

जब तक आपको यह परीक्षण पुस्तिका खोलने को न कहा जाए तब तक न खोलें

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परीक्षण पुस्तिका अनुक्रम

क्रम संख्या

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परीक्षण पुस्तिका सामान्य योग्यता परीक्षण



समय : दो घण्टे और तीस मिनट

पूर्णांक : 600

अ नु दे श

1. परीक्षा प्रारम्भ होने के तुरन्त बाद, आप इस परीक्षण पुस्तिका की पड़ताल अवश्य कर लें कि इसमें कोई बिना छपा, फटा या खुटा हुआ पृष्ठ अथवा प्रश्नांश आदि न हो। यदि ऐसा है, तो इसे सही परीक्षण पुस्तिका से बदल लें।
2. कृपया ध्यान रखें कि OMR उत्तर-पत्रक में, उचित स्थान पर, रोल नम्बर और परीक्षण पुस्तिका अनुक्रम A, B, C या D को, ध्यान से एवं बिना किसी चूक या विसंगति के भरने और कूटबद्ध करने की जिम्मेदारी उम्मीदवार की है। किसी भी प्रकार की चूक/विसंगति की स्थिति में उत्तर-पत्रक निरस्त कर दिया जाएगा।
3. इस परीक्षण पुस्तिका पर साथ में दिए गए कोष्ठक में आपको अपना अनुक्रमांक लिखना है। परीक्षण पुस्तिका पर और कुछ न लिखें।
4. इस परीक्षण पुस्तिका में 150 प्रश्नांश (प्रश्न) दो भागों में दिए गए हैं : भाग—A और भाग—B। भाग—B में प्रत्येक प्रश्नांश हिन्दी और अंग्रेजी दोनों में छपा है। प्रत्येक प्रश्नांश में चार प्रत्युत्तर (उत्तर) दिए गए हैं। इनमें से एक प्रत्युत्तर को चुन लें, जिसे आप उत्तर-पत्रक पर अंकित करना चाहते हैं। यदि आपको ऐसा लगे कि एक से अधिक प्रत्युत्तर सही हैं, तो उस प्रत्युत्तर को अंकित करें जो आपको सर्वोत्तम लगे। प्रत्येक प्रश्नांश के लिए केवल एक ही प्रत्युत्तर चुनना है।
5. आपको अपने सभी प्रत्युत्तर अलग से दिए गए उत्तर-पत्रक पर ही अंकित करने हैं। उत्तर-पत्रक में दिए गए निर्देश देखें।
6. सभी प्रश्नांशों के अंक समान हैं।
7. इससे पहले कि आप परीक्षण पुस्तिका के विभिन्न प्रश्नांशों के प्रत्युत्तर उत्तर-पत्रक पर अंकित करना शुरू करें, आपको प्रवेश प्रमाण-पत्र के साथ प्रेषित अनुदेशों के अनुसार कुछ विवरण उत्तर-पत्रक में देने हैं।
8. आप अपने सभी प्रत्युत्तरों को उत्तर-पत्रक में भरने के बाद तथा परीक्षा के समापन पर केवल उत्तर-पत्रक अधीक्षक को सौंप दें। आपको अपने साथ परीक्षण पुस्तिका ले जाने की अनुमति है।
9. कच्चे काम के लिए पत्रक परीक्षण पुस्तिका के अन्त में संलग्न है।
10. गलत उत्तरों के लिए दण्ड :
वस्तुनिष्ठ प्रश्न-पत्रों में उम्मीदवार द्वारा दिए गए गलत उत्तरों के लिए दण्ड दिया जाएगा।
(i) प्रत्येक प्रश्न के लिए चार वैकल्पिक उत्तर हैं। उम्मीदवार द्वारा प्रत्येक प्रश्न के लिए दिए गए एक गलत उत्तर के लिए प्रश्न हेतु नियत किए गए अंकों का एक-तिहाई दण्ड के रूप में काटा जाएगा।
(ii) यदि कोई उम्मीदवार एक से अधिक उत्तर देता है, तो इसे गलत उत्तर माना जाएगा, यद्यपि दिए गए उत्तरों में से एक उत्तर सही होता है, फिर भी उस प्रश्न के लिए उपर्युक्तानुसार ही उसी तरह का दण्ड दिया जाएगा।
(iii) यदि उम्मीदवार द्वारा कोई प्रश्न हल नहीं किया जाता है अर्थात् उम्मीदवार द्वारा उत्तर नहीं दिया जाता है, तो उस प्रश्न के लिए कोई दण्ड नहीं दिया जाएगा।

जब तक आपको यह परीक्षण पुस्तिका खोलने को न कहा जाए तब तक न खोलें

Note : English version of the instructions is printed on the back cover of this Booklet.

PART—A

SPOTTING ERRORS

Directions : Each item in this section has a sentence with three underlined parts labelled (a), (b) and (c). Read each sentence to find out whether there is any error in any underlined part and indicate your response in the Answer Sheet against the corresponding letter, i.e., (a) or (b) or (c). If you find no error, your response should be indicated as (d).

