91. Percentage of water absorbed by raisins is :
    (1) Directly proportional to the weight of dry raisins
    (2) Inversely proportional to the weight of dry raisins.
    (3) Equal to the weight of dry raisins.
    (4) None of these.

92. According to the Law of Reflection :
    (1) The angle of incidence is equal to the angle of reflection.
    (2) The angle of incidence is double the angle of reflection.
    (3) The angle of reflection is double the angle of incidence.
    (4) None of the above.

93. The characters transmitted from parents to offsprings are present in :
    (1) cytoplasm    (2) ribosome    (3) golgi bodies    (4) genes

94. The branch of biology dealing with the transmission of characters from one generation to other is termed as :
    (1) Mycology    (2) Genetics    (3) Anatomy    (4) Physiology

95. The SI unit of converging ability of a lens is :
    (1) cm    (2) m    (3) dioptre    (4) power

96. An alloy is :
    (1) an element    (2) a compound
    (3) a homogenous mixture    (4) a heterogenous mixture

97. The fossil remains of Archaeopteryx is a connecting link between :
    (1) reptiles and mammals    (2) reptiles and birds
    (3) fish and amphibian    (4) amphibian and reptile

98. A pacemaker is meant for :
    (1) transplanting liver    (2) transplanting heart
    (3) regulation of heart beats    (4) regulation of blood flow

99. Renewable energy is preferred over the conventional energy as they are :
    (1) non-exhaustible    (2) costly
    (3) highly efficient    (4) none of these

100. The pH of the gastric juices released during digestion is :
    (1) less than 7    (2) more than 7
    (3) equal to 7    (4) equal to 0

# PART-B

## SECTION-V (ii) : MATHEMATICS

**101.** The value of $\dfrac{1}{\sqrt{2} + \sqrt{3} - \sqrt{5}} + \dfrac{1}{\sqrt{2} - \sqrt{3} - \sqrt{5}}$ is :

(1) $\dfrac{1}{\sqrt{2}}$      (2) $\dfrac{1}{\sqrt{3}}$      (3) $\dfrac{1}{\sqrt{5}}$      (4) $1$

**102.** How many numbers between 1 and 1000 contain all the numbers 2, 3, 4, 5, 6 as factors ?

(1) 20      (2) 18      (3) 16      (4) 12

**103.** The value of $\dfrac{(0.734)^2 - (0.266)^2}{.468}$ is :

(1) 1.010      (2) 1.000      (3) 1.001      (4) 1.100

**104.** A manufacturer sells a pen to a wholesaler at a profit of 18%, the wholesaler sells it to a retailer at a profit of 20%. The retailer sells it to a customer at a profit of 25%. If the customer pays Rs. 35.40, the cost of the manufacturer is :

(1) Rs. 15      (2) Rs. 17      (3) Rs. 20      (4) Rs. 22

**105.** There are 600 men in a fort. If each one of them is given 180 g of ration daily, there is ration enough for 35 days. If 300 men are increased and the ration is decreased to 150 g daily, the number of days for which the ration will be sufficient now is :

(1) 30 days      (2) 28 days      (3) 25 days      (4) 24 days

**106.** The difference between compound and simple interest on a certain sum for 3 years at 10% is Rs. 31. The sum is :

(1) Rs. 1500      (2) Rs. 1200      (3) Rs. 1000      (4) Rs. 800

**107.** An article is sold for Rs. 400 cash down or Rs. 100 cash and three monthly instalments of Rs. 105 each. The rate of interest under instalment plan is :

(1) 30.77%      (2) 32.70%      (3) 33%      (4) 35%

**108.** A student has to obtain 40% marks to pass the examination. He secures 40 marks and fails by 20 marks. The total marks for the examination are :

(1)   180       (2)   160       (3)   150       (4)   125


**109.** If a cyclist moves at 24 km per hour, he reaches his destination 5 minutes too late and if he cycles at 30 km per hour, he reaches his destination 4 minutes too soon. The distance the cyclist covers is :

(1)   15 km       (2)   18 km       (3)   20 km       (4)   22 km


**110.** The value of $\dfrac{\tan 45°}{\text{cosec } 30°} + \dfrac{\sec 60°}{\cot 45°} - \dfrac{5 \sin 90°}{2 \cos 0°}$ is :

(1)   1       (2)   $-1$       (3)   0       (4)   2


**111.** The value of $(\cos\theta - \sin\theta)^2 + (\cos\theta + \sin\theta)^2$ is :

(1)   2       (2)   $-2$       (3)   1       (4)   0


**112.** If from a point 20 m away from the foot of a tower, the angle of elevation of the top of the tower is 30°, then the height of the tower is :

(1)   $20\sqrt{3}$ m       (2)   $\dfrac{20}{\sqrt{3}}$ m       (3)   $10\sqrt{3}$ m       (4)   $\dfrac{10}{\sqrt{3}}$ m


