ALLEN

101. A body of mass 20 kg falls through a distance of 50 cm. Then the loss in potential energy on reaching the ground is -

(1) 98 Joule   (2) 392 Joule

(3) 980 Joule   (4) 5000 Joule

102. Calorimeters are generally made of

(1) Copper   (2) Brass

(3) Aluminium   (4) Zinc

103. 1 Calorie is able to raise the temp. of 1 gm. of copper through approximately

(1) 1°C   (2) 5°C   (3) 10°C   (4) 20°C

104. A particle in a medium completes 20 vibrations in 2.5 seconds. The frequency of wave is

(1) 20 Hz   (2) 200 Hz   (3) 50 Hz   (4) 8 Hz

105. The value of 1 Kilowatt power in terms of horse power will be

(1) 1.34 H.P.   (2) 746 H.P.

(3) 786 H.P.   (4) 4.36 H.P.

106. A myopic eye can be corrected by using a

(1) Convex lens   (2) Concave lens

(3) Plane mirror   (4) Cylindrical lens

107. In a solution of $CuSO_4$, a piece of Zn is dropped. The solution becomes colourless. This reaction will be

(1) Substitution reaction

(2) Decomposition reaction

(3) Addition reaction

(4) Dissociation reaction

108. Decible is

(1) a sound apparatus.

(2) a sount tone.

(3) the unit of intensity of sound.

(4) the wave length of noise.

109. The renewable source of energy is

(1) Coal   (2) Uranium

(3) Natural gas   (4) Geothermal power

110. The first artificial satelite was

(1) Sputnik-1   (2) Explorer-1

(3) Aryabhatta   (4) Luna-3

111. Titan is the largest moon or satellite of

(1) Mars   (2) Venus   (3) Jupiter   (4) Saturn

112. A concave mirror of focal length is 10 cm produces an image five times large and real. The distance of object from the mirror will be -

(1) 10 cm   (2) 12 cm

(3) 16 cm   (4) 20 cm

113. In an explosion a body breaks up into two pieces of unequal masses. In this

(1) both parts will have numerically equal momentum.

(2) lighter part will have more momentum.

(3) heavier part will have more momentum.

(4) both parts will have equal kinetic energy.

114. A 100W, 200V bulb is connected to a 160V power supply. The power consumption would be

(1) 64 W   (2) 80 W

(3) 100 W   (4) 125 W

115. International unit of atomic weight is

(1) Carbon-12   (2) Oxygen-16

(3) Hydrogen-1   (4) Nitrogen-14

116. Which of the following isotopes of Uranium is unstable

(1) U-234   (2) U-235

(3) U-238   (4) All the above

117. An element have atomic number 19 and mass number 39. The number of neutron in its nucleus is

(1) 20   (2) 58   (3) 19   (4) 39

118. Mass percentage of nitrogen in the compound N_2O_3 is

(1) 36.84   (2) 46.70   (3) 82.40   (4) 63.60

119. A metal M has its Chloride formula MCl_3 and equivalent weight of metal is 9. Atomic weight of element is

(1) 9   (2) 18   (3) 27   (4) 3

120. Atomic weight of an element is 30, Its equivalent wt. is 10. The valency of elecment will be

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

121. Specific heat of any element is 0.1. The nearest atomic wt. of that element will be

(1) 32   (2) 64   (3) 62   (4) 48

122. The number of molecules in one mole of gas is

(1) 6.023×10^{23} (2) 6.023×10^{22}

(3) 6.023×10^{21} (4) 6.023×10^{20}

123. In the given below MnO_2 is catalyst as

$$2KClO_3 \xrightarrow{MnO_2} 2KCl + 3O_2$$
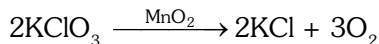
(1) Positive Catalyst   (2) Negative Catalyst

(3) Auto Catalyst   (4) Induced Catalyst

124. How much MgO is obtained on heating 5 gm of ($MgCO_3$) Magnesium Carbonate -

(1) 2.4 gm   (2) 2.38 gm

(3) 2.8 gm   (4) 3.28 gm

125. Valency of Cr in $CrPO_4$ is

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

126. Match Column I with II and Choose the correct option.

	Column I (Substance)		Column II (pH value)
(a)	Vinegar	(i)	7.4
(b)	Milk	(ii)	4.0
(c)	Blood	(iii)	6.5
(d)	Toothpaste	(iv)	8.0

	a	b	c	d
(1)	(i)	(ii)	(iii)	(iv)
(2)	(ii)	(iii)	(iv)	(i)
(3)	(ii)	(iii)	(i)	(iv)
(4)	(iii)	(iv)	(i)	(ii)

127. Elements A, B, C and D belongs in groups 1, 2 14 and 17 of the periodic table respectively. Which of the following pair of elemetns would produce a covalent bond?