1. He appears to be a honest man. No error
(a) (b) (c) (d)

2. One of the members expressed doubt if the Minister was an atheist. No error
(a) (b) (c) (d)

3. This view has been taken by one of the ablest persons who has written on this subject.
(a) (b) (c)

No error
(d)

4. Slow and steady owns the race, as the wise would say. No error
(a) (b) (c) (d)

5. We often hear people say that most human beings have not evolved
(a) (b)

or grow up enough to stick to truth or non-violence. No error
(c) (d)

SYNONYMS

Directions : Each item in this section consists of a sentence with an underlined word followed by four words or groups of words. Select the word or group of words that is **nearest in meaning** to the underlined word and mark your response in your Answer Sheet accordingly.

6. The Industrial Revolution saw a massive rise in the population of Europe.

(a) enormous

(b) erroneous

(c) hazardous

(d) perilous

7. I had some deepest convictions reflected in my work.

(a) ideas and opinions

(b) firm beliefs

(c) prejudices

(d) biases

8. This boy is very timid.

(a) courageous

(b) shy

(c) clever

(d) dull

9. My friend is as stubborn as a mule.

(a) observant

(b) obnoxious

(c) obstinate

(d) corpulent

10. His behaviour was deliberately provocative.

(a) exciting desire

(b) infuriating

(c) pitiable

(d) creating frustration

ANTONYMS

Directions : Each item in this section consists of a sentence with an underlined word followed by four words or groups of words. Select the word or group of words that is **opposite in meaning** to the underlined word and mark your response in your Answer Sheet accordingly.

11. Too many cooks spoil the broth.

- (a) tarnish
- (b) wreck
- (c) embellish
- (d) upset

12. He is biased against the students from cities.

- (a) open
- (b) prejudiced
- (c) liked
- (d) impartial

13. It is easy to be an orthodox.

- (a) idolatrous
- (b) intelligent
- (c) malignant
- (d) heterodox

14. Permit me to present you with a book.

- (a) allow
- (b) enclose
- (c) prohibit
- (d) persuade

15. None but the brave deserves the fair.

- (a) ugly person
- (b) coward
- (c) jealous person
- (d) weak person

COMPREHENSION

Directions : In this section, you have two short passages. After each passage, you will find some items based on the passage. First, read a passage and answer the items based on it and mark your response on the Answer Sheet accordingly. You are required to select your answers based on the contents of the passage and opinion of the author only.

"Now, ladies and gentlemen," said the conjuror, "having shown you that the cloth is absolutely empty, I will proceed to take from it a bowl of goldfish. Presto!"

All around the hall people were saying, "Oh, how wonderful! How does he do it?"

But the Quick Man on the front seat said in a big whisper to the people near him, "He-had-it-up-his-sleeve."

Then the people nodded brightly at the Quick Man and said, "Oh, of course"; and everybody whispered round the hall, "He-had-it-up-his-sleeve."

"My next trick," said the conjuror, "is the famous Hindostanee rings. You will notice that the rings are apparently separate; at a blow they all join (clang, clang, clang)—Presto!"

There was a general buzz of stupefaction till the Quick Man was heard to whisper, "He-must-have-had-another-lot-up-his-sleeve."

Again everybody nodded and whispered, "The-rings-were-up-his-sleeve."

The brow of the conjuror was clouded with a gathering frown.

"I will now," he continued, "show you a most amusing trick by which I am enabled to take any number of eggs from a hat. Will some gentleman kindly lend me his hat? Ah, thank you—Presto!"

He extracted seventeen eggs, and for thirty-five seconds the audience began to think that he was wonderful. Then the Quick Man whispered along the front bench, "He-has-a-hen-up-his-sleeve," and all the people whispered it on. "He-has-a-lot-of-hens-up-his-sleeve."

The egg trick was ruined.

It went on like that all through. It transpired from the whispers of the Quick Man that the conjuror must have concealed up his sleeve, in addition to the rings, hens, and fish, several packs of cards, a loaf of bread, a doll's cradle, a live guinea pig, a fifty-cent piece, and a rocking chair.

16. "The brow of the conjuror was clouded with a gathering frown." The sentence means that the conjuror

(a) was very pleased

(b) was very sad

(c) was rather angry

(d) was very afraid

17. "The egg trick was ruined." This means that

- (a) eggs were all broken
- (b) people were unconvinced
- (c) conjuror was disappointed
- (d) the trick could not be performed

18. According to the Quick Man, the conjuror

- (a) had everything bought for production
- (b) produced things with the magic he knew
- (c) had things in the large sleeves of his coat
- (d) created an illusion of things with his magic

19. The author believes that the Quick Man was really

- (a) foolish
- (b) clever
- (c) wrong
- (d) right

20. The conjuror extracted seventeen eggs from the hat of

- (a) the Quick Man
- (b) his own
- (c) one gentleman from the audience
- (d) None of the above

Magda : Good morning, Mrs. Smiles. It's wet, isn't it?

Mrs. Smiles : Yes, it is, isn't it? How are you today? All right? You haven't been studying too hard, have you? You look a bit pale.

Magda : I don't, do I? Well, I haven't been out much lately. I don't like this weather a bit. Why, we haven't had a dry day for weeks, have we?

Mrs. Smiles : No, I don't think we have. Let's see, you'll be going back home next month, won't you?

Magda : Oh no, I'm not going back yet. My sister's coming over first.

