

Q. No. 9 to 13 : Read the following passage carefully and select the most correct answer of the given questions.

The expansion of our range of perception is a natural consequence of the growth of consciousness. It is part of normal human sensory ability, there does not have to be special purpose for it beyond the experience itself. You don't need to be overly concerned with what to do with your new experiences, just let them be what they are and carry on with your life as before. If there is any vision that you need to act upon, you will know what to do, you won't have to try to figure it out.

16. Choose the grammatically correct sentence :

- (1) She is strong enough to carry the box
- (2) She is too strong to carry the box.
- (3) She is enough strong to carry the box.
- (4) She is strong to too carry the box.

17. Choose the correct alternative :

- (A) Thirty-one cannon were fired to greet the royal guest.
- (B) For social peace and harmony, we should all observe the canons of morality.
- (1) Only (A) is correct. (2) Only (B) is correct.
- (3) Both (A) and (B) are correct (4) Both (A) and (B) are wrong.

18. Choose the odd man out :

- (1) Deer (2) Sheep
- (3) Swine (4) Elephant

19. Choose the alternative which best expresses the meaning of the underlined idiom :

Parents pay through their nose for their children's education.

- (1) by taking loans (2) an extremely high price
- (3) grudgingly (4) willingly

20. If Sunidhi has tumour in her body, who will treat her ?

- (1) Radiologist (2) Gynaecologist
- (3) Oncologist (4) Osteopath

21. Which of the following is a rhetorical question ?

- (A) Is it fair to mislead parents ?
 - (B) Are you willing to join our group ?
 - (C) Can you speak English fluently ?
 - (D) Have you visited the Taj Mahal ?
- (1) A (2) B (3) C (4) D

22. Choose the correct simple sentence for the given sentences :

- (A) They tried to persuade the principal.
- (B) The Principal denied their request.
- (1) By trying to persuade the Principal, he denied their request.
- (2) They tried to persuade the Principal but he denied their request.
- (3) Despite their trying to persuade the Principal, he denied their request.
- (4) Though they tried to persuade the Principal, he denied their request.

मराठी

42. 'फकिराचे अभंग' या कवितासंग्रहाचे कवी कोण?
- (1) संत तुकाराम (2) संत ज्ञानेश्वर (3) फ.मु. शिंदे (4) विद्ठल बाध
43. प्रके. अत्रे यांनी कोणत्या टोपणनावानी कवितालेखन केले?
- (1) केशवसुत (2) केशवदूत (3) केशवकुमार (4) कुसुमाग्रज
44. प्रत्येक चरणात 12 अक्षरे व य-य-य-य गण ही कोणत्या वृत्ताची लक्षणे आहेत?
- (1) मालिनी (2) भुजंगप्रयात (3) वसंततिलका (4) इंद्रवज्ञा
45. शब्दालंकार प्रकारात मोडणारा अलंकार कोणता?
- (1) श्लेष (2) उपमा (3) उत्त्रेक्षा (4) भ्रान्तिमान
46. शुद्धलेखनाच्या नियमानुसार अचूक शब्द कोणता?
- (1) निघृण (2) निरघुण (3) निर्वृण (4) निर्घृण
47. ज्ञानपीठ पुरस्कारप्राप्त 'ययाती' ही साहित्यकृती कोणत्या साहित्यप्रकारातील आहे?
- (1) कथा (2) काव्य (3) नाटक (4) कादंबरी
48. प्रथमपुरुषी एकवचनी भाषेचा वापर कोणत्या निबंधप्रकारात करणे आवश्यक आहे?
- (1) आत्मवृत्तात्मक (2) वैचारिक (3) कल्पनारम्य (4) वर्णनात्मक
49. तो म्हणाला, "मी येईन." या वाक्यात किती विरामाचिन्हे आहेत?
- (1) दोन (2) तीन (3) सहा (4) एक
50. पूर्वरूपसंधीचे अचूक उदाहरण कोणता?
- (1) साजेसा (2) नुमजे (3) हातून (4) एकेक
51. अव्ययीभाव समासातील शब्द कोणता?
- (1) गैरहजर (2) विद्याभ्यास (3) तोङपाठ (4) नवरात्र
52. 'छते उन्हाची घराला, नांदते जीव पोळती
फुफाटयाच्या वाहणा, पायामधूनी घालती
दाह त्यांच्या वेदनांचे झोलीत गेले पाहिजे.'
संदर्भीय काव्यपंकर्तीमध्ये कोणता रस आहे?
- (1) शांत (2) शृंगार (3) करूण (4) हास्य

53. कोणत्या प्रयोगप्रकारात कर्म प्रथमान्त असते आणि कर्ता प्रथमान्त कधीच नसतो?