**113.** In a mixture of 35 litres, the ratio of milk and water is 5 : 2. Another 5 litres of milk is added to the mixture. The ratio of milk and water in the new mixture is :

(1)   3 : 1       (2)   1 : 3       (3)   2 : 3       (4)   3 : 2


**114.** If the radius of its circumcircle of a right angled triangle is 3 cm and altitude drawn to the hypotenuse is 2 cm, its area would be :

(1)   12 sq. cm       (2)   9 sq. cm       (3)   6 sq. cm       (4)   4 sq. cm

**115.** Three cubes each of volume 125 cm³ are joined end to end to form a cuboid. The surface area of the resulting cuboid is :

(1)   350 cm²        (2)   300 cm²        (3)   175 cm²        (4)   150 cm²

**116.** A spherical ball of diameter 21 cm is melted and recasted into cubes each of side 1cm, the number of cubes thus formed is :

(1)   693        (2)   809        (3)   1617        (4)   4851

**117.** The mean of 5 numbers is 18. If one number is excluded, their mean is 16. The excluded number is :

(1)   90        (2)   64        (3)   26        (4)   80

**118.** Three unbiased coins are tossed. The probability of obtaining at least two tails is :

(1)   $\dfrac{1}{8}$        (2)   $\dfrac{3}{8}$        (3)   $\dfrac{1}{2}$        (4)   $\dfrac{1}{4}$

**119.** The circumcentre of a triangle whose vertices are $(-2, -3)$, $(-1, 0)$, $(7, -6)$ is :

(1)   $(3, -3)$        (2)   $(3, -2)$        (3)   $(-3, 2)$        (4)   $(2, -2)$

**120.** The 6$^{th}$ term from the end of an Arithmetic Progression (A. P.) 17, 14, 11,........., $-40$ is equal to :

(1)   $-21$        (2)   $-25$        (3)   $-22$        (4)   $-24$

# PART-B

## SECTION-V (iii) : SOCIAL SCIENCE

Choose the correct answer out of the four :

121. Which type of the forest belt supplies most of the world's requirement of Newsprint ?

    (1)  Evergreen forest              (2)  Decidous forest

    (3)  Coniferous forest             (4)  Mediterranian forest


122. Who were the first of the kings to issue gold coins in India ?

    (1)  Mauryas        (2)  Indo Greeks        (3)  Guptas        (4)  Kushans


123. Dhai-Din-Ka-Jhopra at Ajmer was constructed by :

    (1)  Sher Shah Suri                (2)  Qutb-ud-Din Abak

    (3)  Jalaludin-Firoz-Khilzi        (4)  Balban


124. In which of the following countries Gramin Bank (known as the Bank of the Poor ) is based :

    (1)  Pakistan       (2)  Sri Lanka        (3)  India        (4)  Bangladesh


125. In which of the following states, the anti defection law was enacted in 1979 ?

    (1)  Kerala                        (2)  Jammu and Kashmir

    (3)  West Bengal                   (4)  Tamil Nadu


126. As per India Protocol who among the following ranks is the highest in the order of protocol ?

    (1)  Deputy Prime Minister

    (2)  Former President

    (3)  Governor of a state within the state

    (4)  Speaker of Lok Sabha


127. Who was Nagarjuna ?

    (1)  Indian Emperor                (2)  a Vedic rishi

    (3)  a Jain Monk                   (4)  a Budhist Philosopher

**128.** What are 'teaser loan rates' charged by banks ?

    (1)    Fixed rate of interest charged by banks

    (2)    Floating rate of interest charged by banks

    (3)    Rate of interest in the initial period is less and goes up subsequently

    (4)    Rate of interest in the initial period is more and it goes down subsequently


**129.** Who amongst the following has asked Banks to adopt 'Six Steps' approach to prevent diversion of funds by the companies ?

    (1)    Company Registrar    (2)    SEBI    (3)    RBI    (4)    AMFI


**130.** The only viceroy to be assassinated in India was :

    (1)    Lord Hardings        (2)    Lord Northbrooke

    (3)    Lord Ellenborough    (4)    Lord Mayo


**131.** According to the Constitution of India the term 'District judge' shall not include :

    (1)    Chief Presidency Magistrate    (2)    Session judge

    (3)    Tribunal judge           (4)    Chief judge of a small cause court


**132.** Despite being a Republican state, India is a member of the Common-Wealth of Nations whose Head is the British Monarch. This is because :

    (1)    The membership does not affect the sovereign nature of the Indian Republic

    (2)    This membership only shows that the British ruled over India

    (3)    Members of the Association are sovereign and independent

    (4)    It is a symbol of the unity among British dominated nations.