Mrs. Smiles : Oh, is she? You're looking forward to that, I expect. How long is it since you saw her?

Magda : Nearly a year now. Yes, I am looking forward to it very much.

Mrs. Smiles : She's coming over here to study?

Magda : Yes, that's right. I shan't go back home until she's settled down. I don't think I ought to, ought I?

Mrs. Smiles : Well, no, she's younger than you are, is she?

Magda : Yes, she's only eighteen.

21. Magda had not been out much lately because

(a) she had not been keeping well

(b) she was busy with her studies

(c) the weather had been unpleasant

(d) her sister had come over to stay

22. Magda was not going back home yet because

(a) it had been raining heavily

(b) her sister was coming over

(c) her studies were not completed

(d) she was not feeling well

23. Mrs. Smiles says, "You're looking forward to that." This means, Magda was _____ her sister's arrival.

(a) expecting with pleasure

(b) preparing hard for

(c) thinking greatly about

(d) watching with joy

24. Magda's sister was coming to

(a) visit her sister

(b) help Mrs. Smiles

(c) settle down in England

(d) pursue her studies

25. Mrs. Smiles and Magda are

(a) classmates

(b) school friends

(c) neighbours

(d) sisters-in-law

FILL IN THE BLANKS

Directions : Each of the following sentences in this section has a blank space and four words or groups of words given after the sentence. Select whichever word or group of words you consider most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.

26. We fail to understand your reasons for _____ the college without completing the degree.
(a) attending (b) joining
(c) leaving (d) refusing
27. She _____ her energy and started shouting only when she heard the noise of bulldozers and cranes.
(a) checked (b) conserved
(c) maintained (d) controlled
28. The British _____ all over Africa and Asia collapsed in the first half of the twentieth century.
(a) hegemony (b) domicile
(c) residence (d) inheritance
29. The football match has to be _____ because of the weather.
(a) called off (b) continued
(c) put off (d) turned off
30. If I were rich, _____ a lot.
(a) I'll travel
(b) I can travel
(c) I would travel
(d) I travelled
31. They apologized _____ me for what happened.
(a) to (b) at
(c) for (d) with
32. If you are tired of swimming, just _____ for a while.
(a) struggle (b) stroke
(c) float (d) streak
33. He had _____ spoken for two minutes when there was a commotion in the crowd.
(a) even (b) hardly
(c) often (d) little
34. I would not commit myself _____ that course of action.
(a) of (b) to
(c) by (d) with
35. The soldiers waiting to go into battle for the first time were full of _____.
(a) apprehension
(b) consideration
(c) anticipation
(d) frivolity

IDIOMS AND PHRASES

Directions : Given below are some idioms/phrases followed by four alternative meanings to each. Choose the response (a), (b), (c) or (d) which is the most appropriate meaning and mark your response on the Answer Sheet accordingly.

36. A red-letter day

- (a) a trivial day
- (b) a very important or significant day
- (c) a day of bloodshed and violence
- (d) a mourning day

37. The gift of the gab

- (a) ability to speak easily and confidently
- (b) ability to spoil something
- (c) ability to sell things
- (d) gift from a sacred institution

38. Walk a tightrope

- (a) to be forced to leave your job
- (b) to be ready to fall
- (c) to act very carefully
- (d) to invite danger

39. To be in a fix

- (a) to receive strong criticism
- (b) to support oneself
- (c) to fix problems
- (d) to be in a difficult situation

40. To fish in troubled waters

- (a) to borrow money
- (b) to steal belongings of
- (c) to get benefit in bad situation
- (d) to extend a helping hand

ORDERING OF SENTENCES

Directions : Each of the following items in this section consists of a sentence the parts of which have been jumbled. These parts have been labelled P, Q, R and S. Given below each sentence are four sequences namely (a), (b), (c) and (d). You are required to rearrange the jumbled parts of the sentence and mark your response on the Answer Sheet accordingly.

41. Domestic fires in Indian villages

- P. as the heat is dispersed
- Q. an unhealthy smoke accumulates in unventilated houses
- R. are wasteful
- S. lit in Chulhas

The correct sequence should be

- (a) PQSR
- (b) PQRS
- (c) SPQR
- (d) SRPQ

42. Bold rocks near at hand

- P. makes a fine forest for the imagination
- Q. than distant Alps
- R. are more inspiring
- S. and the thick fern upon a heath

The correct sequence should be

- (a) QRSP
- (b) RSQP
- (c) RQSP
- (d) SRQP

43. Newton discovered that

- P. due to the gravitational pull
- Q. of the earth
- R. the apple falls
- S. on the ground

The correct sequence should be

- (a) QPRS (b) RSPQ
- (c) QSPR (d) SQRP

44. The knocking

- P. were still in the house
- Q. for some time
- R. although the echoes of it
- S. ceased

The correct sequence should be

- (a) SRPQ (b) SQRP
- (c) PQSR (d) RSPQ

45. The history of mankind is

- P. and steady progress
- Q. continuous change
- R. the history of
- S. from barbarism to refinement

The correct sequence should be

- (a) PQRS (b) RQPS
- (c) QSPR (d) SQRP

CLOZE COMPREHENSION

Directions : In the following passage there are some blank spaces with four words or groups of words given. Select whichever word or group of words you consider most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.