 - कर्मणी
 - कर्तरी
 - भावे
 - भावकर्तरी

54. 'विकट वाट वहिवाट नसावो धोपट मार्ग सोहुनको' ही अनंत फंदीची रचना कोणत्या प्रकारातील आहे?

 - लावणी
 - पोवाडा
 - भारूळ
 - अभंग

55. सतिल या शब्दाचा समानार्थी शब्द कोणता?

 - लीलायुक्त
 - लीलासहित
 - लीलया
 - नीर

56. 'थंडी' या नामासाठी योग्य विशेषण कोणते?

 - मलूल
 - अलगाद
 - गुलाबी
 - वेढी

57. मधू लाढू खात असे. या वाक्यातील काळ ओळखा.

 - रीति भूतकाळ
 - रीति वर्तमानकाळ
 - रीति भविष्यकाळ
 - वर्तमानकाळ

प्र. 58 ते 60 खालील उतारा वाचून त्यावर विचारलेल्या प्रश्नांची उत्तरे लिहा.

हुशार मुलं ही खरोखरच परमेश्वरी देणगी होय. अशा असामान्य मुलांना वाढवताना मिळणाऱ्या आनंदाची चव ही चाखल्याशिवाय नाही कळणारे. म्हणूनच तुमची मुलं हुशार असेल तर अभिनंदन! हो, पण अशा हुशार मुलांना वाढवताना समस्याच येत नाहीत अशा गैरसमजात भाज्य राहू नका ठे! उलट अशा मुलांना वाढवताना जरूर ती पथ्ये पाळली गेली नाहीत तर अशी मुल अधिक समस्या निर्माण करून ठेवतात. तसंच बुद्धिवान आणि कल्पक मुलं ही आपली वैयक्तिकच नके तर समाजाची, राष्ट्राची सपत्ती मानून त्याची बुद्धिमत्ता व कल्पकता विकसित करणे हे पालक म्हणून आपलं सामाजिक कर्तव्य ठरत नाही काय?

58. चव चाखणे म्हणजे काय?

(1) खाऊन पाहणे (2) रुचकर वाटणे (3) अनुभव घेणे (4) तोडाला पाणी सुटणे

59. राष्ट्रीय संपत्ती म्हणून कोणाचा उल्लेख केला आहे?

(1) सामान्य मुलं (2) अभिनंदन करणारी मुलं
(3) पथ्य पाळणारी मुलं (4) बुद्धिवान, कल्पक मुलं

60. उतान्यातून कोणाचे अभिनंदन केले आहे?

(1) हुशार मुलांचे (2) कल्पक व बुद्धिमान मुलांचे
(3) पथ्य पाळणाऱ्या मुलांचे (4) हुशार मुलांच्या पालकांचे

CHILD DEVELOPMENT AND PEDAGOGY

74. The development of various sense organs' competency and the nervous system occurs rapidly up to the age of three years. This opinion was put forth by
(1) Wundt (2) Tichner (3) Skinner (4) Thurston and Thorndike
75. In infancy the various movement of a child are dependant on motor skill development. According to this which of the following statement is not correct ?
(1) Maturity is the main factor in motor development.
(2) Motor development starts after birth.
(3) Development occurring in the coordination of muscles and nervous system are included in motor development.
(4) Sitting, getting up, running etc are motor skills
76. Which of the following is not a correct example of sensation ?
(1) An unconscious persons gets sensation about sound
(2) Dogs find out thieves by smeling and sniffing things.
(3) When one puts an eatable in the mouth the taste sensation are awakened
(4) When we go to the market we hear many sounds
77. Which of the following is an incorrect statement about perception ?
(1) Perception is the next step after sensation.
(2) Mind is active in perception and inactive in sensation
(3) Stimulus, sense organs and nervous system are the support of both mental processes i.e. sensation and perception
(4) Perception does not occur in absence of sensation
78. Instrument players, singers, dancers all impress us with their talent and entertain us. This is included in which type of imagination ?
(1) Fantastic imagination (2) Aesthetic imagination
(3) Pragmatical imagination (4) Reproductive imagination
79. Imagery is useful in various areas of education. Following are statements explaining educational importance of imagery. Which of the following is not a correct statement ?
(1) Intensity of imagery depends upon the eagerness of experiences
(2) Experiences that are to be given to the students should be exact, clear and detailed
(3) It is unnecessary to teach the students how to form imagery
(4) While telling abstract concepts to students they should be related to pictures, diagrams and models
80. We sometimes think that we have got what we desire and then keep some favourable and convenient things in our mind. This happens due to which of the following defects in thinking process ?
(1) Defect in observation (2) Prejudiced thoughts
(3) Coincidental judgment (4) Wishful thinking

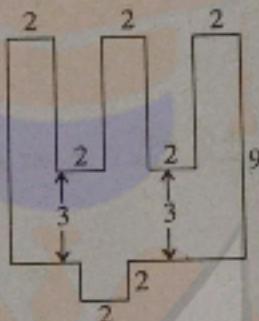
MATHEMATICS & SCIENCE

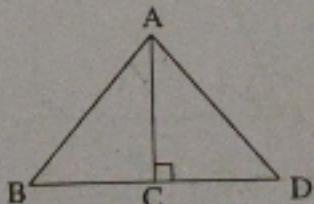
91. $\sqrt{2\sqrt{2\sqrt{2\sqrt{2\sqrt{2}}}}} = ?$

92. Jay invested one third part of his funds at a rate of 7%, one fourth part at a rate of 8% and rest part at a rate of 10%. If his annual income is Rs. 561. Find the total fund he has.

(1) Rs. 5400 (2) Rs. 6000 (3) Rs. 6600 (4) Rs. 7200

93. From the given figure find the total area of a figure





- (1) 100° (2) 90° (3) 120° (4) 60°

97. If a number 782 is divided in the proportion $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$, then what will be the first number ?
 (1) 202 (2) 204 (3) 391 (4) 140

98. Right circular cylinder of a radius 12 cm is filled up to height 20 cm with water. When a metal ball is immersed in the cylinder, water level rises by 6.75 cm. Find the radius of ball in cm.
 (1) 3 (2) 9 (3) 7 (4) 1

99. Price of an article is increased by 20%. What percent of discount should be declared on the increased price so that the article will be sold at its original price ?

- (1) $16\frac{2}{3}$ (2) $12\frac{2}{3}$ (3) 10 (4) 20

100. If $a^2bc^3 = 5^3$ and $ab^2 = 5^6$ then $abc = ?$

- (1) 5^6 (2) 5^3 (3) 5^2 (4) 5^4

101. If $\frac{4^5 + 4^5 + 4^5 + 4^5}{2^5 + 2^5} \times \frac{6^5 + 6^5 + 6^5 + 6^5 + 6^5 + 6^5}{3^5 + 3^5 + 3^5} = 8^n$ then $n = ?$

- (1) 4 (2) $\frac{1}{4}$ (3) 2 (4) $\frac{1}{2}$

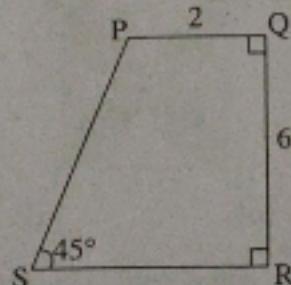
102. If $x + \frac{1}{x} = \frac{17}{4}$ and $4y^2 + 4 + 17y = 0$. Then what will be the relation between x and y from the following ?

- (1) $x < y$ (2) $x > y$ (3) $x = y$ (4) $x \leq y$

103. Average salary of all workers in a factory is Rs. 8000. In it, if average salary of seven workers is Rs. 12000 and average salary of remaining workers is Rs. 6000 find the total number of workers in the factory ?