(1) A and D   (2) B and C

(3) C and D   (4) A and C

128. Quinine is obtained from

(1) bark   (2) fruit   (3) leaves   (4) roots

129. Nocturnal bird is

(1) Pigeon   (2) Sparrow

(3) Owl   (4) Parrot

130. Body temperature of human body is

(1) 42°C   (2) 40°C   (3) 34°C   (4) 37°C

131. Budding is found in -

(1) Mango   (2) Yeast

(3) Papaya   (4) Banana

132. The unit of classification is

(1) Class   (2) Order

(3) Species   (4) Genus

133. Which of the following is a micronutrient element?

(1) Mg   (2) K   (3) Ca   (4) Zn

134. Penicilline is obtained from

(1) Cycas   (2) Fungi

(3) Fern   (4) Algae

135. Cotton fibre is obtained from

(1) Seeds   (2) Phloem

(3) Leaves   (4) Roots

136. Vessel are absent in

(1) Pinus wood   (2) Shishum wood

(3) Teak wood   (4) Sal wood

137. A substance produced in liver which prevents the freezing of blood is called

(1) Ptyalin   (2) Heparin

(3) Trypsin   (4) Insulin

138. Which of the following contains phytochrome?

(1) Algae   (2) Fungi

(3) Yeast   (4) Angiosperm

139. Auxin hormone was discovered by

(1) Went   (2) Moore

(3) Mehta   (4) Mendel

140. Which of the options given below would not work in the following sentence?
In order for the body to absorb and use_____ these must be broken down by hydrolysis into _____.

(1) polysaccharides, monosaccharides

(2) amino acids, proteins

(3) fats, glycerol and fatty acids

(4) disaccharides, monosaccharides

141. The first governer of the portuguese in India was

(1) Albuquerque   (2) De-Almeida

(3) Vasco-da-Gama   (4) Bortholomew Diaz

142. When was the battle of Plassey fought?

(1) 1526 AD.   (2) 1556 AD.

(3) 1757 AD.   (4) 1761 AD

143. Rani Laxmibai is associated with city

(1) Kanpur   (2) Awadh

(3) Jhansi   (4) Delhi

144. The Founder of 'Brahmo Samaj' was

(1) Rajaram Mohan Rai

(2) Swami Vivekanand

(3) Dayanand Saraswati

(4) Ramkrishna paramhans

145. Among the following who is called 'Light fo Asia'?

(1) Mahavir   (2) Buddha

(3) Akbar   (4) Ashoka

146. The book written by Gandhi ji is –

(1) Common will

(2) India Wins Freedom

(3) Discovery of India

(4) My Experiment with Truth

147. Kabir was disciple of

(1) Ramanand   (2) Ramanuja

(3) Tukaram   (4) Chaitanya

148. The attainment of complete Independance was declared as the ultimate goal by India National Congress in

(1) 1929 AD.   (2) 1939 AD.

(3) 1940 AD.   (4) 1946 AD.

149. Cabinet Mission comes to India in

(1) 1945 AD.   (2) 1946 AD.

(3) 1947 AD.   (4) 1948 AD.

