

PART - I

Directions (1 - 6) : Read the following passage carefully and answer the questions given below. Certain words or groups of words are given in bold type to help you locate them while answering some of the questions.

It is said that there is a malady of disorder everywhere. The leaders who are not equal to the task misguide their followers. The remedy of the malady that affects our political, economic and social practices lies in the human individual. What is needed is a change in his nature. For that, we should read great classics. Literature brings about that change for the better. It improves the quality of human beings. Great books give great thoughts, broaden our outlook, and awaken our souls. They also provide a moral base as the lack of discipline and ideals is **inimical** to civilized values.

There are various kinds of books. Some arouse or instruct while others elevate our nature. The first kind of books destroy our ego and give us joy. Now joy is different from pleasure. The books that give joy contain emotions and thoughts recollected in tranquility. Only a seer can produce such books. They deserve not only to be read but also to be understood. Through them we establish a contract with masterminds of the past. They passed on to us our traditions. But following a tradition does not mean blindly following what our forefathers did or believed. We must adapt and bring modifications. However, the individual contribution is largely determined by the pressure brought upon us to bear new problems of the new era.

There are three clearly marked features of the age in which we live. They are the scientific and technological revolution, the liberation of dependent countries in Asia and Africa and the growing unity of the world. We should read books which trace the history of the above mentioned three moments. The intellectual wealth of all mankind is at our disposal, we should break the barriers of language. Books build bridges between countries, that is, they bring us together. They promote understanding and love and remove suspicion, fear and hatred.

Great books come to our help when our values are discounted and many of us are mere shadows of ourselves. We are the victims of contradictory impulses. We are a bundle of fear, suspicion, greed, jealousy as well as kindness and goodwill. For creating a harmonious human society, the former instincts should be curbed, and the latter kindled. We must guard against corrupting the minds of our people with **trivialities**. A general spiritual awakening is essential.

1. Which of the following statements (a), (b) and/or (c) is/are TRUE in the context of the passage ?

2. Choose the word that is SAME in the meaning of the word given in bold.

DISMAL

- (A) Depressing (B) Disabled (C) Bitter (D) Reckless

3. Choose the word that is OPPOSITE in the meaning of the word given in bold.

TRIVIALITIES

- (A) Emoluments (B) Essentials (C) Promises (D) Details

4. Choose the word that is OPPOSITE in the meaning of the word given in bold.

INIMICAL

- (A) Destitute (B) Extravagant (C) Oppressed (D) Compatible

5. What does the author consider essential for creating a normal harmonious human society ?

- (a) We should control our emotions of fear, greed, suspicion and jealousy.
(b) We should encourage kindness.
(c) We should not engage our mind in petty and mean things.
(d) There should be a general spiritual awakening among us.

- (A) Only (a) and (b) (B) Only (a), (b) and (c)
(C) (a), (b), (c) and (d) (D) Only (b), (c) and (d)

6. How can the nature of the individual be changed according to the passage ?

- (A) If he reads great books his outlook will be broad, his psychological health will improve, and he will have moral contentment and spiritual joy.
(B) If he reads great books only his psychological health will improve.
(C) If he reads great books, he will have only moral contentment and spiritual joy.
(D) If he only focuses on reading books.

7. Rearrange the words to form noun phrase and rewrite the sentence :

Mili was given the task of (family-cooking-entire-for-the)

- (A) Mili was given the task of cooking for the entire family.
(B) The task of cooking for the entire family was given to Mili.
(C) The cooking task for the family was entirely given to Mili.
(D) Mili family was given the task of cooking entirely.

8. Choose the correct SYNONYM of the word : "BLASÉ"

- (A) Beautiful (B) Blank (C) Credible (D) Indifferent

9. Choose the appropriate phrasal verb.

I cannot go out tonight. I must look _____ my little brother.

- (A) for (B) on (C) at (D) after

19. Find out the correct meaning of the idiomatic expression and mark your answer.

Bread and Butter

- (A) A rich man's meal (B) Breakfast
(C) A means of livelihood (D) To hear a good news

20. Identify the incorrect use of conjunctions.

- (A) You must work hard, you'll not succeed in life if you don't.
(B) You must work hard otherwise you will not succeed in life.
(C) You must work hard, or you will not succeed in life.
(D) You must work hard but still you will not succeed in life.

21. Find the correct word to complete the sentence "A _____ of bees."

- (A) swarm (B) column (C) shoal (D) group

22. Choose the one word that can be substituted for the given sentence :

A speech made without preparation

- (A) Prepared (B) Debate (C) Extempore (D) Elocution

23. Which is the silent letter in the word "Buffet" ?

- (A) 'e' (B) 't' (C) 'f' (D) 'u'

24. Choose the correctly spelt word.

- (A) Conscious (B) Consiensus (C) Concisous (D) Consouics

25. Complete this sentence.

I am sleepy so I will _____ off now.

- (A) Dose (B) Doze (C) Sleep (D) Drowse

26. Select the most appropriate word and fill in the blanks in following sentence :

The MLA of this area is _____ respected by the locals.

- (A) Much (B) Rather
(C) Very (D) Highly

36. Write the negative sentence for "Both of them have a bike".

- (A) Neither of them has a bike. (B) None of them have a bike.
(C) Nobody of them has a bike. (D) Two of them does not have a bike.

37. Change into passive voice.

A judge reviews the case in the court.

- (A) The case is reviewed by the judge in the court.
(B) The case was reviewed by the judge in the court.
(C) The case has been in review by the judge in the court.
(D) The case have been in review at the court by a judge.

