain points, you are given a choice of three words marked (a), (b) and (c), one of which fits the meaning of the passage. Choose the best word out of the three. Mark the letter, viz., (a), (b) or (c), relating to this word on your Answer Sheet. Examples **K** and **L** have been solved for you.

The **K.** (a) boy was in the school in Simla. **L.** (a) She was homesick.

(b) horse

(b) It

(c) dog

(c) He

*Explanation :* Out of the list given in item **K**, only 'boy' is the correct answer because usually, a boy, and not a horse or a dog, attends school. So (a) is to be marked on the Answer Sheet for item **K**. A boy is usually referred to as 'he', so for item **L**, (c) is the correct answer. Notice that to solve the first item **K**, you have to read the rest of the sentence and then see what fits the best.

**PASSAGE**

Drobny defied the critics. He had played through the Wimbledon fortnight and reached the final. Could he win just one more match and take the crown, or would he fail again at the last test and justify those who said that he lacked that little extra something that makes the champion? His opponent was the Australian Ken Rosewall, **39.** (a) that brilliant

(b) a

(c) the

youngster and already a master **40.** (a) with worldwide experience behind him.

(b) of

(c) for

Jaroslav Drobny, **41.** (a) a son of a Czech carpenter who **42.** (a) had started the  
(b) that (b) was  
(c) the (c) has

boy off at the **43.** (a) age of five with a wooden 'bat' in lieu **44.** (a) for a racquet,  
(b) stage (b) of  
(c) career (c) to

went on **45.** (a) to the famous Centre Court at Wimbledon **46.** (a) in day with  
(b) for (b) on  
(c) with (c) that

the full knowledge that this **47.** (a) can be the game of his **48.** (a) life. He had  
(b) must (b) age.  
(c) would (c) day.

kept on trying, and **49.** (a) he could keep on trying, but **50.** (a) games would  
(b) one (b) matches  
(c) you (c) opportunities

become fewer and fewer. He knew that he had to gain an advantage from the start, and he had this young rival set off against him.

**PART—B**

- 51.** Which of the following statements about the Progressive Writers' Association, which created a generation of creative people, is/are correct?
1. It thought critically about the poverty and hunger of the Indian people.
  2. It brought out the positive developments of colonialism.
  3. Its creative pursuits began with a critical evaluation of Gandhian politics.
  4. It planned India's development model.

Select the correct answer using the code given below.

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

- 52.** E. V. Ramaswami Naicker was associated with
1. reforming Brahminism
  2. the Self-Respect Movement
  3. the Low Caste Movement
  4. the Communist Movement

Select the correct answer using the code given below.

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

- 53.** Consider the following statements about 'Param Vir Chakra' :

1. It is the highest peacetime gallantry award.
2. It is the replacement of British Victoria Cross.
3. It can be awarded to civilians.

Which of the statements given above is/are correct?

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

- 54.** Gandhiji's 'Harijan Campaign' sought to

1. attack caste system as a whole
2. open wells, roads, temples, etc., to Harijans
3. encourage social work among Harijans

Select the correct answer using the code given below.

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

**55.** The Salt Satyagraha called by Mahatma Gandhi saw the

1. violation of salt laws along coastal India
2. participation of women
3. upward swing when it came to the working class joining in

Select the correct answer using the code given below.

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

**56.** What was the code name for the Indian Air Force operations during the Kargil Conflict of 1999?

- (a) Operation Vijay  
(b) Operation Meghdoot  
(c) Operation Indradhanush  
(d) Operation Safed Sagar

**57.** During the Civil Disobedience Movement, tribals in Chota Nagpur

1. gave up opium consumption
2. wore Khadi
3. gave up drinking liquor and eating meat

Select the correct answer using the code given below.

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

**58.** Which of the following was/were the new feature/features visible in the Quit India Movement (1942)?

1. Large-scale movements in some of the industrial areas
2. Large-scale mass involvement in some of the Princely States
3. Increase in the activities of the Kisan Sabha

Select the correct answer using the code given below.