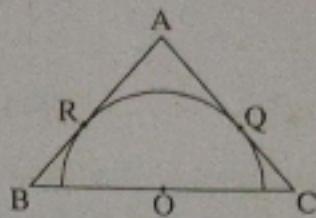
- (1) 18 (2) 20 (3) 21 (4) 22

104. Find the perimeter of $\square PQRS$ given in the figure



- (1) $16 + 3\sqrt{2}$ (2) $16 + 6\sqrt{2}$ (3) $28\sqrt{2}$ (4) $22\sqrt{2}$

105. In $\triangle ABC$ (in figure aside) $AB = 20$, $BC = 42$, and $AC = 34$. Point 'O' is any point on the side BC. A semicircle is drawn by taking point, 'O' as a centre. Semicircle touches to side AC and side AB at a point Q and R respectively. Find the radius of the semicircle.



(1) $\frac{121}{9}$

(2) $\frac{112}{3}$

(3) $\frac{112}{9}$

(4) $\frac{121}{3}$

106. In a figure, in $\square ABCD$ $\angle A = \angle B = 90^\circ$, $\angle C = 60^\circ$. If $AD = 7$, $BC = 11$ then find AC.



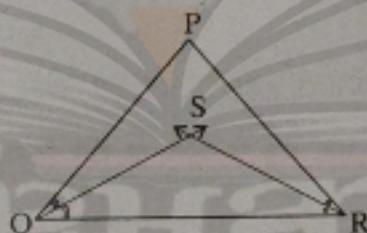
(1) 13

(2) 11

(3) $4\sqrt{3}$

(4) $11\sqrt{3}$

107. In a figure, $PQ > PR$. Ray QS and ray RS are angular bisectors of $\angle Q$ and $\angle R$ respectively. Then what will be the most accurate alternative from the following?



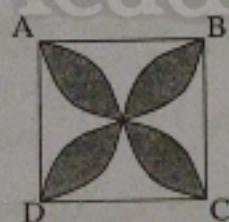
(1) $QS > RS$

(2) $QS < RS$

(3) $QS = RS \neq QR$

(4) $QS = SR = QR$

108. In a figure $\square ABCD$ is a square. Find the total area of shaded part of the figure.



(1) 43 cm^2

(2) 57 cm^2

(3) 78.5 cm^2

(4) 21.5 cm^2

109. A total amount of Rs. 41.58 is spent over to paint the total surface area of certain solid hemisphere. The rate of painting is Rs. 400 per sq. meter. then what will be the radius of hemisphere?

(1) 10.5 m

(2) 10.5 cm

(3) 10.39 cm

(4) 10.39 m

110. $1 + (\sqrt{-1})^{100} + (\sqrt{-1})^{10} + (\sqrt{-1})^{1000} = \dots$

(1) 2

(2) 1

(3) $\sqrt{-1}$

(4) 0

111. $(0.98)^{-3} = \dots$

(1) 0.06

(2) 1.06

(3) 1.09

(4) 1.62

112. Prasad's house is at a distance of 200 m. from each temple. Distance between two temples is 240 m. Prasad's house and Sagar's house is exactly opposite side of a road joining the two temples. If Sagar's house is at a distance of 150 m. from each temple then find the distance between Prasad's house and Sagar's house.

(1) 240 m

(2) 250 m

(3) 90 m

(4) 160 m

113. If $a = 3 + 2\sqrt{-1}$ and $b = 5 - 3\sqrt{-1}$, then which of the following alternatives indicates most accurate relation between 'a' and 'b'

(A) 'a' is equal to 'b'

(B) 'a' is less than 'b'

(C) 'a' is greater than 'b'

(D) Will not compare 'a' with 'b'

(1) A and B

(2) A and C

(3) Only A

(4) Only D

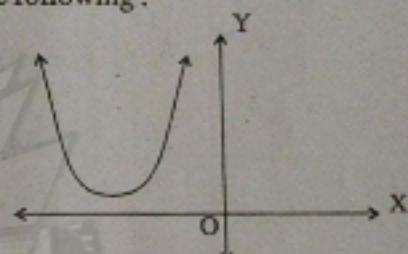
114. From the figure given state what is a suitable alternative from the following:

(1) For each value of x there are two values of y .

(2) For positive x , y is negative.

(3) For any negative value of x , y is always positive.

(4) For every value of y , there are two values of x , one is positive and other is negative.



115. What is the length of a side of a square shaped farm having area $101 \frac{1}{100} \text{ m}^2$?

(1) 10.05 m

(2) 10.005 m

(3) 100.5 m

(4) 100.05 m

116. 5 units and 4 units are the radii of two concentric circles. The chord of larger circle is tangent to the smaller circle. Find the length of the chord.