150. Who coined the famous slogan 'Inquilab Zindabad'?

(1) Ashfaque Ullah Khan

(2) Chandra Shekhar Azad

(3) Bhagat Singh

(4) Abul Kalam Azad

151. The southern most point of India is

(1) Kanya Kumari   (2) Indira Point

(3) Point Calimer   (4) Rameshwaram

152. Which one of the following state has the longest coast line?

(1) Gujrat   (2) Maharashtra

(3) Kerela   (4) West Bengal

153. On which river is the Hirakud dam constructed?

(1) Narmada   (2) Godvari

(3) Mahanandi   (4) Kaveri

154. 'The Valley of Flower' lies in

(1) Jammu and kashmir   (2) Uttarakhand

(3) Himachal Pradesh   (4) Kerala

155. The minimum rainfall place in India is

(1) Mathura   (2) Delhi

(3) Jaisalmer   (4) Leh

156. Laterite soil is found in

(1) Uttar Pradesh   (2) Himanchal Pradesh

(3) Kerala   (4) Punjab

157. Damodar is tributary of river

(1) Ganga   (2) Hugli

(3) Suvarnrekha   (4) Yamuna

158. 'Titan' is the largest moon or satellite of

(1) Mars   (2) Venus   (3) Jupiter   (4) Saturn

159. Longest River in the world is

(1) Missisippi   (2) Kango

(3) Nile   (4) Ganga

160. Which is the largest populated country in the world

(1) China

(2) India

(3) United State of America

(4) Canada

161. The first day session of Indian Constituent Assembly was Chaired by

(1) Dr. Rajendra Prasad

(2) Jawahar Lal Nehru

(3) B.R. Ambedkar

(4) Dr. Sachchidanand Sinha

162. Indian Parliament consists of

(1) Lok Sabha and Rajya Sabha

(2) Lok Sabha, Rajya Sabha, Prime Minister

(3) Speaker, Lok Sabha

(4) Lok Sabha, Rajya Sabha, President

163. The maximum number of Anglo Indian who can be nominated to the Lok Sabha are

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

164. The constitution of India was adopted by the Constituent Assembly on

(1) 15th August, 1947

(2) 30th June, 1948

(3) 26th November, 1949

(4) 26th January, 1950

165. The chairman of the planning commission is

(1) Finance Minister

(2) Prime Minister

(3) President

(4) Governer of Reserve Bank

166. The Maximum strength of Lok Sabha has been fixed to

(1) 540   (2) 545   (3) 550   (4) 555

167. The Vacancy of the office of the President must be filled up within

(1) Ninty days   (2) Six months

(3) Nine months   (4) One year

168. India is a secular state is enunciated in

(1) Preamble of the Constitution

(2) Fundamental Rights

(3) Directive Principles of state policy

(4) Citizenship provisions

169. The Headquarter of UNO is located at

(1) London   (2) Rome

(3) New Delhi   (4) New York

170. The first summit of SAARC was held at

(1) New Delhi   (2) Colombo

(3) Dhaka   (4) Islamabad

171. Economic planning is a subject of

(1) Union list

(2) State list

(3) Concurent list

(4) Not specified in any list

172. 'Twenty Point Economic Programme' was fixed launched in the year

(1) 1969   (2) 1975   (3) 1977   (4) 1980

173. 'ADHAR' is a programme

(1) to provide identify to Indian residents

(2) Infrastructure Development

(3) Eduction

(4) Social Security

174. The time period of the 12th five year plan is

(1) 2001–07   (2) 2012–17

(3) 2010–15   (4) 2007–12

175. The standard of living in a country is represented by

(1) National Income   (2) Poverty Ratio

(3) Unemployment rate   (4) Per Capital Income

176. The Headquarters of the Indian Army is at

(1) New Delhi   (2) Nagpur

(3) Bangalore   (4) Chennai

177. The Supreme Command of Armed Forces of India is vested in

(1) The Chief of the Army Staff

(2) The President of India

(3) Ministry of Defence

(4) Adjutant General

178. The Army is headed by

(1) the Chief of the Army Staff

(2) The Deputy Chief of Army Staff

(3) Master General

(4) General Officer Commanding-in-Chief

179. The Indian Air Force is headed by

(1) The Chief of the Air Staf

(2) Air Officer Incharge Maintenance

(3) Air Officer Incharge Administration

(4) Air Officer Incharge Personal and Training

180. The Indian Navy is headed by

(1) The Chief of Navel Staff

(2) Vice Chief of Naval Staff

(3) Deputy Chief of Naval Staff

(4) Chief of Personnel

181. If α and β are the zeros of the polynomial $f(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$, the value of k is

(1) 12   (2) 6   (3) 4   (4) 1

182. If $(x + 2)$ is a factor of the polynomial $f(x)$, where $f(x) = x^2 + ax + 2b$ and $a + b = 4$. then the value of a and b are

(1) a = 1, b = 3   (2) a = 3, b = 1

(3) a = –1, b = 5   (4) a = 5, b = –1

183. If $1^3 + 2^3 + \text{........} + 9^3 = 2025$ then

$(0.11)^3 + (0.22)^3 + \text{.........} (0.99)^3$ will be

(1) 0.2695   (2) 2.695

(3) 3.695   (4) 0.3695

184. If $\left(\tan\theta + \dfrac{1}{\tan\theta}\right) = 2$,then the value of $\tan^2\theta + \dfrac{1}{\tan^2\theta}$ will be