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

**59.** The Financial Sector Legislative Reforms Commission report submitted recently, among others, contained which of the following proposals?

1. All regulators will have an empowered board, the role of each of the members has been defined.
2. The Commission envisages an important process of judicial review of the regulations.
3. The draft code does not mention about executive powers.

Select the correct answer using the code given below.

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

**60.** The Swadeshi Movement evoked serious responses in

- (a) Madras and Hyderabad
- (b) Bengal and Maharashtra
- (c) Bihar and Orissa
- (d) the Princely States

**61.** Who among the following was associated with the Gudem-Rampa Rebellion?

- (a) Birsa Munda
- (b) Kushal Konwar
- (c) Alluri Sitarama Raju
- (d) Mangal Pandey

**62.** The Bali Ministerial Declaration and the ministerial decisions that were adopted on 7th December, 2013 contained several issues. Which of the following are related to the Least-Developed Countries?

1. Preferential Rules of Origin for Least-Developed Countries
2. Operationalization of the Waiver Concerning Preferential Treatment to Services
3. Duty-Free and Quota-Free (DFQF) Market Access for Least-Developed Countries

Select the correct answer using the code given below.

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

**63.** The 'Doctrine of Lapse' was a policy that aimed to

- (a) control the rebellions in the Princely States
- (b) extend the military strength of the British
- (c) regulate the landlords
- (d) extend the territorial boundaries of the English East India Company

**64.** The Permanent Settlement of 1793 introduced

- (a) peasant rights
- (b) bourgeois property rights in land to Zamindars
- (c) shipping rights for the English East India Company
- (d) rights for women to have property rights

**65.** Which of the following is/are true relating to the Lokpal Bill, 2013, which was assented to by the President on 1st January, 2014?

1. It provides for creation of anti-graft ombudsman to investigate corruption charges against public functionaries including the Prime Minister, Ministers and Members of the Parliament.
2. The Bill makes it incumbent upon States to make within a year their own law for setting up Lokayuktas on the lines of the Lokpal Bill.
3. States are free not to set up Lokayuktas, if they do not so desire.

Select the correct answer using the code given below.

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

**66.** Who among the following was associated with the Hindustan Socialist Republican Association?

- (a) Subhash Chandra Bose
- (b) Mahatma Gandhi
- (c) Bhagat Singh
- (d) Laxmi Sehgal

**67.** The Indian National Army was organized to fight against

- (a) Germany and Japan
- (b) the British in India
- (c) Japan
- (d) Russia

**68.** Which of the following is/are true relating to Nelson Mandela?

1. He was the first President of South Africa.
2. Mandela spent 18 years in prison on Robben Island.
3. Mandela became the President in 1990 after his release from the prison.

Select the correct answer using the code given below.

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

**69.** The Non-Cooperation Movement was withdrawn after the

- (a) First World War
- (b) Chauri-Chaura Incident
- (c) Bardoli Satyagraha
- (d) Gandhi-Irwin Pact

**70.** Which of the following books was written by B. R. Ambedkar?

- (a) *The Discovery of India*
- (b) *My Life*
- (c) *Buddha or Karl Marx*
- (d) *Hind Swaraj*

**71.** Which of the following is/are correct relating to the North-Eastern Region Community Resource Management Project for upland areas?

1. It is a livelihood and rural development project aimed to transform the lives of the poor and marginalized tribal families in North-East India.
2. This Project is initiated exclusively by the North-Eastern Council.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**72.** Which of the following statements are true for the Fundamental Right to Life and Personal Liberty as guaranteed under Article 21 of the Constitution of India?

1. The Right is available to citizens as well as aliens.
2. It covers protection against arbitrary executive and legislative action.
3. It includes the right to live with human dignity.
4. It can be taken away according to the procedure established by law.

Select the correct answer using the code given below.