**133.** When was the New Liberalised Industrial Policy announced in India ?

    (1)    1989        (2)    1990        (3)    1991        (4)    1992

134. The punch line 'we invest in your dreams' is of which of the following banks ?

    (1)    Jammu and Kashmir Bank    (2)    Punjab National Bank

    (3)    State Bank of India    (4)    UTI Bank


135. The homeland of Yakuts is :

    (1)    Iran    (2)    Russian Tundra    (3)    Kenya    (4)    North India


136. The crystal layer of the earth is also called :

    (1)    Sial    (2)    Sima    (3)    Moho    (4)    Nife


137. Which layer of the atmosphere maintains an almost uniform temperature ?

    (1)    troposphere    (2)    tropopause

    (3)    stratosphere    (4)    ionosphere


138. What is meant by the term 'Cirrus' ?

    (1)    a low cloud    (2)    a high cloud

    (3)    a rain bearing cloud    (4)    a hail bearing cloud


139. The Title Vikramaditya was assumed by :

    (1)    Ashoka    (2)    Chandraputa - II

    (3)    Kanishka    (4)    Samudragupta


140. Who has been referred to as the conscience keeper of Gandhiji ?

    (1)    C. Rajgopalachari    (2)    R. Tagore

    (3)    V. Patel    (4)    G.K. Gokhale

# PART-B

## SECTION-V (iv) : ENGLISH

Choose the most appropriate response out of the four choices given after every question. Each question carries one mark.

141. The phrase 'Hobson's choice' means :
    (1) a predetermined pick falsely offered as an option
    (2) an improbable stroke of luck
    (3) an avoidable mistake
    (4) a choice one can take from the given options

142. The phrase 'mare's nest' mean :
    (1) comfortable surroundings
    (2) a chaotic state
    (3) unattainable destination
    (4) a deceptive discovery

143. A doctor who specialises in the treatment of eyes is called :
    (1) cardiologist
    (2) neurologist
    (3) opthalmologist
    (4) orthopaedist

144. Choose the correctly spelt word :
    (1) seudonym
    (2) sudonym
    (3) pseudonym
    (4) psudonym

145. Choose the correctly spelt word :
    (1) alliance
    (2) aliance
    (3) allianse
    (4) alianse

146. The indirect form of the sentence :
    Sheela asked her son, "Where is your school bag ?"
    (1) Sheela asked her son where is your school bag.
    (2) Sheela asked her son where his school bag was.
    (3) Sheela asked her son where his school bag is.
    (4) Sheela asked her son where is his school bag.

**147.** The indirect form of the sentence :

Malik said, " I went to Europe last year".

(1)   Malik said that I went to Europe last year.

(2)   Malik said that he went to Europe last year.

(3)   Malik said he had gone to Europe last year.

(4)   Malik said that I had gone to Europe last year.

**148.** The passive voice of "I have finished my work" is :

(1)   My work is finished.          (2)   My work has been finished.

(3)   My work have finished by me.   (4)   My work has been finished by me.

**149.** The active voice of "Amit was punished by his teacher for not doing his home work".

(1)   Amit punished his teacher for not doing his home work.

(2)   Amit not doing his homework was punished by his teacher.

(3)   Amit's teacher punished him for not doing his homework.

(4)   His teacher punished Amit not doing his home work.

*Directions : (150 - 152)*

*In questions 150-152, choose the most appropriate words to fill in the blanks.*

**150.** Sarika _____ to go home next month.

(1)   have          (2)   will          (3)   had          (4)   has

**151.** I met my friend _____ thirty years.

(1)   since          (2)   from          (3)   after          (4)   till

**152.** Marco Polo _____ on his journey to China with his uncle.

(1)   set off          (2)   set back          (3)   set by          (4)   set about

**153.** In which of the following plays of Shakespeare Portia was the heroine ?

(1)   Hamlet          (2)   King Lear

(3)   The Merchant of Venice          (4)   Othello

**154.** Who wrote the poem 'Rime of the Ancient Mariner' ?

(1)   Keats          (2)   Coleridge          (3)   Wordsworth          (4)   Shelley

155. Who wrote the novel 'Far from the Madding Crowd' ?

   (1)   Thomas Hardy                (2)   George Eliot

   (3)   Emily Bronte                (4)   Jane Austen


156. Who wrote the play ' Man and Superman' ?

   (1)   Samuel Beckett              (2)   George Bernard Shaw

   (3)   Eugene O'Neil               (4)   Shakespeare


157. In which novel of Charles Dickens is Peggotty a character ?

   (1)   Oliver Twist                (2)   David Copperfield

   (3)   Great expectations          (4)   A tale of two cities


158. Which of the following is not a poet of the Romantic Age ?

   (1)   Keats        (2)   Shelly        (3)   Browning        (4)   Wordsworth


159. In the sentence, If it rains on Wednesday, the match will be cancelled. - **If it rains** is a :

   (1)   Noun clause                 (2)   Adjective clause

   (3)   Adverb clause               (4)   Conditional clause


160. In the sentence 'He is the boy who has come from Nepal'. - **who has come from Nepal** is a :

   (1)   Noun clause                 (2)   Adjective clause

   (3)   Adverb clause               (4)   none of the above