The honeybee is a very unusual kind of insect. ____ 46. (a) Unlike other insects which live

(b) Similar to

(c) With

(d) Like

alone, the honeybee lives as a/an ____ 47. (a) group of a community. These bees live

(b) individual

(c) member

(d) troop

together in what is known as a bee ____ 48. (a) house. The head of the bees is called the

(b) home.

(c) army.

(d) colony.

queen bee. She is ____ 49. (a) heaviest than the rest of the bees. Her main task

(b) heavier

(c) largest

(d) larger

is to ____ 50. (a) lay eggs.

(b) hatch

(c) make

(d) bear

PART—B

Directions :

The following **six (6)** items consist of two statements, Statement I and Statement II. Examine these two statements carefully and select the correct answer 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

51. Statement I :

The pitch of the sound wave depends upon its frequency.

Statement II :

The loudness of the sound wave depends upon its amplitude.

52. Statement I :

Sound wave cannot propagate in vacuum.

Statement II :

Sound waves are elastic waves and require a medium to propagate.

53. Statement I :

The Government of India Act, 1935 introduced Dyarchy at the Centre.

Statement II :

The provincial autonomy was granted to the Provinces.

54. Statement I :

Mughal Painting reached its climax during the reign of Jahangir.

Statement II :

Aurangzeb's Court was adorned by some of the best known artists of the Mughal School of Painting.

55. Statement I :

Phytoplankton produce most of the organic carbon in the ocean.

Statement II :

Algae are produced in the cold water biome.

56. Statement I :

Geostrophic wind blows above a height of 600 metres, parallel to the isobars.

Statement II :

Geostrophic wind is the horizontal wind velocity, in which the Coriolis force balances the horizontal pressure force.

57. Which one of the following groups of cellular organelles contains DNA?
- Mitochondria, nucleus, chloroplast
 - Mitochondria, Golgi bodies, nucleus
 - Mitochondria, plasma membrane, nucleus
 - Chloroplast, nucleus, ribosomes
58. One of the additional functions of Smooth Endoplasmic Reticulum (SER) is
- protein synthesis
 - lipid synthesis
 - storage of biomolecules
 - detoxification of toxic substances
59. Damage to the apical meristem of a growing young plant will affect the
- length of the plant
 - colour of the flower
 - colour of the leaves
 - taste of the fruits
60. Which of the following kingdoms has/have only unicellular organisms?
- Monera only
 - Protista only
 - Monera and Protista both
 - Protista and Fungi both
61. Which one of the following is a waterborne disease?
- Jaundice
 - Tuberculosis
 - Rabies
 - Arthritis
62. The atomic number of an element is 8. How many electrons will it gain to form a compound with sodium?
- One
 - Two
 - Three
 - Four
63. A sample of oxygen contains two isotopes of oxygen with masses 16 u and 18 u respectively. The proportion of these isotopes in the sample is 3 : 1. What will be the average atomic mass of oxygen in this sample?
- 17.5 u
 - 17 u
 - 16 u
 - 16.5 u
64. Which one of the following is a heterogeneous mixture?
- Hydrochloric acid
 - Vinegar
 - Milk
 - Soda water
65. What is the formula mass of anhydrous sodium carbonate? (Given that the atomic masses of sodium, carbon and oxygen are 23 u, 12 u and 16 u respectively)
- 286 u
 - 106 u
 - 83 u
 - 53 u

66. Which one of the following is called 'syngas'?

- (a) $C(s) + H_2O(g)$
- (b) $CO(g) + H_2O(g)$
- (c) $CO(g) + H_2(g)$
- (d) $NO_2(g) + H_2(g)$

67. The frequency of ultrasound waves is

- (a) less than 20 Hz
- (b) between 20 Hz and 2 kHz
- (c) between 2 kHz and 20 kHz
- (d) greater than 20 kHz

68. The magnetic field strength of a current-carrying wire at a particular distance from the axis of the wire

- (a) depends upon the current in the wire
- (b) depends upon the radius of the wire
- (c) depends upon the temperature of the surroundings
- (d) None of the above

69. A stainless steel chamber contains Ar gas at a temperature T and pressure P . The total number of Ar atoms in the chamber is n . Now Ar gas in the chamber is replaced by CO_2 gas and the total number of CO_2 molecules in the chamber is $n/2$ at the same temperature T . The pressure in the chamber now is P' . Which one of the following relations holds true? (Both the gases behave as ideal gases)

- (a) $P' = P$
- (b) $P' = 2P$
- (c) $P' = P/2$
- (d) $P' = P/4$

70. Which one of the following is the correct relation between Å and nm?

- (a) $1 \text{ nm} = 10^{-1} \text{ Å}$
- (b) $1 \text{ nm} = 10 \text{ Å}$
- (c) $1 \text{ nm} = 1 \text{ Å}$
- (d) $1 \text{ nm} = 10^{-2} \text{ Å}$

71. The full form of LED is

- (a) Light Emitting Diode
- (b) Light Emitting Device
- (c) Light Enhancing Device
- (d) Light Enhancing Diode

72. If a free electron moves through a potential difference of 1 kV, then the energy gained by the electron is given by

- (a) $1.6 \times 10^{-19} \text{ J}$
- (b) $1.6 \times 10^{-16} \text{ J}$
- (c) $1 \times 10^{-19} \text{ J}$
- (d) $1 \times 10^{-16} \text{ J}$

73. Consider the following places of India :

1. Itanagar
2. Imphal
3. Agartala
4. Aizawl

Which one of the following is the correct chronological order of the above places in terms of sunrise time?

