**Exam. 2018**

**Sub. Code No. : 3101**

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**Signature of Candidate**

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यदि किसी प्रश्न में हिंदी व अंग्रेजी माध्यम में भिन्नता हो तो अंग्रेजी माध्यम का प्रश्न हीं चेतावनी।

**INSTRUCTIONS FOR THE CANDIDATES:**

1. **अप्रौं, अपना पत्रिका या पत्रिका के अन्दर रहें।** जब अपना प्रश्न-पुर्णिका पढाने की वजह से जाने तो पत्रिका के अन्दर रहें। (The OMR Answer Sheet is inside this Question Booklet. When you are directed to read the Question Booklet, take out the OMR Answer Sheet and fill in the particulars carefully with the blue/black ball point pen only.)

2. **पत्रिका का अंक 2½ घंटे हैं।** प्रश्न-पुर्णिका में 150 प्रश्न हैं। (The test is of two-and-half hours duration and consists of 150 questions. There is no negative marking.)

3. **अपने ब्यवहार अंकित करने एवं उस पत्रिका पर निर्देश लगाने के लिए केवल नीले/ब्लू बॉल पेंट पैन का प्रयोग करें।** (Use Blue/Black Ball Point Pen only for writing particulars on this page/darkening responses in the Answer Sheet. The candidate should remain careful in handling the question paper and in darkening the responses on the answer sheet.)

4. **प्रश्न 10 मिनट में यह भी सुनिश्चित करे कि प्रश्न-पुर्णिका क्रम में उपर पत्रिका क्रमांक 1 ही है।** अगर यह निचला हो तो अभ्यर्थी हर प्रश्न-पुर्णिका क्रमांक उपर पत्रिका क्रमांक के इन निर्देशों को सुनिश्चित कराएं। (Within first 10 minutes, also ensure that your Question Booklet Serial No. and Answer Sheet Serial No. are the same. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Question Booklet and the Answer Sheet.)

5. **वेबल-1 (क्रमांक 1 से V के लिए)**

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<td>(No. 1 से 30)</td>
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<td>(No. 61 से 90)</td>
<td>(No. 91 से 120)</td>
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**Note:** इस पुर्णिका के अन्दर आए गए प्रश्नों को पढ़े। (Please read other remaining instructions given on the last page of this booklet.)
1. "Reasoning of child is not logical and is based on intuition rather than on systematic logic." According to Piaget this stage of cognitive development is called:

(1) Sensory motor period
(2) Preoperations period
(3) Concrete operations period
(4) Formal operations period

2. Out of the following which is not the example of intrinsic motivation?

(1) Anxiety
(2) Need for achievement
(3) Level of aspiration
(4) Praise

3. Which of the following parenting styles is most effective for development of Children's social competence?

(1) Authoritarian
(2) Neglectful
(3) Authoritative
(4) Indulgent
4. Which of the following strategies of teaching-learning is obstacle in developing creativity?

(1) Help students to think in flexible ways.
(2) Encourage students to take risk.
(3) Overcontrol students during teaching-learning.
(4) Guide students to be persistent and delay gratification.

5. Which of the following statement is incorrect about the continuous and comprehensive evaluation?

(1) It is school based evaluation.
(2) It includes all aspects of students.
(3) Diagnostic evaluation is not included in it.
(4) Both formal and informal techniques are used for it.

6. Which of the following is a significant fact about the development?

(1) It does not follow a predictable pattern.
(2) It is a product of the interaction of hereditary and environment.
(3) All individuals have similar rates of development.
(4) Development proceeds from specific to general.
7. Which of the following is not a characteristic of disadvantaged child?
(1) Suffers inadequacy of basic necessities of life.
(2) Provide the basic and universal right.
(3) Risk of future psycho-educational problems.
(4) Denied the opportunity to grow normally at his/her own rate.

8. A child who is high and low in a characteristic (such as anxiety or sociability) will remain so at later ages. This statement stresses on the importance of:
(1) Hereditary
(2) Environment
(3) Hereditary and environment
(4) Maturation

9. The domains of development such as physical, cognitive, social and emotional are developed in which one of the following process?
(1) Distinctly
(2) Partially
(3) Randomly
(4) Integrated and holistically
10. Which of the following behavioural characteristic is not related to the motivated behaviour of the individual?
   (1) Energized  (2) Directed
   (3) Separated  (4) Sustained

11. According to Chomsky, an innate capacity to acquire language is the result of our uniquely human biological inheritance, is called:
   (1) Language Adaptation Degree
   (2) Language Acquisition Device
   (3) Language Acceptance Desire
   (4) Language Acquire Domain

12. According to Kohlberg which level of moral development of a child shows no internalization of moral values and the moral reasoning of the child is controlled by external rewards and punishment?
   (1) Preconventional
   (2) Conventional
   (3) Postconventional
   (4) Universal ethical principle

13. The nature of emotion correctly depicts in which of the following statement?
   (1) Some emotions has behavioural aspect.
   (2) Emotions are permanent state of the organism.
   (3) Emotional expressions can not be modified by learning.
   (4) Every emotion is accompanied by a feeling.
14. Which of the following statement is correct about the continuous and comprehensive evaluation of learners?