38. Select the correct spelling for the plural form of the word- "STOREY".

- (A) stories (B) storiyas (C) storeys (D) storeies

39. Identify the kind of Noun : "A Mother must have patience."

- (A) Proper (B) Collective (C) Abstract (D) Common

40. A sentence is broken into four parts (A), (B), (C), (D). Mark the part that has an error. Ignore errors of punctuation, if any.

- (A) One of the (B) best lawyers in town
(C) have been (D) hired

41. Select the relative pronoun :

The children _____ shouted in class were punished.

- (A) Who (B) Whom (C) Who's (D) Which

42. Choose the right interjection. _____! We have won the match.

- (A) Hurray (B) Alas (C) Ooh (D) Hmm

43. Choose the correct ANTONYM of the word : "ASSET"

- (A) Credibility (B) Liability (C) Poverty (D) Prosperity

44. "What time do you wake up?" What type of sentence is this ?

- (A) Exclamatory sentence (B) Declarative sentence
(C) Interrogative sentence (D) Imperative sentence

45. Use the correct article in the following sentence :

She is _____ educated lady with _____ laptop at _____ airport.

- (A) an, the, a (B) the, an, a (C) an, a, the (D) a, the, the

Directions (46 – 50) : Rearrange the following six sentences (1), (2), (3), (4), (5) and (6) in the proper sequence to form a meaningful paragraph; then answer the questions given below them.

- (1) While these disadvantages of biofuels are serious, they are the only alternate energy source for the future and the sooner we find solutions to these problems the faster we will be able to solve the problems we are now facing with gasoline.
 - (2) This fuel can also help to stimulate jobs locally since it is also much safer to handle than gasoline and can thus have the potential to turn around a global economy.
 - (3) These include dependence on fossil fuels for the machinery required to produce biofuel which ends up polluting as much as the burning of fossil fuels on roads and exorbitant cost of biofuels which makes it very difficult for the common man to switch to this option.
 - (4) This turnaround can potentially help to bring world peace and end the need to depend on foreign countries for energy requirements.
 - (5) Biofuels are made from plant sources and since these sources are available in abundance and can be reproduced on a massive scale, they form an energy source that is potentially unlimited.
 - (6) However, everything is not as green with the biofuels as it seems as there are numerous disadvantages involved, which at times overshadow their positive impact.

46. Which of the following sentence should be **SECOND** after rearrangement?

47. Which of the sentence should be the **SIXTH (LAST)** after rearrangement?

- (A) (1) (B) (3) (C) (4) (D) (5)

48. Which of the sentence should be the **FIRST** after rearrangement?

49. Which of the sentence should be the **THIRD** after rearrangement?

50. Which of the sentence should be the **FIFTH** after rearrangement?

PART - I
SECTION-II : HINDI

51. निम्न विकल्पों में से गलत टिप्पणी को चिह्नित करें :

- (A) भाषा के किसी शब्द को लिखने में प्रयुक्त वर्णों के सही क्रम को वर्तनी कहते हैं।
- (B) जिस भाषा की वर्तनी में अपनी भाषा के साथ अन्य अक्षरों को सटीक ध्वनियों के साथ ग्रहण करने की जितनी अधिक शक्ति होगी, उस भाषा की वर्तनी ही समर्थ होगी।
- (C) इसका अर्थ हुआ कि वर्तनी का सीधा सम्बन्ध भाषागत ध्वनियों के उच्चारण से है।
- (D) वर्तनी का अर्थ है लेखन में की गई गलतियाँ।

52. दो या दो से अधिक सार्थक शब्द-खण्डों के योग से निर्मित होने वाले शब्द _____ शब्द कहलाते हैं।

- (A) यौगिक
- (B) रूढ़
- (C) योगरूढ़
- (D) अयौगिक

53. नील गगन-सा शांत हृदय था सो रहा। - में कौन सा अलंकार है ?

- (A) अनुप्रास अलंकार
- (B) यमक अलंकार
- (C) उपमा अलंकार
- (D) रूपक अलंकार

54. निम्नलिखित में कौन सा सदा बहुवचन में प्रयुक्त होता है ?

- (A) केला
- (B) मुनि
- (C) विद्या
- (D) केश

55. ज़िन्दगी के असली मजे उनके लिए नहीं हैं जो फूलों की छांह के नीचे खेलते और सोते हैं / बल्कि फूलों की छांह के नीचे अगर जीवन का कोई स्वाद छिपा है / तो वह भी उन्हीं के लिए है जो दूर रेगिस्तान से आ रहा है / जिनका कंठ सूखा हुआ, होंठ फटे हुए और सारा बदन पसीने से तर है ।

निम्नलिखित में से कौन-सा वाक्यांश दोषयुक्त है ?

- (A) ज़िन्दगी के असली मजे उनके लिए नहीं हैं जो फूलों की छांह के नीचे खेलते और सोते हैं ।
- (B) बल्कि फूलों की छांह के नीचे अगर जीवन का कोई स्वाद छिपा है
- (C) तो वह भी उन्हीं के लिए है जो दूर रेगिस्तान से आ रहा है
- (D) जिनका कंठ सूखा हुआ, होंठ फटे हुए और सारा बदन पसीने से तर है।

56. निम्नलिखित किस वाक्य में पूर्वकालिक क्रिया का प्रयोग है ?

- (A) अंकिता खेलकर पढ़ने बैठेगी।
- (B) मोहन पत्र लिखता रहा है।
- (C) मेघा भोजन कर रही है।
- (D) चिड़ियाँ दाना चुग रही हैं।

57. महिलाओं को भेड़-बकरी की तरह हाँकने का जमाना अब नहीं रहा। इस वाक्य में रेखांकित का सही बहु वचन विकल्प क्या है ?

- (A) भेड़ो - बकरियाँ
- (B) भेड़ों - बकरियों
- (C) भेड़ों - बकरियाँ
- (D) भेड़ - बकरियों

58. किस वाक्य में अच्छा शब्द क्रिया विशेषण के रूप में प्रयुक्त हुआ है ?

- (A) रमेश अच्छा लड़का है।
- (B) अच्छा, मैं चला।
- (C) हमें अच्छों के साथ रहना चाहिए।
- (D) कपिल अच्छा खेलता है।

59. निम्नलिखित विकल्पों में से जलोर्मि शब्द में संधि है :

- (A) दीर्घ संधि
- (B) व्यंजन संधि
- (C) गुण संधि
- (D) विसर्ग संधि

60. गरीब माँ-बाप अपना _____ कर बच्चों को पढ़ाते हैं और वे चिंता नहीं करते। रिक्त स्थान की पूर्ति सटीक मुहावरे से कीजिए।
 (A) गला काट (B) पेट काट (C) खून बहा (D) मन लगा
61. कर्मवाच्य से संबंधित कौन सा वाक्य असंगत है ?
 (A) कर्मवाच्य में कर्म की प्रधानता होती है।
 (B) कर्म में प्रथमा तथा कर्ता में तृतीया विभक्ति का प्रयोग होता है।
 (C) यहाँ क्रिया का प्रयोगकर्ता के अनुसार होता है।
 (D) जिस लिङ्ग, पुरुष तथा वचन में कर्म होता है, उसी लिङ्ग, पुरुष तथा वचन में क्रिया का प्रयोग होता है।
62. मोहन सातवीं कक्षा में पढ़ता है। रेखांकित शब्द का पद परिचय चिह्नित करें।
 (A) विशेषण, संख्यावाचक, आवृत्तिसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
 (B) विशेषण, परिमाणवाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
 (C) विशेषण, संख्यावाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, कक्षा' विशेष्य
 (D) विशेषण, निश्चयवाचक, क्रमसूचक, स्त्रीलिंग, एकवचन, 'कक्षा' विशेष्य
63. किसी के कथन को उद्धृत करते समय किस विराम चिह्न का प्रयोग किया जाता है ?
 (A) निर्देशन चिह्न (B) विस्मयादिबोधक चिह्न
 (C) अवतरण चिह्न (D) प्रश्नवाचक चिह्न
64. रिक्षा शब्द निम्न में से मूलतः किस भाषा का शब्द है ?
 (A) चीनी (B) अरबी (C) पुर्तगाली (D) जापानी
65. 'कुर्सी पर मंत्री जी बैठे हैं' इस वाक्य में 'कुर्सी' शब्द किस कारक में है?
 (A) करण कारक (B) सम्प्रदान कारक (C) संबंध कारक (D) अधिकरण कारक
66. "संभव है कि कल बौछार पड़े"। वाक्य में काल है -
 (A) सामान्य भविष्यत् काल (B) आज्ञार्थ भविष्यत् काल
 (C) सम्भाव्य भविष्यत् काल (D) आसन्न भूतकाल
67. निम्नलिखित वाक्यों में से एक अशुद्ध वाक्य को चिह्नित करें :
 (A) पिता जी गेहूँ पिसवाने चक्की पर गए हैं। (B) निर्ददी व्यक्ति से मित्रता नहीं करनी चाहिए।
 (C) उसके घर के पास एक मिठाई की दुकान है। (D) मैंने अपना गृहकार्य कर लिया है।
68. 'अर्णव को दिनेश से तिगुना फायदा हुआ।' वाक्य में कौनसा विशेषण है ?
 (A) निश्चित संख्यावाचक विशेषण (B) अनिश्चित संख्यावाचक विशेषण
 (C) निश्चित परिमाण वाचक विशेषण (D) अनिश्चित परिमाण वाचक विशेषण
69. 'निः' उपसर्ग युक्त शब्द छाँटिए :
 (A) निकष (B) नियम (C) निर्मल (D) निपात
70. हिन्दी भाषा की सबसे छोटी इकाई को क्या कहते हैं ?
 (A) वर्ण (B) शब्द (C) विचार (D) भाषा

PART - I

- 71. Which of the following is NOT a provision under Article 22 ?**

 - (A) Right to be informed of the grounds of arrest
 - (B) Right to consult and be defended by a legal practitioner
 - (C) Right to a public trial
 - (D) Protection against preventive detention

72. Bengaluru is referred to as the "Silicon Valley of India" because of :

 - (A) Its large number of parks and gardens
 - (B) Its production of high-quality cotton
 - (C) Its major hub of information technology (IT) companies
 - (D) Its location in a valley surrounded by mountains

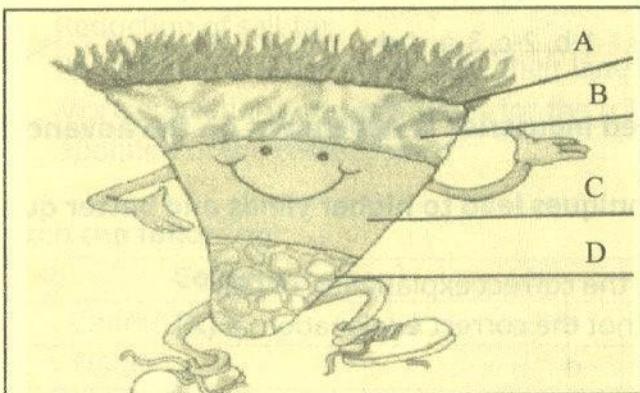
73. Crop that needs well-drained fertile soils, moderate temperatures and lots of sunshine.