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

74. Which one of the following is known as uplands of delta region?

- (a) Baf
- (b) Bils
- (c) Peh
- (d) Chars

75. Consider the following Wildlife Sanctuaries of India :

1. Shikari Devi
2. Bhadra
3. Simlipal
4. Pachmarhi

Which one of the following is the correct order of the above Wildlife Sanctuaries in terms of their location from south to north?

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

76. Which one of the following statements about temperature is correct?

- (a) Temperature decreases with height in the stratosphere.
- (b) Temperature is constant at different heights in the stratosphere.
- (c) Temperature increases with height in the troposphere at an average rate of 6.5°C per kilometre.
- (d) Temperature decreases with height in the troposphere at an average rate of 6.4°C per kilometre.

77. Which one of the following is known as a zone of sharp salinity change in the vertical section of ocean?

- (a) Thermocline
- (b) Halocline
- (c) Photic zone
- (d) Pycnocline

78. Permanent hardness of water **cannot** be removed by which one of the following methods?

- (a) Treatment with washing soda
- (b) Calgon's method
- (c) Boiling
- (d) Ion exchange method

79. Which one of the following reactions will give NO (nitric oxide) gas as one of the products?

- (a) $3\text{Cu} + 8\text{HNO}_3$ (dilute) \rightarrow
- (b) $\text{Cu} + 4\text{HNO}_3$ (conc.) \rightarrow
- (c) $4\text{Zn} + 10\text{HNO}_3$ (dilute) \rightarrow
- (d) $\text{Zn} + 4\text{HNO}_3$ (conc.) \rightarrow

80. Which one of the following is a tribasic acid?

- (a) Hydrochloric acid
- (b) Nitric acid
- (c) Sulphuric acid
- (d) Phosphoric acid

81. Which one of the following statements is **not** correct?

- (a) All carbons in diamond are linked by carbon-carbon single bond.
- (b) Graphite is layered structure in which layers are held together by weak van der Waals forces.
- (c) Graphite layers are formed by hexagonal rings of carbon atoms.
- (d) Graphite layers are held together by carbon-carbon single bond.

82. Which one of the following is called dry ice?

- (a) Solid carbon dioxide
- (b) Liquid carbon dioxide
- (c) Liquid nitrogen
- (d) Liquid ammonia

83. The acidic semidigested food coming out of the stomach is neutralized by

- (a) pancreatic juice
- (b) duodenal secretion
- (c) large intestine secretion
- (d) bile juice

84. The oxygenated blood from the lungs is received by the

- (a) left auricle
- (b) left ventricle
- (c) right auricle
- (d) right ventricle

85. The oxygen evolved during photosynthesis comes from splitting of

- (a) water
- (b) carbon dioxide
- (c) oxygen
- (d) light

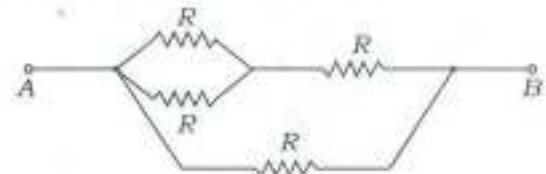
86. Which one of the following depicts the correct circuit of a reflex arc?

- (a) Effector—sensory neuron—spinal cord—motor neuron—receptor
- (b) Receptor—sensory neuron—spinal cord—motor neuron—effector
- (c) Receptor—sensory neuron—brain—motor neuron—effector
- (d) Sensory neuron—receptor—brain—effector—motor neuron

87. If one set of chromosomes for a given plant is represented as N ; in case of double fertilization, the zygote and the endosperm nucleus of a diploid plant would have how many sets of chromosomes respectively?

- (a) N and $2N$
- (b) $2N$ and $2N$
- (c) N and $3N$
- (d) $2N$ and $3N$

88. Consider the following circuit :



Which one of the following is the value of the resistance between points A and B in the circuit given above?

- (a) $\frac{2}{5}R$
- (b) $\frac{3}{5}R$
- (c) $\frac{3}{2}R$
- (d) $4R$

89. The absolute zero temperature is 0 Kelvin. In $^{\circ}\text{C}$ unit, which one of the following is the absolute zero temperature?

- (a) 0°C
- (b) -100°C
- (c) -273.15°C
- (d) -173.15°C

90. Consider the following statements about visible light, UV light and X-rays :

1. The wavelength of visible light is more than that of X-rays.
2. The energy of X-ray photons is higher than that of UV light photons.
3. The energy of UV light photons is less than that of visible light photons.

Which of the statements given above is/are correct?

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

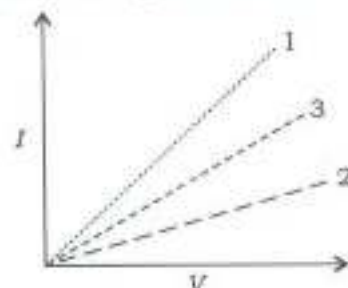
91. The time period of oscillation of a simple pendulum having length L and mass of the bob m is given as T . If the length of the pendulum is increased to $4L$ and the mass of the bob is increased to $2m$, then which one of the following is the new time period of oscillation?