(1) Summative assessment is called formal assessment.

(2) Summative assessment is called informal assessment.

(3) Summative assessment is during the instructional procedure.

(4) Summative assessment emphasise on diagnosing difficulties of students.

15. Out of the following which tool is not seems to be appropriate for formative assessment?

(1) Quizzes

(2) Criterion Referenced Test

(3) Group discussion

(4) Conversation

16. Which of the following question encourages a deep style of thinking?

(1) What is the inverse of one half?

(2) What is the lowest prime number?

(3) How much milk would you use to make half of the tea?

(4) What does it mean to say that addition is the opposite to subtraction?
17. Characteristic of social constructivist approach of learning is:
   (1) Emphasis on child's cognition for learning.
   (2) Emphasis on processing of information for learning.
   (3) Emphasis on collaboration with others for learning.
   (4) Emphasis on experiences for learning.

18. Which one of the following category of intelligence is not suggested by Howard Gardner in his multiple intelligence theory?
   (1) Mathematical Skill
   (2) Musical Skill
   (3) Interpersonal Skill
   (4) Practical Skill

19. According to Vygotsky, a range of task too difficult for the child to do alone, but possible with the help of adults and more skilled peers, is called:
   (1) Guided Participation
   (2) Scaffolding
   (3) Zone of proximal development
   (4) Inter subjectivity
20. Which of the following statement is incorrect about thinking?

(1) Thinking uses images and language.
(2) Thinking is a form of information processing.
(3) Thinking is the set of cognitive process.
(4) Thinking and language are unrelated.

21. Which of the following step is not included in problem solving?

(1) Accumulation of data
(2) Formulating hypothesis
(3) Verification and making generalization
(4) Responding to the stimulus

22. To meet the individual differences of learners which of the following step is not required?

(1) Individual's abilities assessed accurately
(2) Individualisation of instruction
(3) Indentification of socio-economic status
(4) Identification of special talents
23. ‘समावेशन’ का तात्पर्य है एक विशेष आवश्यकता वाले बालक को नियमित (सामान्य) कक्षा में शिक्षित करना:
(1) कुछ समय के लिए
(2) अधिकांश समय के लिए
(3) पूरे समय के लिए
(4) विद्यालय में सामाजिक गतिविधियों के दौरान

24. बहु-जुड़ (मन के प्रेम (डालें)) सिद्धांत के प्रवर्तक कौन थे?
(1) हॉफबर्ग गार्डनर
(2) अल्फ्रेड बिने
(3) ई० एल० डॉर्नबाउक
(4) ज० प० गिलफॉर्ड

25. अद्वितीय अनुभव (नियोन्यस) उपयुक्त रूप में परिभाषित की जा सकती है:
(1) यह बाह्य है और शैक्षिक और सांस्कृतिक वंचना से होता है।
(2) यह आंतरिक है और आंतरिक तत्त्व के हुकुमदीय से होता है।
(3) यह बाह्य है और सांतत्विक विशेष (बाधा) से होती है।
(4) यह आंतरिक है और मानसिक मंदता से होती है।

26. एक बालक जिसे मानव सम्पर्क से पृथक होना गया है, प्रायः दीर्घकाल तक अत्यधिक भाषा की बनी हो दर्शाता है जो बाद के भाषा उपयुक्त अनुभूतियों द्वारा पूर्ण रूप से बिखरते ही पूरी होती है। यह सात भाषा विकास के कीन-से-पस को बल देता है?
(1) वातावरणीय (2) जैविकीय
(3) अंतःक्रियावादी (4) व्यावहारिक

23. The term 'inclusion' means educating a child with special need in the regular classroom for:
(1) Some time
(2) Most of the time
(3) Full time
(4) During social activities in the school

24. Who was propounder of Multiple intelligence (Frames of Mind) theory?
(1) Howard Gardner
(2) Alfred Binet
(3) E. L. Thorndike
(4) J. P. Guilford

25. Learning disability can be appropriately defined as:
(1) It is extrinsic and due to educational & cultural deprivation.
(2) It is intrinsic and due to central nervous system dysfunction.
(3) It is extrinsic and due to emotional disturbance.
(4) It is intrinsic and due to mental retardation.