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

**73.** Consider the following statements :

1. 'SAMARTH 2014', a national festival for showcasing the abilities of persons with disabilities, was organized recently in New Delhi by the Ministry of Culture.
2. India is a party to the United Nations Convention on the Rights of Persons with Disabilities.

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

**74.** Consider the following statements about 'Sahayog Kaijin' :

1. It is a joint exercise of the Coast Guards of India and Japan.
2. Its 13th edition was held recently off Chennai Port.

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

**75.** Consider the following statements about grand slam tennis tournaments :

1. There are four grand slam annual tennis tournaments.
2. The first grand slam of a year is the US Open.
3. The Australian and the US tournaments are played on grass court.

Which of the statements given above is/are correct?

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

**Directions :**

The following **six (6)** items consist of two statements, Statement I and Statement II. You are to examine these two statements carefully and select the answers to these items using the code given below :

Code :

- (a) Both the statements are individually true and Statement II is the correct explanation of Statement I
- (b) Both the statements are individually true but Statement II is **not** the correct explanation of Statement I
- (c) Statement I is true but Statement II is false
- (d) Statement I is false but Statement II is true

**76. Statement I :**

Minerals are formed by slow cooling of the magma.

Statement II :

Very small crystals are formed when lava cools quickly on the surface.

**77. Statement I :**

The Kullu Valley in Himachal Pradesh receives copious snowfall during winter.

Statement II :

The Kullu Valley receives moisture-bearing wind of the Western Disturbances during winter.

**78. Statement I :**

The hills with dense vegetation cover do not experience heavy soil erosion.

Statement II :

The vegetation cover helps infiltration of rainwater and binding of soils.

**79. Statement I :**

The decrease of air temperature with increasing altitudes in the atmosphere is called the vertical temperature gradient.

Statement II :

In Troposphere, air temperature decreases with increasing altitude due to radiation from the Earth.

**80. Statement I :**

Chemical weathering processes are found more active in hot and humid environment.

Statement II :

High temperature and rainfall help in the process of decomposition of rocks.

**81. Statement I :**

The acceleration due to gravity decreases with increase in height from the surface of the Earth.

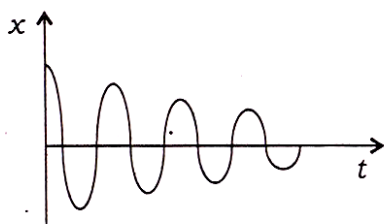
Statement II :

The acceleration due to gravity is inversely proportional to the square of the distance from the centre of the Earth.

- 82.** The number of valence electrons in the  $O^{2-}$  ion is
- (a) 4  
(b) 6  
(c) 8  
(d) 10
- 83.** Within an animal cell, the most abundant inorganic constituent of protoplasm is
- (a) sodium and potassium salt  
(b) water  
(c) iron  
(d) phosphate
- 84.** Two conducting wires  $A$  and  $B$  are made of same material. If the length of  $B$  is twice that of  $A$  and the radius of circular cross-section of  $A$  is twice that of  $B$ , then their resistances  $R_A$  and  $R_B$  are in the ratio
- (a) 2 : 1  
(b) 1 : 2  
(c) 1 : 8  
(d) 1 : 4
- 85.** Consider the following statements :
- A real image
1. can be formed on a screen
  2. is always magnified and inverted
- 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.** Which one of the following is the correct electronic configuration of chlorine?
- (a) 2, 7, 8  
(b) 2, 8, 7  
(c) 2, 8, 8  
(d) 7, 8, 2
- 87.** In honey, which one among the following sugars predominates?
- (a) Sucrose  
(b) Fructose  
(c) Galactose  
(d) Maltose
- 88.** During short-circuiting, the current flowing in the electrical circuit
- (a) reduces substantially  
(b) does not change  
(c) increases instantaneously  
(d) varies continuously
- 89.** The number of aluminium ions present in 54 g of aluminium (atomic weight 27) is
- (a) 2  
(b) 18  
(c)  $1.1 \times 10^{24}$   
(d)  $1.2 \times 10^{24}$
- 90.** What is 'breakbone fever' most commonly known as?
- (a) Typhoid  
(b) Rhinitis  
(c) Yellow fever  
(d) Dengue