- (a) T
- (b) $2T$
- (c) $4T$
- (d) $T/2$

92. The connecting cable of electrical appliances like electric iron, water heater or room heater contains three insulated copper wires of three different colours—red, green and black. Which one of the following is the correct colour code?

- (a) Red—live wire, Green—neutral wire, Black—ground wire
- (b) Red—neutral wire, Green—ground wire, Black—live wire
- (c) Red—live wire, Green—ground wire, Black—neutral wire
- (d) Red—ground wire, Green—live wire, Black—neutral wire

93. The graphs between current (I) and voltage (V) for three linear resistors 1, 2 and 3 are given below :



If R_1 , R_2 and R_3 are the resistances of these resistors, then which one of the following is correct?

- (a) $R_1 > R_2 > R_3$
- (b) $R_1 < R_3 < R_2$
- (c) $R_3 < R_1 < R_2$
- (d) $R_3 > R_2 > R_1$

94. Consider the following statements about a microscope and a telescope :

- Both the eyepiece and the objective of a microscope are convex lenses.
- The focal length of the objective of a telescope is larger than the focal length of its eyepiece.
- The magnification of a telescope increases with the increase in focal length of its objective.
- The magnification of a microscope increases with the increase in focal length of its objective.

Which of the statements given above are correct?

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

95. A planet has a mass M_1 and radius R_1 . The value of acceleration due to gravity on its surface is g_1 . There is another planet 2, whose mass and radius both are two times that of the first planet. Which one of the following is the acceleration due to gravity on the surface of planet 2?

- (a) g_1
(b) $2g_1$
(c) $g_1/2$
(d) $g_1/4$

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

List-I (River Basin)	List-II (Town)
A. Bhagirathi	1. Lansdowne
B. Alaknanda	2. Narendra Nagar
C. Nayar	3. Uttarkashi
D. Ganga	4. Pauri

Code :

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

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

List-I (Local Wind)	List-II (Place)
A. Yamo	1. Sudan
B. Black Roller	2. France
C. Bise	3. Japan
D. Haboob	4. North America

Code :

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

98. 'Majuli', the river island, is located in which one of the following rivers?

- (a) Jamuna
- (b) Padma
- (c) Ganga
- (d) Brahmaputra

99. Which one of the following Indian States has recorded negative growth of population as per Census 2011?

- (a) Manipur
- (b) Mizoram
- (c) Tripura
- (d) Nagaland

100. Which one of the following types of cloud is characterized by continuous precipitation?

- (a) Cirrocumulus
- (b) Cumulus
- (c) Nimbostratus
- (d) Cumulonimbus

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

List-I
(Major Port)

List-II
(Location)

- | | |
|------------------|-----------------------------------|
| A. Kolkata | 1. Landlocked area |
| B. Mormugao | 2. In the delta region |
| C. Visakhapatnam | 3. On the riverside |
| D. Paradip | 4. On the entrance of the estuary |

Code :

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

102. Which one of the following is **not** an agent of metamorphism?

- (a) Heat
- (b) Compression
- (c) Decomposition
- (d) Solution

103. The solution of which one of the following will have pH less than 7?

(a) NaOH

(b) KCl

(c) FeCl_3

(d) NaCl

104. Which one of the following is an oxidation-reduction reaction?

(a) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

(b) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$

(c) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$

(d) $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \text{BaSO}_4 + 2\text{NaCl}$

105. Which one of the following is **not** used as fertilizer?

(a) Ammonium nitrate

(b) Ammonium sulphide

(c) Ammonium phosphate

(d) Ammonium sulphate

106. Which one of the following is the chemical formula of gypsum?

(a) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$

(b) Ca_2SiO_4

(c) $2\text{CaSO}_4 \cdot \text{H}_2\text{O}$

(d) CaSO_4

107. Which one of the following statements about the law of conservation of mass is correct?

(a) A given compound always contains exactly same proportion of elements.

(b) When gases combine in a reaction, they do so in a simple ratio by volume, provided all gases are at room temperature.

(c) Matter can neither be created nor destroyed.

(d) Equal volumes of all gases at same temperature and pressure contain equal number of molecules.

108. The wavelength of X-rays is of the order of

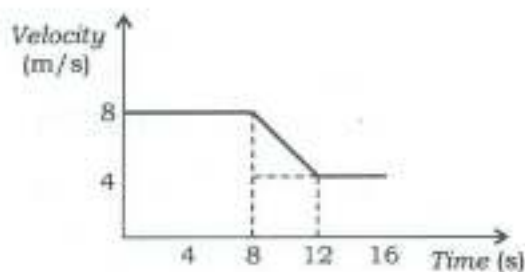
(a) 1 Å

(b) 1 μm

(c) 1 mm

(d) 1 cm

109. Consider the following velocity and time graph :



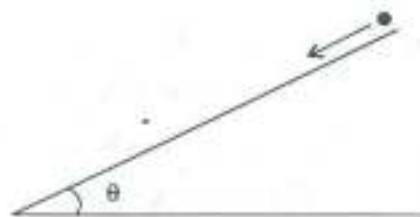
Which one of the following is the value of average acceleration from 8 s to 12 s?