26. The child is raised in isolation from human contact often show extreme, long-lasting language deficits that are rarely entirely overcome by later exposure to language. This evidence support to which aspect of language development?
(1) Environmental (2) Biological
(3) Interactionist (4) Pragmatic
27. The highest level of learning in the hierarchy proposed by Gagne is:
   (1) Problem Solving Learning
   (2) Principle Learning
   (3) Concept Learning
   (4) Skill Learning

28. Which one of the following situation of learning is not based on child centered education?
   (1) Problem based
   (2) Discovery
   (3) Guided discovery
   (4) Demonstration

29. Which of the following is a supplementary law of learning propounded by Thorndike?
   (1) Law of Readiness
   (2) Law of Multiple Responding
   (3) Law of Exercise
   (4) Law of Effect

30. Learning is:
   (1) Everything we know is learned.
   (2) A relatively permanent influence on behaviour, knowledge and skill.
   (3) Directly observable and measurable.
   (4) Limited to particular age level.
31. ‘उकोच’ शब्द का सही अर्थ है :  
(1) गृह लेने वाला  
(2) गृह देने वाला  
(3) गृह  
(4) रिश्वत लेने का इच्छुक

32. ‘याबलीव’ पद में समास है :  
(1) अन्योपभाव  
(2) तत्तुषुष  
(3) कर्मधार्य  
(4) बहुआदि

33. योगी शिवेन्द्र ‘कुरूपात’ पर विराजमान है।  
रेखाक्रित पद में समास है :  
(1) मध्यम पद लेपी तत्तुषुष  
(2) कर्मधार्य  
(3) बहुआदि  
(4) द्रव्य

34. किस शब्द में ‘अव’ उपसर्ग का प्रयोग नहीं हुआ है ?  
(1) अवनदीप  
(2) अवलोक  
(3) अवधेश  
(4) अवधी

35. यह समस्या में आप ही हल कर लूंगा। रेखाक्रित पद का संज्ञानमें वर्तमान है :  
(1) संबंधवाचक  
(2) पूर्ववाचक  
(3) निजवाचक  
(4) विश्ववाचक

36. निम्न में से किस विकल्प में अविभाजी पद नहीं है ?  
(1) संबंधसूचक  
(2) सर्वनाम  
(3) समुच्चयबोधक  
(4) क्रिया-विशेषण

37. ‘गुण स्वर सन्धि’ का उदाहरण चुनिए :  
(1) अपेक्षामित  
(2) दश्योद्व  
(3) मनोदाश  
(4) शिरोरेखा

38. निम्न में से किस विकल्प में अपवाचक प्रत्यय का प्रयोग हुआ है ?  
(1) दाप्त  
(2) पाशिविक  
(3) दाशारथि  
(4) आस्तिक
39. ‘ऊँचाईयें’ नापने है तो पर्वतों की सैर करो।
रेखांकित पद का संज्ञापद विशिष्ट कीजिए:
(1) भावयाचक संज्ञा
(2) समूहयाचक संज्ञा
(3) व्यक्तियाचक संज्ञा
(4) जातियाचक संज्ञा

40. विशेषण से निर्मित भावयाचक संज्ञापद नहीं है:
(1) आंतीयता
(2) नैपुष्पा
(3) धेयता
(4) सारत्य

41. मोहन ‘आत्मी’ कश्च में ‘उत्तर’ स्थान पर रहा।
रेखांकित पदों में विशेषण का स्वरूप दर्शित करे:
(1) क्रमयाचक निशिचत संख्यायाचक विशेषण।
(2) पूर्णक्रमयाचक निशिचत संख्यायाचक विशेषण।
(3) समुदयाचक निशिचत संख्यायाचक विशेषण।
(4) आवृत्तियाचक निशिचत संख्यायाचक विशेषण।

42. एककर्म खिड़की द्वारा बाक्य है:
(1) महर्षि वेदंरस ने जयसंहिता लिखी।
(2) उसमेँ हमें पुस्तकें दी।
(3) बहने ने भाई को राखी बाँधी।
(4) मैंने पिताजी को पत्र लिखा।

43. वांछित दृष्टि से अशुद्ध विचल दर्शिए:
(1) दुरावस्था
(2) माहूभक्त
(3) मन:कामगाना
(4) अल्चान

44. अशुद्ध विलोम युग्म है:
(1) संशोधण – विश्लेषण
(2) शील – अशील
(3) सति – कुलटा
(4) सस्ती – असस्ती

45. गृहत संथिय विच्छेद वाला विचल दर्शिए:
(1) उद्द + डग्नय = उद्दडग्नय
(2) पद्द + हति = पद्दहति
(3) तल्ल + टीका = तल्लटीका
(4) शरद + उल्लास = शरदोल्लास
Direction: Answer the following questions by selecting the most appropriate option.