 - (A) Kharif Crop (Rice)
 - (B) Zaid Crop (Fodder)
 - (C) Rabi Crop (Wheat)
 - (D) Legumes (Pulses)

74. What is the primary reason why fossil fuels are considered non-renewable resource ?

 - (A) They cause pollution
 - (B) They take millions of years to form
 - (C) They are found underground
 - (D) They are used in power plants

75. With the help of the diagram choose the correct order of layers of soil profile.



- (A) A-Parent rock, B-Weathered rock, C-Top soil, D-Subsoil
 (B) A-Topsoil, B-Subsoil, C-Weathered rock, D-Parent rock
 (C) A-Subsoil, B-Topsoil, C-Parent Rock, D-Weathered rock
(D) A-Weathered rock, B-Parent rock, C-Subsoil, D-Topsoil

76. What does secularism mean in the context of the Indian Constitution ?
- (A) Separation of religion from the state
 - (B) Promotion of one religion over others
 - (C) State endorsement of all religions equally
 - (D) Prohibition of all religious practices
77. Imagine you are a student in a university where a certain section of students is being denied to scholarships based on their caste. Which fundamental right is violated ?
- (A) Right to Freedom
 - (B) Right to Equality
 - (C) Right to Freedom of Religion
 - (D) Right to Constitutional Remedies
78. Which of the following statements is correct regarding the Rajya Sabha ?
- (A) It has a fixed number of members that cannot be changed.
 - (B) It is a permanent house and cannot be dissolved.
 - (C) All members of Rajya Sabha are directly elected.
 - (D) It has the exclusive power to approve financial bills.
79. Match the following :
- | | Column A (Step) | | Column B (Description) |
|---|---------------------------|---|------------------------|
| 1 | Thermal Power | a | Petroleum |
| 2 | Black Gold | b | Manganese |
| 3 | Non-Conventional resource | c | Coal |
| 4 | Metallic | d | Solar energy |
- 2-a
- (A) 1-d, 2-c, 3-a, 4-b
 - (C) 1-a, 2-b, 3-c, 4-d
 - (B) 1-c, 2-a, 3-d, 4-b
 - (D) 1-b, 2-c, 3-a, 4-d
80. Assertion (A) : The growth of agro-based industries is dependent on the advancements in agricultural practices.
 Reason (R) : Improved agricultural techniques lead to higher yields and better quality of raw materials.
- (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).
 - (B) Both (A) and (R) are 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.
81. The Rowlatt Satyagraha saw violent incidents, the most notable being the Jallianwala Bagh massacre. In which city did this massacre occur ?
- (A) Lahore
 - (B) Delhi
 - (C) Amritsar
 - (D) Bombay

82. Marginalization refers to :

- (A) The process of integrating individuals into society
 - (B) The social process of being made marginal or peripheral
 - (C) The promotion of equal opportunities for all
 - (D) The elimination of social classes

83. Which of the following statement is correct about the motive of Britishers to Partition the Bengal ?

- I. The Partition of Bengal was intended to promote unity among different religious communities in the region.
 - II. The British claimed the Partition of Bengal was for administrative convenience, as Bengal was too large to govern effectively.
 - III. The Partition of Bengal aimed to encourage the growth of Indian industries by dividing the province into industrial and agricultural zones.
 - IV. The Partition of Bengal curtail the influence of Bengali politicians and to split the Bengali people.

(A) I & II (B) II & III (C) II & IV (D) Only IV

84. Who can file a Public Interest Litigation in India ?

- (A) Only lawyers
 - (B) Any individual or organization acting in the interest of the public
 - (C) Only government officials
 - (D) Only those directly affected by the issue

85. Which of the following was a major demand of the Munda Rebellion ?

- (A) Reduction of salt tax
 - (B) Recognition of tribal rights over their land and forests
 - (C) More educational opportunities for the tribals
 - (D) Abolition of the caste system

86. Match the following :

	Column A (Step)		Column B (Description)
1	Charkha	a	Thread dyers
2	TISCO	b	Spun thread
3	Rangrez	c	1854
4	First cotton mill set up in India	d	1912

4-0

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

87. Broad flat steps are made on the steep slopes called terrace farming. What is the purpose of terrace farming ?
- (A) To increase soil fertility (B) To increase water flow
(C) To reduce soil erosion (D) To help in growing crop
88. A wide base in India's population pyramid indicates :
- (A) A high proportion of elderly individuals
(B) A low birth rate
(C) An aging population
(D) A high birth rate
89. Assertion (A): Raja Ram Mohan Roy founded the Brahmo Samaj in 1830.
- Reason (R): The Brahmo Samaj aimed to prohibited all forms of idolatry and sacrifice.
- (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).
(B) Both (A) and (R) are 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.
90. In a parliamentary government, the Prime Minister is :
- (A) Appointed by speaker
(B) Elected directly by the public
(C) The leader of the majority party in the legislature
(D) A member of the judiciary
91. Which of the following is not a principle of sustainable development ?
- (A) Respect and care for all forms of life
(B) Improve the quality of human life
(C) Conserve earth vitality
(D) Apply latest technology and skills
92. Which of the following is NOT a function of the Supreme Court ?
- (A) To interpret the Constitution
(B) To settle disputes between states
(C) To conduct elections
(D) To protect fundamental rights
93. Which of the following was an immediate cause of the Revolt of 1857 ?
- (A) Heavy taxation on agricultural land
(B) Introduction of Western education
(C) Use of Enfield rifles with cartridges rumored to be greased with cow and pig fat
(D) Lack of support for local art and culture