(1) 6 unit

(2) 3 unit

(3) 9 unit

(4) 1 unit

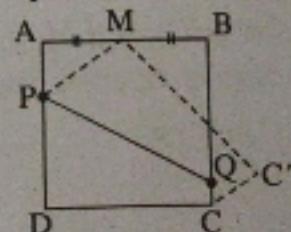
117. In a figure in a square ABCD point P and point Q are the points on side AD and side BC respectively. Such that if a figure is fold along segment PQ point D coincides with point M. Point M is a mid point of side AB. Find the ratio PM : AP.

(1) 5 : 8

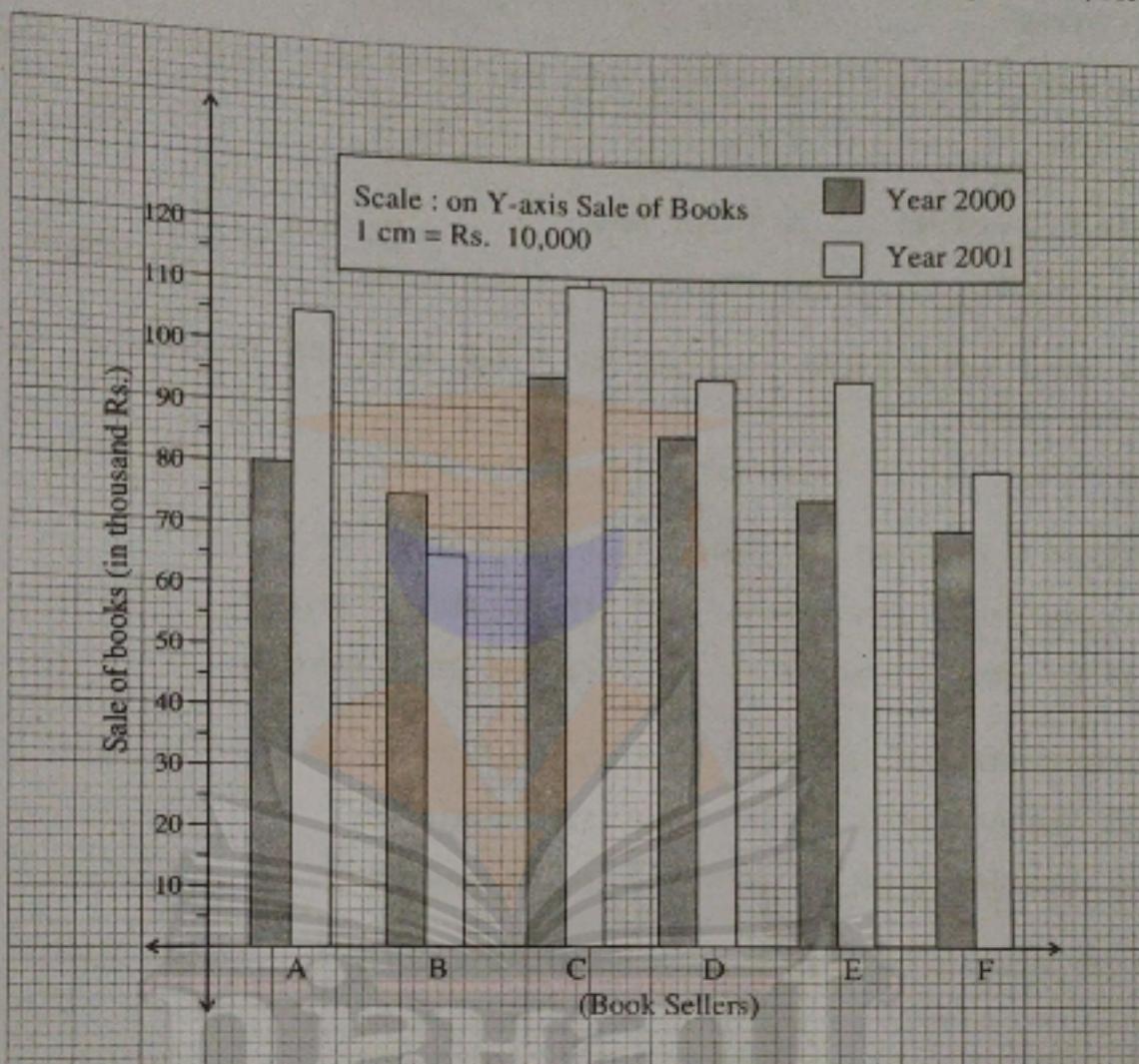
(2) 5 : 3

(3) 3 : 5

(4) 3 : 4



Note : For Q. No. 118, 119 and 120 : Following bar graph, shows the total sale of books done by six different book sellers in the year 2000 and 2001. Observe it and answer the Q. No. 118, 119, 120.