46. Fill in the blank space with correct adverb in the following sentence:
   The soldiers fought ............
   (1) Partly
   (2) Luckily
   (3) Bravely
   (4) Clearly

47. Fill in the blank with the correct option:
   The milk ........ sour.
   (1) has turned
   (2) will be turning
   (3) had turn
   (4) is turn

48. Identify the word with a different Sound represented by the underlined letter at the initial level in one of the following words:
   (1) Chest
   (2) Cheap
   (3) Catch
   (4) Chin

49. What are the positive and comparative degrees of the adjective "Best"?
   (1) Good, Better
   (2) Ok, Good
   (3) Better, Good
   (4) Best, Best

50. Choose the correct form of the verb "Read" in the following sentence:
   Read ........ a play by Bernard Shaw.
   (1) had reading
   (2) am reading
   (3) are reading
   (4) has read

51. Fill in the blank with appropriate modal from the options given below:
   ....... you mind opening the window?
   (1) Can
   (2) Could
   (3) Would
   (4) May
52. Write the antonym of the word 'Praise':

(1) Criticize
(2) Worship
(3) Favour
(4) Ignore

53. Choose the correct option for the underlined phrase:
The doctor told her to carry on with the treatment.

(1) Continue
(2) Delay
(3) Stop
(4) Postpone

54. Fill in the blank space with correct adjective in the following sentence:
He didn't make ............... mistakes.

(1) Many
(2) Good
(3) Much
(4) Most

55. Which one of these options has the words arranged in proper order to form a correct sentence?

(1) Lies the / wears a / uneasy / head that / crown.
(2) Uneasy / lies the / head / that wears / a crown.
(3) A crown / lies the / uneasy / head / that wears.
(4) Head / uneasy / a crown / that wears / lies the.

56. Fill in the blank with the correct option:
The plane ....... from Delhi at 3.00 clock tomorrow afternoon.

(1) left
(2) will have left
(3) leaves
(4) leaving
57. Identify the conjunction in the following sentence from the options given below:
   Answer the first question before you proceed further.
   (1) First
   (2) Before
   (3) Further
   (4) Proceed

58. Choose the correct past tense of the verb "Bring":
   (1) Brought
   (2) Buy
   (3) Buying
   (4) Broughted

59. Fill in the blank space with correct article in the following sentence:
   My brother is in ............... Indian army.
   (1) a
   (2) an
   (3) the
   (4) zero article

60. Choose the correct preposition from the given options in the following sentence:
   There is a label ............... the bottle.
   (1) on
   (2) in
   (3) at
   (4) into
61. The value of $666 + 6 + 3$ is equal to:

(1) 37  (2) 111
(3) 333  (4) 38

62. If $\frac{x}{16} = \frac{196}{x}$, then value of $|x|$ is:

(1) 28  (2) 36
(3) 52  (4) 56

63. Find the **wrong** term in the following series:

445, 221, 109, 46, 25, 11, 4

(1) 221  (2) 46
(3) 109  (4) 25

64. Which of the following fraction is the smallest?

(1) $\frac{13}{16}$  (2) $\frac{17}{21}$
(3) $\frac{15}{19}$  (4) $\frac{7}{8}$
65. If the side of an equilateral triangle is decreased by 20%, then its area is decreased by:

(1) 8%  (2) 16%
(3) 36%  (4) 20%

66. Find the next term of the series:
0, 6, 24, 60, 120, ?

(1) 180  (2) 210
(3) 216  (4) 240

67. 'X' and 'Y' are brothers. 'B' is the daughter of 'A'. 'A' is the wife of 'Y'. What is the relation of 'B' to 'X'?

(1) Sister-in-Law
(2) Niece
(3) Daughter
(4) Sister

68. In a certain code, 'PURE' is written as 'QVQD' and 'COPE' is written as 'DPOD', then 'WHEN' is written as:

(1) XIFO
(2) XDIM
(3) XIDM
(4) XIMD
69. Which of the following is correct?

(1) \( \frac{3}{5} < \frac{4}{7} < \frac{8}{9} \)
(2) \( \frac{4}{7} < \frac{8}{9} < \frac{3}{5} \)
(3) \( \frac{3}{5} < \frac{8}{9} < \frac{4}{7} \)
(4) \( \frac{4}{7} < \frac{3}{5} < \frac{8}{9} \)

70. Find the odd one:

(1) Mercury  (2) Venus  (3) Sun  (4) Saturn

71. In five friends, A scores more run than C but less than D, B scores more than D but less than E. Who scores the maximum runs?