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94. The primary focus of the Second Five-Year Plan was on :
(A) Agriculture
(B) Heavy Industries
(C) Defence
(D) Services Sector
95. Which Fundamental Right prohibits discrimination on grounds of religion, race, caste, sex, or place of birth ?
(A) Right to Freedom
(B) Right to Equality
(C) Right to Freedom of Religion
(D) Right to Constitutional Remedies
96. What did the British East India Company gain as a result of its victory in the Battle of Plassey ?
(A) Control over trade routes to China
(B) The right to collect revenue (Diwani) in Bengal, Bihar, and Odisha
(C) The monopoly on indigo production
(D) Control of all Indian territories
97. Wood's Dispatch of 1854 is considered important because it :
(A) Focused on the establishment of military schools in India.
(B) Laid the foundation for modern, Western-style education in India.
(C) Established Universities across India.
(D) Focused on improving agricultural practices.
98. The maximum strength of the Lok Sabha is :
(A) 500
(B) 550
(C) 545
(D) 400
99. Which of the following is a characteristic of subsistence farming ?
(A) Use of advanced machinery and technology
(B) High yields intended for large-scale trade
(C) Small land holdings and traditional farming methods
(D) Practice of cutting down trees
100. Which of the following statements is incorrect about the method of growing indigo during British rule ?
(A) The 'Nij' system involved planters growing indigo on land they directly controlled.
(B) In the 'Ryoti' system, farmers were willingly growing indigo as it was highly profitable for them.
(C) The 'Ryoti' system forced farmers to grow indigo on their own land under coercive contracts.
(D) The 'Nij' system planters found it difficult to expand the area of cultivation.

PART - II
SECTION - IV : MATHEMATICS

101. If $\frac{3}{5}$ of a number is equal to $\frac{7}{10}$ of another number, what is the ratio of the first number to the second number ?

- (A) 3 : 4 (B) 7 : 6 (C) 2 : 3 (D) 7 : 10

102. A person walks 3 km east, 4 km north, and 6 km west. What is the magnitude of the resultant displacement ?

- (A) 2 km (B) 4 km (C) 5 km (D) 7 km

103. Find the value of $(5^{-1} \times 25^{1/2}) \times 125^{1/3}$.

- (A) 1 (B) 5 (C) 25 (D) 125

104. If two lines intersect, then the vertically opposite angles are :

- (A) Equal (B) Supplementary
(C) Complementary (D) Corresponding

105. Which expression illustrates the associative property of multiplication ?

- (A) $2 \times 3 = 3 \times 2$ (B) $2 \times (3 \times 4) = (2 \times 3) \times 4$
(C) $2 \times 0 = 0$ (D) $2 \times 2 = 4$

106. Rama has a polyhedron-shaped toy that has 20 edges and 12 vertices. She wants to cover its faces with paper (one paper sheet for one face). How many paper sheets she needs to cover it fully ?

- (A) 8 (B) 10 (C) 12 (D) 6

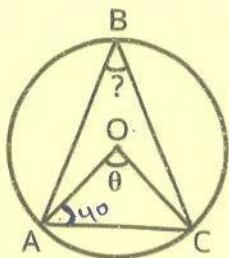
107. What is the value of the Roman numeral "MCMXCIX" ?

- (A) 1989 (B) 1999 (C) 2000 (D) 1990

108. In a bar graph displaying the number of hours students spend on homework each week, which statement is true if one bar is three times taller than another ?

- (A) The taller bar represents fewer hours spent on homework.
(B) The taller bar represents three times the hours of the shorter bar.
(C) Both bars represent the same number of hours.
(D) The shorter bar represents more hours than the taller bar.

109. In Fig. find value of $\angle ABC$ if $\angle OAC = 40^\circ$ in $\triangle AOC$.



- (A) 100° (B) 90° (C) 40° (D) 50°

\checkmark (D) 50°

110. The average score of 10 students is 75. If 2 students with scores 56 and 70 leave the group, the average score increases by 3. Find the total score of the remaining 8 students.

- (A) 592 (B) 608 (C) \checkmark 624 (D) 640

\checkmark (C) 624

111. A mixture contains alcohol and water in the ratio 5:3. If 16 liters of water is added to the mixture, the ratio of alcohol to water becomes 5:7. What is the initial quantity of alcohol in the mixture?

- (A) \checkmark 30 liters (B) 20 liters (C) 25 liters (D) 15 liters

112. Which of the following has the least value?

- (A) \checkmark -14×6 (B) $12 \div (-4)$ (C) $3 - 6 \times (-5)$ (D) $-7 \times (-6)$

113. Polygons that have no portions of their diagonals in their exteriors are called _____.

- (A) Concave (B) Convex (C) \checkmark Irregular (D) Regular

114. Manan painted the outside of a box of length 4 m, breadth 2.5 m and height 1 m. How much area did he cover, if he painted all except the bottom of the box?