- (a) 8 m/s^2
- (b) 12 m/s^2
- (c) 2 m/s^2
- (d) -1 m/s^2

110. If the focal length of a convex lens is 50 cm, which one of the following is its power?

- (a) +2 dioptre
- (b) +0.02 dioptre
- (c) -0.5 dioptre
- (d) +0.5 dioptre

111. A ball is released from rest and rolls down an inclined plane, as shown in the following figure, requiring 4 s to cover a distance of 100 cm along the plane :



Which one of the following is the correct value of angle θ that the plane makes with the horizontal? ($g = 1000 \text{ cm/s}^2$)

- (a) $\theta = \sin^{-1}(1/9.8)$
- (b) $\theta = \sin^{-1}(1/20)$
- (c) $\theta = \sin^{-1}(1/80)$
- (d) $\theta = \sin^{-1}(1/100)$

112. The coefficient of areal expansion of a material is $1.6 \times 10^{-5} \text{ K}^{-1}$. Which one of the following gives the value of coefficient of volume expansion of this material?

- (a) $0.8 \times 10^{-5} \text{ K}^{-1}$
- (b) $2.4 \times 10^{-5} \text{ K}^{-1}$
- (c) $3.2 \times 10^{-5} \text{ K}^{-1}$
- (d) $4.8 \times 10^{-5} \text{ K}^{-1}$

113. The refractive indices of two media are denoted by n_1 and n_2 , and the velocities of light in these two media are respectively v_1 and v_2 . If n_2/n_1 is 1.5, which one of the following statements is correct?

- (a) v_1 is 1.5 times v_2 .
- (b) v_2 is 1.5 times v_1 .
- (c) v_1 is equal to v_2 .
- (d) v_1 is 3 times v_2 .

114. Which one of the following greenhouse gases is in largest concentration in the atmosphere?

- (a) Chlorofluorocarbon
- (b) Nitrous oxide
- (c) Carbon dioxide
- (d) Methane

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

List-I (Koppen's Climatic Type)	List-II (Letter Code)
A. Tropical wet	1. Af
B. Mid-latitude desert	2. Cs
C. Mediterranean	3. Df
D. Humid continental	4. BWk

Code :

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

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

List-I (Railway Zone)	List-II (Headquarters)
A. West Central	1. Jabalpur
B. South East Central	2. Gorakhpur
C. East Central	3. Bilaspur
D. North Eastern	4. Hajipur

Code :

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

117. Which one of the following is the correct descending order of Indian States in terms of sex ratio as per Census 2011?

- (a) Mizoram—Manipur—
Tripura—Meghalaya
- (b) Tripura—Manipur—
Meghalaya—Mizoram
- (c) Meghalaya—Manipur—
Mizoram—Tripura
- (d) Manipur—Meghalaya—
Tripura—Mizoram

118. Steppe (temperate continental) climate is **not** experienced in which one of the following places?

- (a) Pretoria
- (b) Saskatchewan
- (c) Perth
- (d) Buenos Aires

119. Which one of the following is **not** a process of chemical weathering?

- (a) Solution
- (b) Carbonation
- (c) Oxidation
- (d) Exfoliation

120. Which one of the following statements is correct for a plane mirror?

- (a) Its focal length is zero.
- (b) The size of the image of an object placed in front of the mirror is slightly less than that of the object.
- (c) The image is virtual, erect and laterally inverted.
- (d) Its focal length is 200 cm.

121. An object is placed in front of a convex mirror. Which one of the following statements is correct?

- (a) It will never form an inverted image.
- (b) The image moves towards the focus when the object moves towards the mirror.
- (c) Depending on the position of the object with respect to the mirror, the image can be inverted and real.
- (d) The size of the image becomes larger than that of the object when the object is placed at a distance equal to half the focal length.

122. A circular coil of radius R having N number of turns carries a steady current I . The magnetic induction at the centre of the coil is 0.1 tesla. If the number of turns is doubled and the radius is halved, which one of the following will be the correct value for the magnetic induction at the centre of the coil?

- (a) 0.05 tesla
- (b) 0.2 tesla
- (c) 0.4 tesla
- (d) 0.8 tesla

123. Which one among the following is **not** a Fundamental Right under the Constitution of India?

- (a) Right to equality
- (b) Right to freedom
- (c) Right to citizenship
- (d) Right against exploitation

124. Which one of the following crops was introduced by the Portuguese in India?

- (a) Opium
- (b) Coffee
- (c) Betel leaf
- (d) Chili

125. Consider the following statements about merchant guilds of South India :

1. Ayyavole merchant guild was originally established in Aihole.
2. Manigramam merchant guild was subordinated to the Anjuvannam merchant guild in the 13th century.