(1) C  (2) B  (3) D  (4) E

72. If \( 2 = x + \frac{1}{1 + \frac{1}{3 + \frac{1}{4}}} \), then value of \( x \) is:

(1) \( \frac{18}{17} \)  (2) \( \frac{21}{17} \)  (3) \( \frac{16}{17} \)  (4) \( \frac{20}{17} \)
73. A train is moving with a speed of 180 km/hr. Its speed in metre per second is:
   (1) 50 m/sec
   (2) 40 m/sec
   (3) 30 m/sec
   (4) 25 m/sec

74. If \( \sqrt{18 \times 14 \times x} = 84 \), then \( x \) is equal to:
   (1) 22
   (2) 24
   (3) 28
   (4) 32

75. \( \sqrt{0.0025} + \sqrt{2.25} \) is equal to:
   (1) 1.55
   (2) 1.50
   (3) 0.155
   (4) 15.5

76. School bus picks A from his house and takes two left turns and then one right turn to reach his school. If the bus is facing East, while reaching the school, which direction was the bus facing at his home?
   (1) North
   (2) South
   (3) East
   (4) West
77. If \( \left( \frac{9}{4} \right)^x \cdot \left( \frac{8}{27} \right)^{x-1} = \frac{2}{3} \), then the value of \( x \) is:
   (1) 1
   (2) 2
   (3) 3
   (4) 4

78. In a certain code language, "pul ta nop" means "fruit is good", "nop ko tir" means "tree is tall" and "pul ho sop" means "eat good food". Which of the following does mean fruit in that language?
   (1) pul
   (2) ho
   (3) nop
   (4) ta

79. In a row of trees, a tree is at 11th place in the row from the left and 16th place from the right. How many trees are there in this row?
   (1) 25
   (2) 26
   (3) 27
   (4) 28
80. If $a$ is greater than $b$ by 2 and $b$ is greater than $c$ by 10 and $a + b + c = 130$, then value of $(b + c) - a$ is:

(1) 28  (2) 32  (3) 34  (4) 44

81. Which of the following is not correctly matched?

(1) Badkhal Lake – Faridabad  (2) Khalipur Lake – Gurugram  (3) Chandlai Lake – Jhajjar  (4) Karan Lake – Karnal

82. Neeraj Chopra won a Gold medal at Asian Games – 2018. He is associated with which sports?

(1) Javelin Throw  (2) Table Tennis  (3) Archery  (4) Shooting

83. The capital of Yaudhey Gana was:

(1) Rohtak  (2) Hisar  (3) Kurukshetra  (4) Ambala

Level-1/3101
84. Who is known as Haryana Kesari?
   (1) Sir Chhotu Ram
   (2) Lala Lajpat Rai
   (3) Pt. Neki Ram
   (4) Lala Murlidhar

85. Who was the leader of the revolution of 1857 in Panipat?
   (1) Imam Ali Kalandar
   (2) Akbar Ali
   (3) Bisarat Ali
   (4) Sadruddin

86. How many wildlife sanctuaries are there in Panchkula district?
   (1) One
   (2) Two
   (3) Three
   (4) Four

87. How many administrative sub-divisions are there in Haryana?
   (1) 73
   (2) 93
   (3) 49
   (4) 62
88. The decadal population growth of Haryana for the period of 2001-2011 is:
   (1) 28.43%
   (2) 22.62%
   (3) 44.59%
   (4) 19.9%

89. Maharana Pratap Bhoj University is situated in:
   (1) Bhopal
   (2) Sonipat
   (3) Gwalior
   (4) Kurukshetra

90. Identify the group, of which all the cities are associated with Metro project:
   (1) Gurugram, Faridabad & Sonipat
   (2) Gurugram, Palwal & Bahadurgarh
   (3) Gurugram, Faridabad & Bahadurgarh
   (4) Gurugram, Manesar & Faridabad
**Direction:** Answer the following questions by selecting the most appropriate option.

91. Find the value of \( x \), if \( 5^{x-3}, 3^{2x-8} = 225 \):

   (1) 3 \hspace{1cm} (2) 5
   (3) 6 \hspace{1cm} (4) 7

92. If both \( a \) and \( b \) are rational numbers, find the values of \( a \) and \( b \) in the following equalities:

\[
\frac{\sqrt{3} - 1}{\sqrt{3} + 1} = a + b\sqrt{3}
\]

   (1) \( a = -1, b = 2 \)
   (2) \( a = 1, b = 2 \)
   (3) \( a = 2, b = -1 \)
   (4) \( a = -2, b = 1 \)

**Rough work for** SPACE FOR ROUGH WORK
93. राजू ने दो पंखों को बेचा, जिनमें प्रत्येक पंखे का मूल्य 990 रू० है। एक पंखे को बेचने पर उसे 10% का लाभ होता है, तथा अन्य पंखे को बेचने पर उसे 10% की हानि होती है। इस लेन-देन में राजू को कितना प्रतिशत लाभ या हानि हुई?