118. What is the percentage of total sale of seller F in both the years 2000 and 2001 to the total sale of seller C in the same period ?
- (1) 71.11% (2) 68.54% (3) 73.17% (4) 77.26%
119. Find the average of total sale done by all sellers in the year 2000.
- (1) 73 (2) 80 (3) 88 (4) 83
120. Find the percentage of average of the total sale done by the sellers A, B, C in the year 2001 to the average of the total sale done by the sellers A, C, F in the year 2000.
- (1) 75% (2) 77.5% (3) 82.5% (4) 87.5%

131. Electric charge per unit time is

- (1) electric current
- (2) resistance
- (3) electric power
- (4) work done

132. How many electrons are present in Mg^{2+} ion ?

- (1) 10
- (2) 11
- (3) 12
- (4) 14

133. Analogous organs have

- (1) Same structure and same functions
- (2) Same functions and different structure
- (3) Same structure and different functions
- (4) Different structure and different functions.

134. If there were no atmosphere on the earth, the duration of day light would have

- (1) decreased
- (2) increased
- (3) become infinite
- (4) remained unchanged.

135. The elements with atomic number 2, 10, 18, 36, and 54 belongs to

- (1) alkali metals
- (2) alkaline earth metals
- (3) halogens
- (4) inert gas elements.

136. Reproduction in yeast takes place by

- (1) fragmentation
- (2) budding
- (3) binary fission
- (4) multiple fission

137. A stone is dropped from the top of a building and it reaches the ground in 1 second. What is the height of building ?

- (1) 9.8 m
- (2) 19.6 m
- (3) 12 m
- (4) 4.9 m

138. Which of the following is a covalent compound ?

- (1) Sugar
- (2) Common salt
- (3) Calcium chloride
- (4) Magnesium oxide.

139. In eukaryotic cell, glycolysis takes place with in

- (1) nucleus
- (2) endoplasmic reticulum
- (3) Cytosol
- (4) mitochondria

140. A speed of 54km/hr is equal to

- (1) 10 m/s (2) 12 m/s (3) 15 m/s (4) 20 m/s

141. Fats containing food becomes rancid due to the process of

- (1) oxidation (2) reduction
(3) corrosion (4) hydrogenation

142. The generic as well as species name of an organism does not generally have less than letters.

- (1) 3 (2) 4 (3) 2 (4) 5

143. The correct formula of aluminium carbonate is

- (1) $\text{Al}_2(\text{CO}_3)_3$ (2) AlCO_3 (3) Al_2CO_3 (4) $\text{Al}_3(\text{CO}_3)_2$

144. Which one of the following is acquired character and not inherited character ?

- (1) Nature of hair (2) Colour of eye (3) Size of body (4) Colour of skin

145. If a 40 watt bulb is used for 25 hours, then energy consumed is

- (1) 1000 watt (2) 1 kWh (3) 10 kWh (4) $\frac{1}{10}$ kWh

146. Atomic number of carbon is 6 and atomic mass is 12. How many atoms of carbon are present in 2.4g carbon ?

- (1) 1.2044×10^{23} (2) 6.022×10^{23} (3) 6.022×10^{22} (4) 1.2044×10^{21}

147. Two bones are connected with each other by

- (1) tendons (2) cartilage (3) ligaments (4) fibres.

148. Infrasonic sound have frequencies

- (1) above 20Hz (2) less than 20Hz
(3) above 20,000Hz (4) between 20Hz to 20,000 Hz.

149. Na_2CO_3 is a salt of

- (1) strong acid and strong base (2) strong acid and weak base
(3) weak acid and strong base (4) weak acid and weak base.

150. Which of the following gymnosperms is considered as a living fossil ?

- (1) Ginkgo (2) Thuja (3) Pinus (4) Cycas.