- (A) 22.5 m^2 (B) 23 m^2 (C) \checkmark 24.5 m^2 (D) 28 m^2

115. A six-digit number is formed by repeating a three-digit number. For example, 357357, 789789, etc. Any number of this form is always divisible by:

- (A) 3 (B) 7 (C) 9 (D) \checkmark 11

116. Simplify $(2a + 3b)^2 - (2a - 3b)^2$

- (A) $12ab$ (B) \checkmark $24ab$ (C) $6a^2 - 6b^2$ (D) $36ab$

117. A cylinder has radius 7 cm and height 10 cm. Find its curved surface area.

- (A) \checkmark 440 cm^2 (B) 480 cm^2 (C) 550 cm^2 (D) 660 cm^2

118. Which of the following has its area and perimeter Numerically equal ?

- (A) An equilateral triangle of side 4 centimeters
(B) Square of side 4 centimeters.
(C) An equilateral triangle of side 2 centimeters
(D) Square of side 2 centimeters.

119. The following table gives the weights (in kg) of 9 students :

Student	Weight (kg)
S1	40
S2	55
S3	60
S4	45
S5	65
S6	50
S7	70
S8	62
S9	52

What is the median weight of the students ?

- (A) 55 kg (B) 60 kg (C) 50 kg (D) 65 kg

120. If a point P is 7 units away from the center of a circle of diameter 8 units, the point P lies :

- (A) Inside the circle (B) On the circle
(C) Outside the circle (D) Cannot be determined

121. A shopkeeper buys 90 kg of rice at ₹ 25 per kg and sells it at ₹ 30 per kg. Find his profit percentage.

- (A) 10% (B) 15% (C) 20% (D) 25%

122. Find the smallest number that should be added to 213 to make it a perfect cube.

- (A) 1 (B) 2 (C) 3 (D) 5

123. If $2x^2 - 3x - 5 = (2x+1)(x+m)$, then the value of m is :

- (A) 5 (B) -5 (C) 4 (D) -3

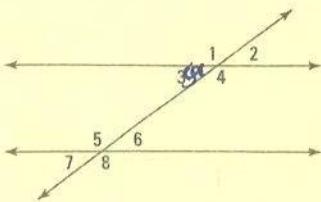
124. If the radius of a circle is doubled, its area becomes :

- (A) Half (B) Double (C) Four times (D) Eight times

125. A dice is rolled. What is the probability that the number appearing is a prime number ?

- (A) $1/2$ (B) $1/3$ (C) $2/3$ (D) $5/6$

126. In the given figure if $\angle 3 = 50^\circ$ then what will be the value of $\angle 8$.



$$3x \Rightarrow \\ 3x + 50 \Rightarrow \frac{360}{120}$$

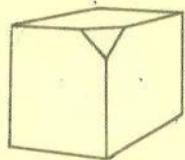
(A) 50°

(B) 60°

(C) 100°

(D) 130°

127. A cube has all its faces painted red. If one of its corners is cut off, how many of the following will be unpainted?



(A) 2 edges and 1 face
(C) 3 edges and 1 face

(B) 3 edges and 2 faces
(D) 2 edges and 2 faces

128. Find the diameter of a circle with area 154 cm^2 .

(A) 07 cm

(B) 14 cm

(C) 28 cm

(D) 42 cm

129. In triangle ABC and triangle DEF, if $AB = DE$, $BC = EF$, and $\angle ABC = \angle DEF$, which congruence criterion can be applied?

(A) SSS

(B) SAS

(C) AAS

(D) ASA

130. A and B can complete a task together in 14 days. A alone can finish the task in 21 days. In how many days can B complete the same task alone?

(A) 30 days

(B) 28 days

(C) 42 days

(D) 60 days

131. A cuboid has dimensions 12 cm, 8 cm, and 6 cm. How many cubes of side 2 cm can be cut from this cuboid?

(A) 48

(B) 72

(C) 96

(D) 144

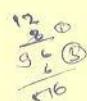
132. Which of the following shapes has rotational symmetry of highest order?

(A) A rectangle

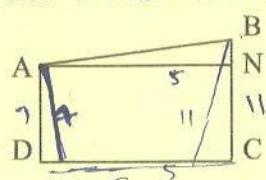
(B) A square

(C) A triangle

(D) A kite



133. In a trapezium ABCD, if the length of the $AD = 7 \text{ cm}$ and $BC = 11 \text{ cm}$, and the height is $AN = 5 \text{ cm}$, find the area of the trapezium.



$$\frac{1}{2} \times 10 \times 5$$

$$121 = 45 \times 20$$

(A) 32 cm^2

(B) 45 cm^2

(C) 64 cm^2

(D) 40 cm^2

134. A library's books are divided into :

Fiction	:	60
Non-fiction	:	30
Biographies	:	10
Total books	=	100

$$\frac{10 \times 36}{100} = 3.6$$

What is the measure of the central angle for biographies in the pie chart ?

- (A) 18° (B) 36° (C) 54° (D) 72°

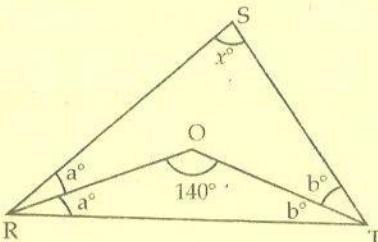
135. If one-fourth, half, and one-fifth of a number added to itself becomes 39, then what is the number ?