(1) 1% हानि
(2) 1% लाभ
(3) 2% हानि
(4) 2% लाभ

94. A तथा B एक कार्य को 10 दिनों में पूर्ण करते हैं। B तथा C उसी कार्य को 15 दिनों में पूर्ण करते हैं। C तथा A उसी कार्य को 20 दिनों में पूर्ण करते हैं। उसी कार्य को अलग-अलग C, कितने दिनों में पूर्ण करेगा?

(1) 120 दिन
(2) 118 दिन
(3) 115 दिन
(4) 110 दिन

93. Raju sold two fans for Rs. 990 each. On selling one fan, he had a gain of 10% and on selling other fan, he had a loss of 10%. Find his gain or loss percent in the whole transaction:

(1) 1% loss
(2) 1% gain
(3) 2% loss
(4) 2% gain

94. A and B can do a work in 10 days. B and C can do the same work in 15 days. C and A can complete the same work in 20 days. In how many days can C alone complete the work?

(1) 120 days
(2) 118 days
(3) 115 days
(4) 110 days
95. Find the median of 30, 17, 43, 39, 18, 40:

(1) 34.5
(2) 30
(3) 39
(4) 43

96. The diagonals of a rhombus measure 16 cm and 30 cm. Find its perimeter:

(1) 63.5 cm
(2) 65 cm
(3) 68 cm
(4) 70.2 cm

Note: For rough work.
97. A shopkeeper bought some pencils at Rs. 18 a dozen and sold them at a profit of 20%. Find the selling price per pencil:

(1) Rs. 1.50
(2) Rs. 1.80
(3) Rs. 2.50
(4) Rs. 2.60

98. The cost of fencing a rectangular field at Rs. 7.50 per metre is Rs. 600. If its length is 24 m, find its breadth:

(1) 16 m
(2) 16.8 m
(3) 20 m
(4) 20.8 m

Level-1/3101
99. The area of an equilateral triangle is:

1. \( \frac{\sqrt{3}}{4} a^2 \) sq. units
2. \( 2a^2 \) sq. units
3. \( \sqrt{3} a^2 \) sq. units
4. \( \frac{\sqrt{3}}{2} a^2 \) sq. units

100. If \( x = 1, y = 2 \) is a solution of the equation \( a^2x + ay = 3 \), then find the values of \( a \):

1. \( a = 1, -3 \)
2. \( a = 1, 2 \)
3. \( a = -3, 2 \)
4. \( a = -1, -2 \)
101. How much area of metal sheet is required to make an open cylindrical tank of radius 3.5 m and height of 12 m?

(1) 305 m²
(2) 285 m²
(3) 292.7 m²
(4) 302.5 m²

102. Find the value of \( 0.25 + 32 \)

(1) 0.078125
(2) 0.78
(3) 0.72185
(4) 0.0078125

---

SPACE FOR ROUGH WORK
103. Find the HCF of 527, 1020 and 11594:

(1) 13
(2) 14
(3) 17
(4) 19

104. Two cubes of sizes 4 cm and 6 cm are melted to form a cuboid of length 10 cm and breadth 8 cm. What is the height of the cuboid so formed?

(1) 4.5 cm
(2) 3.8 cm
(3) 3.5 cm
(4) 2.5 cm
105. If \( \frac{1}{x} = 6 \), then find \( x^2 + \frac{1}{x^2} \):

(1) 36  
(2) 30  
(3) 34  
(4) 32

106. In an examination, A gets 10% more marks than B and B gets 15% more marks than C. How much percent more does A get than C?

(1) 25%  
(2) \(26\frac{1}{2}\)%  
(3) \(28\frac{1}{2}\)%  
(4) \(28\frac{3}{4}\)%
107. 36 men can build a wall 140 m long in 21 days, in how many days would 15 men be able to construct a similar wall 50 m long?

(1) 20 days  (2) 22 days  
(3) 22.5 days  (4) 18 days

108. Write 212°F in Celsius scale:

(1) 424°C  (2) 106°C

(3) 112°C  (4) 100°C

109. Mona's father is thrice as old as Mona. After 12 years, his age will be twice that of his daughter. Find the present age of Mona:

(1) 36 years  (2) 24 years

(3) 12 years  (4) 18 years
110. The speed of a 120 m long train is 50 km per hour. How much time will it take to pass a platform 600 m long?