91. Van de Graaff generator is used for
- (a) accelerating charged particles
  - (b) generating large currents
  - (c) generating electric field
  - (d) generating high-frequency voltage
92. The most stable form of carbon is
- (a) diamond
  - (b) graphite
  - (c) fullerene
  - (d) coal
93. Which one among the following is **not** a sexually transmitted disease?
- (a) Syphilis
  - (b) Gonorrhoea
  - (c) Scurvy
  - (d) Hepatitis B
94. The summer and winter seasons in a year are caused by
- (a) aphelion (farthest) and perihelion (nearest) positions of the Earth from the Sun during the annual revolution
  - (b) rotation of the Earth on its axis
  - (c) variation in solar insolation
  - (d) revolution of the Earth on its inclined axis
95. The latest discovered state of matter is
- (a) solid
  - (b) Bose-Einstein condensate
  - (c) plasma
  - (d) liquid
96. Which of the following pairs represents isoelectronic ions?
- (a)  $\text{Na}^+$ ,  $\text{K}^+$
  - (b)  $\text{K}^+$ ,  $\text{Mg}^{2+}$
  - (c)  $\text{Mg}^{2+}$ ,  $\text{Ca}^{2+}$
  - (d)  $\text{Ca}^{2+}$ ,  $\text{S}^{2-}$
97. After diagnosis of disease in a person, the doctor advises the patient iron and folic acid tablets. The person is suffering from
- (a) osteoporosis
  - (b) anaemia
  - (c) goitre
  - (d) protein-energy malnutrition
98. Which one among the following is the coral group of islands of India?
- (a) Andaman
  - (b) Nicobar
  - (c) Minicoy
  - (d) Lakshadweep
99. Bernoulli's principle is based on which one among the following laws?
- (a) Conservation of mass
  - (b) Conservation of momentum
  - (c) Conservation of angular momentum
  - (d) Conservation of energy

100.



The displacement ( $x$ )-time ( $t$ ) graph given above approximately represents the motion of a

- (a) simple pendulum placed in vacuum
- (b) simple pendulum immersed in water
- (c) simple pendulum placed in outer space
- (d) point mass moving in air

101. Dihydrogen can be prepared on a commercial scale by the action of steam on hydrocarbons, when a mixture of CO and H<sub>2</sub> gas is formed. It is known as

- (a) water gas
- (b) producer gas
- (c) industrial gas
- (d) fuel gas

102. Dropsy is a disease caused due to adulteration in

- (a) Ghee
- (b) Arhar Dal
- (c) mustard oil
- (d) turmeric powder

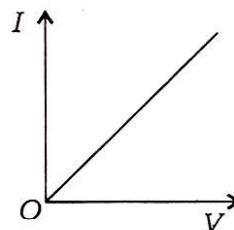
103. Consider the following surface winds :

1. Doldrums
2. Trade winds
3. Westerlies
4. Polar winds

Which one among the following is the idealized global pattern of these winds from the Equator to the Pole?

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

104.



The current ( $I$ )-voltage ( $V$ ) plot of a certain electronic device is given above. The device is

- (a) a semiconductor
- (b) a conductor which obeys Ohm's law
- (c) a superconductor
- (d) an insulator

**105.** Which of the following statements about hydrogen is/are correct?

1. Hydrogen has three isotopes of which protium is the most common.
2. Hydrogen ion ( $H^+$ ) exists freely in solution.
3. Dihydrogen,  $H_2$ , acts as a reducing agent.

Select the correct answer using the code given below.