- (A) 24 (B) 20 (C) 26 (D) 30

136. What is the difference between the place value and face value of the digit 9 in the number 69,827 ?

- (A) 0 (B) 891 (C) 8910 (D) 8991

137. In triangle RST, $\angle ROT = 140^\circ$. What is the value of x ?



- (A) 40° (B) 90° (C) 80° (D) 100°

$$\begin{aligned} & 2x + a + b = 180 \\ & 2x + 140 = 180 \\ & 2x = 40 \\ & x = 20 \end{aligned}$$

138. A department store offers a 25% discount on all items. A customer buys two shirts for ₹ 800 each and one pant for ₹ 500. If an additional 5% sales tax is charged, how much will the customer pay? (round off)

- (A) ₹ 1654 (B) ₹ 1650 (C) ₹ 1653 (D) ₹ 1660

139. A swimming pool measures 35 meters in length and 10 meters in width. What is the area in square centimeters ?

- (A) $10,00,000 \text{ cm}^2$ (B) $20,00,000 \text{ cm}^2$ (C) $35,00,000 \text{ cm}^2$ (D) $50,00,000 \text{ cm}^2$

140. If 6 workers can complete a job in 15 days, how many workers are required to complete the same job in 9 days ?

- (A) 7 (B) 8 (C) 9 (D) 10

141. What is the value of x in $(x, 48, 50)$ to make it a Pythagorean triplet ?

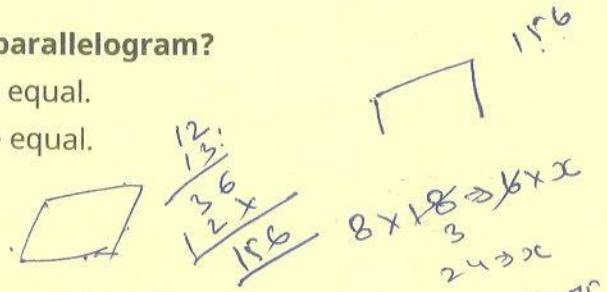
- (A) 14 (B) 16 (C) 18 (D) 20

$$\begin{aligned} & 2x \times 15 \Rightarrow x \times 30 \\ & 30 = x \times 3 \\ & x = 10 \end{aligned}$$

$$30 = 3x$$

142. Which of the following statements is/are true for a parallelogram?

- (A) Opposite sides are equal, and adjacent angles are equal.
(B) Opposite sides are equal, and opposite angles are equal.
(C) All sides are equal, and all angles are equal.
(D) The diagonals are equal.



143. In a quadrilateral ABCD, if $\angle A + \angle C = 120^\circ$, then $\angle B + \angle D$ is equal to :

- (A) 180° (B) 240° (C) 260° (D) 300°

156
0.75

144. If the temperature of a city increases from 25°C to 45°C in 5 hours, what is the rate of increase in temperature in $^\circ\text{F}$ per hour ?

- (A) $1.8^\circ\text{F}/\text{hour}$ (B) $2.2^\circ\text{F}/\text{hour}$ (C) $7.2^\circ\text{F}/\text{hour}$ (D) $3.6^\circ\text{F}/\text{hour}$

145. A group of 8 students can complete an ART project in 18 days. How many days will it take for 6 students to complete the same project, working at the same rate ?

- (A) 14 days (B) 12 days (C) 16 days (D) 24 days

146. If two angles are supplementary and one angle is 40° more than the other, find the smaller angle.

- (A) 50° (B) 70° (C) 110° (D) 140°

140

147. A vendor buys 13 dozen eggs at ₹ 6/dozen and sells them at ₹ 0.75/egg. What is his profit/loss ?

- (A) Profit of ₹ 78 (B) Loss of ₹ 39 (C) Profit of ₹ 39 (D) No profit, no loss

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②

148. A number is divisible by 15, but not by 5. Which of the following must be true ?

- (A) The number is divisible by 3 only.
(B) The number is divisible by 2 only.
(C) The number does not exist.
(D) The number is divisible by 4 and 6.

13
6
78
140
180

180

149. The ratio of the areas of two circles is 1:4. If the radius of the smaller circle is 3 cm, what is the radius of the larger circle ?

- (A) 6 cm (B) 9 cm (C) 12 cm (D) 8 cm

180
40
140

150. Rohan borrowed ₹ 25,000 from a bank for 4 years at an interest rate of 12% per annum. What is the difference between simple interest and compound interest, if the interest is compounded annually ? (Mark nearest round figure)

- (A) ₹ 1,340 (B) ₹ 2,340 (C) ₹ 4,340 (D) ₹ 5,340

2
12
1
2
300
2
12
1
300

2500 x 4 x 12
300
1200

1200

PART - II
SECTION - V : SCIENCE

151. Sound waves are :

- (A) ✓ Longitudinal
(B) Transverse
(C) Partly Longitudinal Partly Transverse
(D) Sometimes Longitudinal Sometimes Transverse

152. _____ is not a micronutrient required by plants.

- (A) Chlorine (B) ✓ Boron (C) Sulphur (D) Zinc

153. Which of the following is not a major greenhouse gas ?

- (A) Carbon dioxide (B) ✓ Ozone (C) Methane (D) Both (B) and (C)

154. Cell organelles having their own genetic materials are :

- (A) Plastids and lysosome (B) Mitochondria and lysosome
(C) ✓ Plastids and Mitochondria (D) Golgi bodies and plastids

155. Photosynthesis is a process in which green plants prepare their own food. Which of the following is not required as a raw material for this process ?

- (A) Oxygen (B) Sunlight (C) ✓ Carbon dioxide (D) Water

156. The first signs of puberty in boys is :

- (A) Enlargement of penis
(B) Appearance of pubic hair
(C) Enlargement of scrotum and testicle
(D) ✓ Deepening of voice

157. The ultrasound equipment used for investigating medical problems works on frequencies :

- (A) Lower than 2 Hz (B) Higher than 2 KHz
(C) ✓ Lower than 2 KHz (D) Between 2 Hz and 2 KHz

158. Amalgam is an alloy of any metal with :

- (A) Sodium (B) ✓ Copper (C) Mercury (D) Zinc

159. Which of the following is a contact force ?

- (A) Magnetic force (B) Gravitational force
(C) Electrostatic force (D) ✓ Muscular force

160. Damaged fluorescent tubes or CFLs need to be disposed off safely as they contain _____ vapors, which are toxic in nature.