(1) 50.5 seconds
(2) 51.84 seconds
(3) 52.75 seconds
(4) 58 seconds

111. A sum of Rs. 41 was divided among 50 boys and girls. Each boy gets 90 paise and a girl 65 paise. Find the ratio of number of boys and girls:

(1) 18 : 13
(2) 17 : 8
(3) 13 : 8
(4) 17 : 13
112. The ratio of Copper and Zinc in an alloy is 5 : 3. If the weight of Copper in the alloy is 30.5 grams, then find the weight of Zinc in the alloy:

(1) 20.5 g  
(2) 20.8 g  
(3) 15.8 g  
(4) 18.3 g

113. Divide 13 hours 1 minute 30 seconds by 6:

(1) 2 hours 1 minute 10 seconds  
(2) 2 hours 15 minutes 10 seconds  
(3) 2 hours 10 minutes 15 seconds  
(4) 2 hours 12 minutes 20 seconds
114. Find the area of the iron sheet required to prepare a cone (with base) is 24 cm height with base radius 7 cm:

(1) 625 cm²
(2) 690 cm²
(3) 704 cm²
(4) 729 cm²

115. Find the value of:

\[
\left[ 3 \frac{1}{4} \div \left( \frac{1}{4} - \frac{1}{2} \left( \frac{1}{2} + \frac{1}{4} \right) \right) \right]
\]

(1) 75
(2) 78
(3) 72 \frac{3}{4}
(4) 75 \frac{2}{3}
116. Length of a room is $1\frac{1}{2}$ times its breadth. If its height be 3.3 m and volume be $123\frac{3}{4}$ m$^3$, find the length of the room:

(1) 7.5 m
(2) 7.2 m
(3) 8.2 m
(4) 8.4 m

117. Factorize the following:

\[(x^2 - 6xy + 9y^2) - 25\]

(1) \((x - 5)(x + 5)\)
(2) \((x - y - 5)(x - y + 5)\)
(3) \((x + 3y + 5)(x - 3y - 5)\)
(4) \((x - 3y - 5)(x - 3y + 5)\)
118. A fruit seller bought 600 mangoes at 6 for Rs. 5 and sold at 5 for Rs. 6. Find the profit or loss percentage:

(1) Profit 44%  (2) Loss 44%
(3) Profit 22%  (4) Loss 22%

119. In a shop, there are three clocks which chime at intervals of 15, 20 and 30 minutes respectively. They all chime together at 10 a.m. At what time will they all chime together again?

(1) 10:45 a.m.  (2) 10:50 a.m.
(3) 11:15 a.m.  (4) 11 a.m.

120. \[ \sqrt{36.1 \times 102.4} \]  is the square root of:

(1) 58.8  (2) 60.8
(3) 60.2  (4) 62.2
121. The plant whose seed oil is being used to coat urea is:

(1) Cotton
(2) Neem
(3) Castor
(4) Jojoba

122. Select the *incorrect* statement:

(1) Power petrol has a higher octane number than ordinary petrol.
(2) Carbon footprint is a measure of Green House Gas emissions by a product.
(3) Reforestation and afforestation are the two terms used for the same process.
(4) The correct sequence of the four layers of atmosphere is: Troposphere, Stratosphere, Mesosphere and Ionosphere (Bottom to Top).

123. The ecological state of "being unique to a defined geographic location" is known as:

(1) Endangered
(2) Pandemic
(3) Sustainable
(4) Endemic
124. The award instituted by the Government of India for significant contribution in the field of wildlife protection is:
   (1) Gargi Puruskar
   (2) Indira Gandhi Paryavaran Puruskar
   (3) Amrita Devi Bishnoi Award
   (4) Priyadarshini Award

125. The metal found in Chlorophyll is:
   (1) Magnesium
   (2) Cobalt
   (3) Iron
   (4) Nickel

126. The World Heritage site of India located in more than one State is:
   (1) Valley of Flowers National Park
   (2) Mountain Railways of India
   (3) Sundarban National Park
   (4) Kalka-Shimla Railway

127. According to the Central Pollution Control Board (CPCB), what is the upper limit of sound for residential area?
   (1) 45 Decibels
   (2) 55 Decibels
   (3) 75 Decibels
   (4) 90 Decibels
128. The correct sequence of shortest to longest wavelength is:

1. Visible, Infrared, Ultraviolet
2. Ultraviolet, Visible, Infrared
3. Infrared, Visible, Ultraviolet
4. Ultraviolet, Infrared, Visible

129. An example of conventional source of energy is:

1. Tidal Energy
2. Geothermal Energy
3. Solar Energy
4. Nuclear Energy

130. The level of which of the following gaseous component increases in the atmosphere because of deforestation?

1. Carbon-di-oxide
2. Ozone
3. Water Vapour
4. Oxygen

131. The plant excluded from the list of trees in the Indian Forest (Amendment) Act 2017 is:

1. Cane
2. Sugar-Cane
3. Date-Palm
4. Bamboo
132. India's first State to release a Climate Change Action plan is:
(1) Uttarakhand
(2) Haryana
(3) Delhi
(4) Kerala

133. Complex interlinked food chains are called:
(1) Food Web
(2) Food Network
(3) Pyramid of Biomass
(4) Trophic level

134. Select the correct statement about ozone:
(1) The percentage of ozone in our atmosphere is 7.8%.
(2) Tropospheric ozone is "good ozone".
(3) Ozone absorbs ultraviolet rays and form oxygen.
(4) Ozone increases the amount of chloro-fluoro-carbons in the stratosphere.