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

126. Which one of the following pairs is correctly matched?

- | <i>Bhakti Saint</i> | <i>Philosophy</i> |
|---------------------|-------------------|
| (a) Shankara | : Avadhuta |
| (b) Ramananda | : Kevaladvaita |
| (c) Ramanuja | : Vishishtadvaita |
| (d) Chaitanya | : Advaita |

127. When did the Stamp Act Congress consisting of delegates from 9 of the 13 colonies of America meet in New York City?

- (a) 1763
- (b) 1764
- (c) 1765
- (d) 1766

128. Who among the following travellers was from Italy and visited Vijayanagar Kingdom in the fifteenth century?

- (a) Nikitin
- (b) Fa-Hien
- (c) Bernier
- (d) Nicolo Conti

129. Where did the French East India Company first establish its factory in India?

- (a) Calicut
- (b) Surat
- (c) Pondicherry
- (d) Masulipatnam

130. The Central Vigilance Commission was established on the recommendation of which one of the following Committees?

- (a) Santhanam Committee
- (b) Dinesh Goswami Committee
- (c) Tarkunde Committee
- (d) Narasimham Committee

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

List-I (Author)	List-II (Book)
A. Bal Gangadhar Tilak	1. <i>The Arctic Home in the Vedas</i>
B. Dadabhai Naoroji	2. <i>Hind Swaraj</i>
C. Mahatma Gandhi	3. <i>The Discovery of India</i>
D. Jawaharlal Nehru	4. <i>Poverty and Un-British Rule in India</i>

Code :

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

132. Which one of the following is the Official Mascot of the FIFA World Cup, 2018?

(a) Fuleco
(b) Zakumi
(c) Pille
(d) Zabivaka

133. The Headquarters of the proposed National Sports University (as per the National Sports University Ordinance, 2018) will be set up in

(a) Chhattisgarh
(b) Manipur
(c) Kerala
(d) West Bengal

134. Sentosa island, which was in news recently, is located in

(a) Singapore
(b) China
(c) Australia
(d) Sri Lanka

135. India, in June 2018, asserted that any mega connectivity project must respect sovereignty and territorial integrity of the countries. The project referred to above is

(a) North-South Corridor Project
(b) Belt and Road Initiative
(c) Chabahar Port
(d) Panama Canal Expansion

136. Who among the following is **not** a member of G7?

(a) France
(b) Germany
(c) Russia
(d) Japan

137. Who among the following leaders started the Indian Home Rule League?

(a) Gopal Krishna Gokhale
(b) Mahatma Gandhi
(c) Bal Gangadhar Tilak
(d) J. B. Kripalani

138. Every Judge of the Supreme Court of India is appointed by
- the Supreme Court Collegium
 - the Cabinet
 - the President of India
 - the Lok Sabha
139. The Nehru-Mahalanobis Strategy of Development was implemented for the first time by which one of the following Five-Year Plans?
- First Five-Year Plan
 - Second Five-Year Plan
 - Third Five-Year Plan
 - Seventh Five-Year Plan
140. Which one of the following is **not** a part of the Directive Principles of State Policy as enshrined in the Constitution of India?
- Equal justice and free legal aid
 - Protection of monuments and places and objects of national importance
 - Protection of personal law
 - Separation of Judiciary from Executive
141. The word 'socialist' was inserted into the Preamble to the Constitution of India through which one of the following Amendment Acts?
- 41st Amendment Act
 - 42nd Amendment Act
 - 43rd Amendment Act
 - 44th Amendment Act
142. The place of English East India Company settlement in Madras was known as
- Fort William
 - Fort St. George
 - Elphinstone Circle
 - Marble Palace
143. Which one of the following Indian States (other than Himalayan or NE States) ranked first in the Composite Water Management Index as per the report issued by the NITI Aayog in June 2018?
- Madhya Pradesh
 - Karnataka
 - Gujarat
 - Maharashtra
144. Who among the following is the ex officio Chairman of the North Eastern Council?
- The President of India
 - The Prime Minister of India
 - The Union Home Minister
 - The Union Minister of State (Independent Charge), Ministry of Development of North Eastern Region

145. Which one of the following is the theme of the World Blood Donor Day, 2018?
- Blood connects us all
 - Be there for someone else. Give blood. Share life
 - Give blood. Give now. Give often
 - Thank you for saving my life
146. 'Seva Bhoj Yojana', a scheme of the Government of India that seeks to reimburse Central share of CGST and IGST on Food/Prasad/Langar/Bhandara offered by religious institutions, is introduced recently by which one of the following Ministries?
- The Ministry of Culture
 - The Ministry of Home Affairs
 - The Ministry of Consumer Affairs, Food and Public Distribution
 - The Ministry of Social Justice and Empowerment
147. Dr. Bindeshwar Pathak, who was awarded Nikkei Asia Prize, 2018 for Culture and Community, is the founder of
- Bachpan Bachao Andolan
 - PRS Legislative Research
 - Sulabh Sanitation and Social Reform Movement
 - Smile Foundation
148. Article 352 of the Constitution of India contains provisions related to
- financial emergency
 - failure of constitutional machinery in States
 - suspension of the enforcement of rights conferred in Part III of the Constitution
 - general emergency
149. The Theosophical Society was led by
- A. O. Hume
 - Arthur Griffith
 - Annie Besant
 - Lord Dufferin
150. Which one of the following statements about Bipin Chandra Pal is correct?
- He was a member of the moderate group of Congress.
 - He was a member of the extremist group of Congress.
 - He was the Minister of Defence in the first Government of independent India.
 - He was the Chief Minister of West Bengal.