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

**106.** Leaves of which of the following plants are **not** used for the rearing of silkworms?

- (a) Mulberry  
(b) Castor  
(c) Oak  
(d) Teak

**107.** Taungup Pass is a mountain corridor connecting India with

- (a) Afghanistan  
(b) China  
(c) Pakistan  
(d) Myanmar

**108.** The temperature of water at the bottom of a lake whose upper surface has frozen to ice would be around

- (a)  $-10^\circ C$   
(b)  $0^\circ C$   
(c)  $4^\circ C$   
(d)  $-4^\circ C$

**109.** Which of the following statements is correct?

- (a) Fullerenes have only six-membered carbon rings  
(b) Fullerenes are cage-like molecules  
(c) Diamond is thermodynamically the most stable allotrope of carbon  
(d) Graphite is slippery and hard, and is therefore used as a dry lubricant in machines

**110.** Which one among the following groups is the most abundant in terms of number of species identified?

- (a) Fungi  
(b) Green plants  
(c) Bacteria  
(d) Insects

**111.** Consider the following statements :

1. Crystallization is a form of mechanical weathering.
2. Hydration causes granular disintegration.
3. Frost action is synonymous with freeze-thaw action.

Which of the statements given above are correct?

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

**112.** Lapland is a cultural region largely within the Arctic Circle in the north of the Scandinavian Peninsula. Who inhabited the Lapland?

- (a) Sami people
- (b) Padaung people
- (c) Hamar people
- (d) Himba people

**113.** If speed of light in air is  $3 \times 10^8$  m/s, the speed of light in glass (with refractive index 1.5) would be

- (a)  $2 \times 10^8$  m/s
- (b)  $4.5 \times 10^8$  m/s
- (c)  $3 \times 10^8$  m/s
- (d)  $1.5 \times 10^8$  m/s

**114.** While looking at an image formed by a convex lens (one half of the lens is covered with a black paper), which one of the following will happen to the image?

- (a) Half of the image will be visible
- (b) Intensity of the image will be diminished
- (c) Image will be inverted now
- (d) One can see an image of smaller size

**115.** Which of the following acids is a mineral acid?

- (a) Citric acid
- (b) Hydrochloric acid
- (c) Ascorbic acid
- (d) Tartaric acid

**116.** Considering the locations of mountains in India, which one among the following is in right sequence from south to north?

- (a) Doddabetta, Kailash, Dhaulagiri, Vindhychal
- (b) Doddabetta, Vindhychal, Dhaulagiri, Kailash
- (c) Dhaulagiri, Kailash, Doddabetta, Vindhychal
- (d) Dhaulagiri, Vindhychal, Doddabetta, Kailash

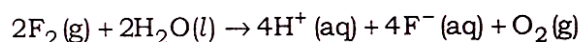
**117.** A balloon filled up with gas would only go up in air if it is filled up with

- (a) a gas whose density is lower than air
- (b) a gas whose density is higher than air
- (c) cold air
- (d) water vapour

**118.** Planet A has double the radius than that of Planet B. If the mass of Planet A is 4 times heavier than the mass of Planet B, which of the following statements regarding weight of an object is correct?

- (a) Heavier on Planet A than on Planet B
- (b) Heavier on Planet B than on Planet A
- (c) Same on both the Planets
- (d) Cannot be measured on Planet B

**119.** Which of the following is correct regarding the reaction of fluorine with water?



- (a) Fluorine is oxidized to  $F^-$
- (b) Water is oxidized to  $O_2$
- (c) Water is reduced to  $H^+$
- (d) Oxidation state of fluorine does not change

**120.** The site of cellular respiration in animal cell is

- (a) ribosome
- (b) mitochondria
- (c) endoplasmic reticulum
- (d) lysosome

**121.** Which one among the following lakes is situated on the west coast of India?

- (a) Chilika
- (b) Ashtamudi
- (c) Pulicat
- (d) Kolleru

**122.** Sound waves are similar to the waves

- (a) of laser light passing through air
- (b) generated in a stretched wire by hitting or plucking the wire
- (c) generated in a pipe filled with air by moving the piston attached to the pipe up and down
- (d) generated by the mobile phone towers

**123.** A sound wave has frequency of 2 kHz and wavelength of 35 cm. If an observer is 1.4 km away from the source, after what time interval could the observer hear the sound?