135. The 'Agenda 21' of Rio Summit 1992 is related to:
(1) Sustainable Development
(2) Polluter-Pays Principle
(3) Environmental Education
(4) Preservation of Ozone Layer
136. The atmospheric green house effect is produced mainly by the absorption and re-emission of:
(1) Visible light by the atmosphere
(2) Infra-red radiations by the atmosphere
(3) Ultra-violet rays by the ground
(4) Ultra-violet radiations by the atmosphere

137. Which of the following does not deplete the water table at a place?
(1) Scanty rainfall
(2) Increasing snowfall
(3) Increasing number of tube-wells
(4) Increasing deforestation

138. Which of the following gas is produced by the anaerobic fermentation of biomass?
(1) Biogas
(2) Gas Oil
(3) Natural Gas
(4) Compressed Natural Gas (CNG)

139. Which of the following is not a scavenger?
(1) Mushroom (2) Vulture (3) Termite (4) Earthworm

140. Select the set of disease caused by pollution:
(1) Cat-cry syndrome and Minamata
(2) Hypertension and Marasmus
(3) Marasmus and Kwashiorkor
(4) Minamata and Fluorosis
141. The incomplete combustion of firewood in homes produce a poisonous gas 'X'. When inhaled gas 'X' combines with substance 'Y' present in blood and reduces the capacity of blood to carry gas 'Z' causing respiratory problems. Identify 'X', 'Y' and 'Z':

<table>
<thead>
<tr>
<th>'X'</th>
<th>'Y'</th>
<th>'Z'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon mono-oxide</td>
<td>Oxygen</td>
<td>Carbon-di-oxide</td>
</tr>
<tr>
<td>Water</td>
<td>Carbonic Acid</td>
<td>Haemoglobin</td>
</tr>
<tr>
<td>Blood</td>
<td>Oxygen</td>
<td>platelets</td>
</tr>
</tbody>
</table>

142. Which of the following is not a 'green good deed'?

(1) Switch off ignition at red light.
(2) Burn the waste.
(3) Keep bird baths and bird feeders.
(4) Eat multigrain.

143. Match the days given in Column I with the dates given in Column II and choose the correct answer using the codes given below:

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Water Day</td>
<td>(i) 5 June</td>
</tr>
<tr>
<td>Ozone Day</td>
<td>(ii) 22 April</td>
</tr>
<tr>
<td>World Environment Day</td>
<td>(iii) 22 May</td>
</tr>
<tr>
<td>International Day for Biological Diversity</td>
<td>(iv) 22 March</td>
</tr>
<tr>
<td>Earth Day</td>
<td>(v) 16 September</td>
</tr>
</tbody>
</table>
144. Which of the following is not a water borne disease?

(1) Cholera
(2) Typhoid
(3) Hepatitis
(4) Tuberculosis

145. Select the incorrect pair:

(1) Nilgiri Biosphere Reserve – Tamil Nadu, Kerala and Karnataka
(2) Nokrek Biosphere Reserve – Mizoram
(3) Simlipal Biosphere Reserve – Odisha
(4) Dehang-Debang Biosphere Reserve – Arunachal Pradesh

146. The theme for World Environment Day 2018 was:

(1) Connecting people to nature
(2) Raise your voice not the sea level
(3) Beat plastic pollution
(4) Consume with care

P.T.O.
147. Which of the following is not produced in soil during decomposition of organic matter?

(1) Water
(2) Nutrients
(3) Carbon-di-oxide
(4) Oxygen

148. Which of the following belong to more than one trophic level?

(1) Snake
(2) Grasshopper
(3) Planktons
(4) Man

149. The 'A' coloured bins are used to dump biodegradable solid waste while the recyclable left-over are to be dumped in 'B' coloured bins. Identify 'A' and 'B':

(1) A → Blue B → Green
(2) A → Green B → Black
(3) A → Blue B → Black
(4) A → Green B → Blue

150. Select the biotic component of an ecosystem from the following:

(1) Chlorophyll
(2) Planktons
(3) Sunlight
(4) Soil