- (A) Sodium (B) Chromium (C) Lead (D) Mercury

161. The process of depositing a layer of any desired metal on another material by means of electricity is called _____.

- (A) Anodizing (B) Electroplating (C) Electric plating (D) Galvanization

162. If we apply oil on the hinges of door making cracking Sound, the friction will :

- (A) Increase (B) Decrease
(C) No change (D) Will disappear altogether

163. A simple pendulum takes 25 seconds to complete 50 oscillations. What is the time period of the pendulum ?

- (A) ~~2 sec~~ (B) 0.5 sec (C) 1.5 sec (D) 3 sec

164. The impression of an image persists for about _____ of a second on the retina.

- (A) 1/18 (B) 1/8 (C) 1/6 (D) ~~1/16~~

165. Microbes that enter the body through the nose most likely affect :

- (A) Lungs (B) Heart (C) Liver (D) Brain

166. The process by which ammonia is converted into nitrites and nitrates is called :

- (A) Eutrophication (B) Ammonification
(C) ~~Nitrification~~ (D) Denitrification

167. In LED there are two wires called leads. One lead is slightly longer than the other. Longer lead is always connected to the _____ terminal of the battery.

- (A) Positive (B) Negative (C) Neutral (D) Any terminal

168. All human beings have _____ of chromosomes in the nuclei of their cells.

- (A) 26 pairs (B) ~~23 pairs~~ (C) 46 pairs (D) 2 pairs

169. When menstrual bleeding occurs, fluid that comes out of the vagina contains blood and _____.

- (A) Zygote (B) Sperm (C) ~~Ovum~~ (D) Embryo

170. The pictorial representation of two interdependent variables is known as :

- (A) Graph (B) ~~Oscillation~~
(C) Uniform motion (D) Non-uniform motion

171. Sliding friction is _____ than static friction.
(A) Equal (B) More (C) Less (D) Equal to or less
172. Female Aedes mosquito acts as a carrier of :
(A) Malaria (B) West Nile fever (C) Dengue (D) Typhoid
173. When an object is heated, the molecules that make up the object :
(A) Begin to move faster (B) Begin to move slower
(C) Become heavier (D) Become lighter
174. Speed of 54 km/ hr when converted to m/s is _____.
(A) 50 m/s (B) 20 m/s (C) 15 m/s (D) 25 m/s
175. The number of nuclei present in the zygote is/are :
(A) 4 (B) 3 (C) 2 (D) 1
176. Which of the following seeds are carried away by wind for pollination ?
(A) Xanthium and Ursena (B) Drumstick and maple
(C) Coconut (D) Castor and balsam
177. Fertility of the soil is reduced by :
(A) Crop rotation
(B) Decaying organic matter
(C) Addition of nitrogen-fixing bacteria
(D) Intensive agriculture
178. Rust of wheat plant disease is caused by :
(A) Fungi (B) Bacteria (C) Virus (D) Protozoa
179. Which of the following is a Natural phenomenon caused by the dispersion of sunlight in the sky ?
(A) Formation of rainbow
(B) Advanced sunrise and delayed sunset
(C) Twinkling of stars
(D) The position of stars seems higher than they actually are
180. Metamorphosis in frogs is controlled by _____ hormone.
(A) Adrenaline (B) Growth (C) Thyroxine (D) Testosterone
181. The major constituent of natural gas is :
(A) Butane (B) Methane
(C) Carbon dioxide (D) Hydrogen
182. In lichens symbiotic association is found between :
(A) Algae and fungus (B) Fungus and bacteria
(C) Algae and bacteria (D) Virus and bacteria

191. What is the role of guard cells ?

- (A) Absorb sunlight
(B) Helps in transporting water from xylem
(C) Helps in transporting sugar from phloem
(D) Regulates opening and closing of stomata

192. Which of the following is not a necessary condition for combustion ?

- (A) Presence of a fuel having high calorific value
(B) Attainment of ignition temperature
(C) Presence of a combustible substance
(D) Presence of a supporter of combustion

193. If the soil is too acidic for crops to be grown, it is treated with :

- (A) Quicklime (B) Organic matter (C) Water (D) Salt

194. Which of the following is not a Natural indicator ?

- (A) Red cabbage extract (B) Hibiscus
(C) Turmeric (D) Phenolphthalein

195. Loudness of Sound depends on :

- (A) Amplitude (B) Frequency (C) Wavelength (D) Speed

196. Which of the following is not a Natural phenomenon ?

- (A) Cyclones (B) Lightning (C) Earthing (D) Earthquake

197. Which of the following glands is not a dual-purpose gland ?

- (A) Testes (B) Pancreas (C) Pituitary (D) Ovaries

198. A wooden spoon is kept in the vessel in which water is boiling. It's other end :

- (A) Becomes hot due to the process of conduction.
(B) Becomes hot due to the process of convection.
(C) Becomes hot due to the process of radiation.
(D) Does not become hot.

199. The processes evaporation, transpiration and precipitation are involved in :

- (A) Water cycle (B) Carbon cycle (C) Nitrogen cycle (D) Oxygen cycle

200. Symbiotic nitrogen-fixing bacteria are present in :

- (A) Roots of cereals (B) Roots of leguminous plants
(C) Soil (D) Air

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