- (a) 2 s
- (b) 20 s
- (c) 0.5 s
- (d) 4 s

**124.** Which of the following is/are amphoteric?

- (a)  $Al(OH)_3(s)$  and  $Fe(OH)_3(s)$
- (b)  $Al(OH)_3(s)$  and  $HCO_3^-(aq)$
- (c)  $Ba(OH)_2(s)$  and  $NaOH(aq)$
- (d)  $Al(OH)_3(s)$  only

**125.** Which of the following statements about vitamins are correct?

1. Vitamin C is essential to make connective tissue in body.
2. Vitamin D is needed for synthesis of eye pigment.
3. Vitamin B<sub>12</sub> helps in maturation of RBC.
4. Vitamin C is required to make use of calcium absorbed from the intestine.

Select the correct answer using the code given below.

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

**126.** What is the correct sequence from the smallest to the largest grain of the following types of clastic rocks?

- (a) Shale, sandstone, conglomerate, siltstone
- (b) Shale, siltstone, sandstone, conglomerate
- (c) Conglomerate, sandstone, shale, siltstone
- (d) Sandstone, siltstone, conglomerate, shale

**127.** Which one among the following waves bats use to detect the obstacles in their flying path?

- (a) Infrared waves
- (b) Electromagnetic waves
- (c) Ultrasonic waves
- (d) Radio waves

**128.** A fuse is used in an electric circuit to

- (a) break the circuit when excessive current flows through the circuit
- (b) break the circuit when power gets off
- (c) indicate if the current is flowing uninterrupted
- (d) complete the circuit for flow of current

**129.** The most of the mass of the atom can be found in

- (a) electrons
- (b) charges
- (c) nucleus
- (d) electron cloud

**130.** The Faroe is a group of islands lying in the Atlantic Ocean between Scotland and Iceland. This island group is also known as

- (a) Island of Sheep
- (b) Island of Goats
- (c) Island of Cows
- (d) Island of Buffaloes

**131.** The pressure of an ideal gas undergoing isothermal change is increased by 10%. The volume of the gas must decrease by about

- (a) 0.1%
- (b) 9%
- (c) 10%
- (d) 0.9%

**132.** Tuareg is a pastoral nomad living in the desert of

- (a) Kalahari
- (b) Sahara
- (c) Arabia
- (d) Patagonia

**133.** A passenger in a moving train tosses a coin upward which falls behind him. It implies that the motion of the train is

- (a) accelerated
- (b) uniform
- (c) retarded
- (d) along the circular tracks

**134.** The mass number of an atom is determined by

- (a) adding the number of neutrons and number of electrons
- (b) adding the number of protons and number of electrons
- (c) the number of protons only
- (d) adding the number of neutrons and number of protons

**135.** Match List-I with List-II and select the correct answer using the code given below the Lists :

<i>List-I</i> (Region)	<i>List-II</i> (Characteristic vegetation)
A. Selvas	1. Tropophytes
B. Savanna	2. Mosses and lichens
C. Tundra	3. Epiphytes
D. Monsoon land	4. Grasses and trees

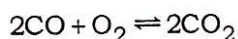
Code :

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

**136.** In optical instruments, the lenses are used to form image by the phenomenon of

- (a) reflection
- (b) refraction
- (c) scattering
- (d) diffusion

- 137.** Note the following balanced chemical equation :



Which one of the following statements is significant in relation to the above chemical equation?

- (a) One can add to a vessel only 2 mol of CO for each mol of O<sub>2</sub> added
- (b) No matter how much of these two reagents are added to a vessel, 1 mol of O<sub>2</sub> is consumed
- (c) When they react, CO reacts with O<sub>2</sub> in a 2 : 1 mol ratio
- (d) When 2 mol of CO and 1 mol of O<sub>2</sub> are placed in a vessel, they will react to give 1 mol of CO<sub>2</sub>

- 138.** Which of the following is/are the most likely cause/causes of sheet-flood found in western part of Rajasthan?

1. Scanty rainfall
2. Sudden high intensity rain
3. Loose sandy soil with scanty vegetation

Select the correct answer using the code given below.

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

- 139.** Mulching, an agronomic measure of soil conservation, is very effective because it

1. protects soil from gully erosion
2. protects soil from sheetwash and wind erosion
3. helps soil to retain moisture and nutrients

Select the correct answer using the code given below.

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

- 140.** How many cubic centimetres (cm<sup>3</sup>) are in a cubic metre (m<sup>3</sup>)?

- (a) 10<sup>3</sup>
- (b) 10<sup>6</sup>
- (c) 10<sup>9</sup>
- (d) 10<sup>12</sup>

- 141.** A semiconducting device is connected in a series circuit with a battery and a resistance. Current is found to pass through the circuit. If the polarity of the battery is reversed, the current drops to zero. The device may be

- (a) p-type semiconductor
- (b) n-type semiconductor
- (c) an intrinsic semiconductor
- (d) p-n junction

**142.** A fertilizer contains 20% nitrogen by mass. To provide a fruit tree with an equivalent of 1 kg of nitrogen, the quantity of fertilizer required is

- (a) 20 kg
- (b) 0.20 kg
- (c) 0.05 kg
- (d) 5 kg

**143.** Why is hydrolysis an effective form of chemical decomposition of bed-rock in humid tropics?

1. Humid tropics experience high temperature and humidity.
2. There is high diurnal range in temperature.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**144.** If the distance  $S$  covered by a moving car in rectilinear motion with a speed  $v$  in time  $t$  is given by  $S = vt$ , then the car undergoes

- (a) a uniform acceleration
- (b) a non-uniform acceleration
- (c) a uniform velocity
- (d) a non-uniform velocity

**145.** The phenomenon of electromagnetic induction implies a production of induced

- (a) resistance in a coil when the magnetic field changes with time
- (b) current in a coil when an electric field changes with time
- (c) current in a coil when a magnetic field changes with time
- (d) voltage in a coil when an electric field changes with time

**146.** Which one among the following is **not** a characteristic of a federal system?

- (a) There are two distinct levels of government
- (b) The responsibilities and powers of each level of government are clearly defined in a written Constitution
- (c) There is no separation of powers between the legislative and executive branches of government
- (d) A Supreme Court is entrusted with the responsibility of interpreting these provisions and arbitrating in matters of dispute

**147.** The Constitution of India guarantees the Fundamental Right to Freedom of Religion to all its citizens. Which among the following is **not** true for this Right?

- (a) It gives freedom of conscience and freedom to profess, practice and propagate any religion
- (b) It gives freedom to establish and maintain institution for religious and charitable purposes
- (c) The Right is subject to public order, morality and health
- (d) The State cannot make any law which abrogates this Right for citizens

**148.** The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 may be seen as giving effect to which of the following Fundamental Rights?

1. Equality before the Law
2. Right against Discrimination
3. Abolition of Untouchability
4. Right to Freedom of Religion

Select the correct answer using the code given below.

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

**149.** Under which of the following Acts is the National Population Register being created?

- (a) The Citizenship Act of India, 1955 as amended in 2004
- (b) The Census Act, 1948
- (c) The UID Act, 2010
- (d) None of the above

**150.** Which one among the following is **not** true about Bal Gangadhar Tilak?

- (a) He started the New English School in Poona
- (b) He founded the Shri Shivaji Fund Committee for celebration of Shiv Jayanti
- (c) He preached the cult of self-reliance
- ✓(d) He transformed the household worshipping of Ganesha into a public event