(1) 4   (2) 2   (3) 1   (4) 8

185. If sec 2A = cosec(A − 42°) where 2A is acute angle then value of A is
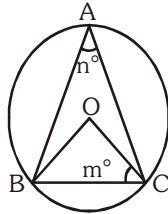
(1) 44°   (2) 22°   (3) 21°   (4) 66°

186. If $\dfrac{\cos\theta - \sin\theta}{\cos\theta + \sin\theta} = \dfrac{1-\sqrt{3}}{1+\sqrt{3}}$ then θ is

(1) 30°   (2) 45°   (3) 60°   (4) 90°

187. If cot θ + cosec θ = 2, then the value of $\dfrac{1+\cos\theta}{1-\cos\theta}$ is

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

188. In the following figure, O is the centre of circle and ∠BAC = n°, ∠OCB = m° then

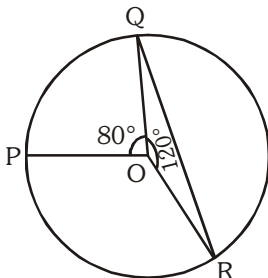(1) m° + n° = 90°   (2) m° + n° = 180°
(3) m° + n° = 120°   (4) m° + n° = 150°

189. In given figure, AB ∥ CD, ∠ABE = 120°, ∠DCE = 110° and ∠BEC = x°, then x° will be
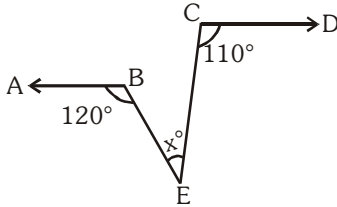
(1) 60°   (2) 50°   (3) 40°   (4) 70°

190. In the following figure, ∠PQR is (there O is centre of circle)

(1) 60°   (2) 80°   (3) 100°   (4) 120°

191. If $\bar{x}$ is the mean of the terms $x_1, x_2, x_3, \ldots x_n$ and $\sum\limits_{i=1}^{n} x_i = x_1 + x_2 + x_3 + \ldots x_n$ then the value of $\sum\limits_{i=1}^{n} x_i - n\bar{x}$ is

(1) 0   (2) 1   (3) n   (4) x

192. Point P divides the line segment joining the points A(2, 1) and B(5, −8) such that $\dfrac{AP}{AB} = \dfrac{1}{3}$. If P lies on the line 2x + y + k = 0, then the value of k is

(1) −4   (2) 4   (3) −3   (4) 3

193. A copper wire 3 mm in diameter is rounded about a cylinder whose length is 1.2 m and diameter is 10 cm., so as to cover the curved surface of the cylinder. The length of the wire is

(1) 125.6 m   (2) 1256 m
(3) 12.56 m   (4) 1.256 m

194. Relation among mean, median and mode is

(1) Mode = 3 median + 2 Mean
(2) Mode = 3 median − 2 Mean
(3) Mode = 3 median + 3 Mean
(4) Mode = 2 median − 3 Mean

195. The area of the figure formed by the intersection of lines x = 0, y = 0, x = 3, y = 4 will be

(1) 3 sq. units   (2) 4 sq. units
(3) 6 sq. units   (4) 12 sq. units

196. If $2^{x+1} + 2^{x-1} = 320$, then the value of x is

(1) 6   (2) 8   (3) 5   (4) 7

197. If $x + \dfrac{1}{x} = 2$, then $\sqrt{x} + \dfrac{1}{\sqrt{x}}$ will be

(1) $\sqrt{2}$ (2) 2   (3) $\sqrt{2}+1$ (4) 1

198. What is the value of P for which (a − 2) is factor of $a^2 - 5a + P$

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

199. A person wishes to fit three rods together in the shape of a right angled triangle so that the hypotenuse is to be longer 4 cm than the base and 8 cm longer than the altitude. The length of the rods are

(1) 3 cm, 4 cm, 5 cm
(2) 1.5 cm, 2 cm, 2.5 cm
(3) 6 cm, 8 cm, 10 cm
(4) 12 cm, 16 cm, 20 cm

200. If x + y = 8, xy = 15, then the value of $x^2 + y^2$ will be

(1) 32   (2) 34   (3) 36   (4) 38

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK