101. Which of the following is a reason for the negative slope of the PPF?
   (a) The inverse relationship between the use of technology and the use of natural resources.
   (b) Scarcity at any point in time we have limited amounts of productive resources.
   (c) Resource specialization
   (d) Increasing opportunity costs.

102. SJSRY stands for
   (a) Swaran Jayanti Shahari Rozgar Yojana
   (b) Shahari Jeewan Sudhar Rashtriya Yojana
   (c) Sampoorna Jeewan Shahari Rozgar Yojana
   (d) None of the above

103. Who is the regulatory authority for telecom in India?
   (a) SEBI
   (b) TRAI
   (c) MTNL
   (d) BSNL

104. Which of the following has resulted in failure to achieve targets of industrial production?
   (a) Poor Planning
   (b) Power, finance and labour problems
   (c) Technical complications
   (d) All of the above

105. Oil and Natural Gas Corporation Indian Oil Corporation, Steel Authority of India, and Bharat Heavy Electricals are all examples of
   (a) Small Scale units
   (b) Private sector units
   (c) Public sector units
   (d) Sick units

106. Which of the following statements is correct with regard to external sector in the pre-reform period?
   (a) The foreign trade policy was very liberal, it allowed import of all types of goods.
   (b) Import of food grains was strictly prohibited
   (c) The balance of payments situation was quite comfortable
   (d) None of the above.
107. In the present context, money stock in India refers to:
   (a) $M_1$
   (b) $M_2$
   (c) $M_3$
   (d) $M_4$

108. Giffen goods are those goods 
   (a) For which demand increases as price increase
   (b) That have a high income elasticity of demand
   (c) That are in short supply
   (d) None of these

109. Three methods of computing national income are 
   (a) Production, outlay and income methods
   (b) Balance of payments, income and consumption methods.
   (c) Saving, investment and income methods
   (d) Outlay, depreciation and production methods.

110. ‘The lender of last resort’ means
   (a) The government coming to the rescue of poor farmers
   (b) Central Bank coming to the rescue of other banks in times of financial crisis.
   (c) Commercial banks coming to the rescue of small industrial units
   (d) People coming to the rescue of commercial banks in times of their financial crisis.

111. Demand for final consumption arises in 
   (a) Household sector only.
   (b) Government sector only.
   (c) Both household and government sectors.
   (d) Neither household nor government sector.

112. _____ is a systematic record of all the economic transactions between one country and rest of the world.
   (a) Balance of trade
   (b) Balance of transactions
   (c) Budget
   (d) Balance of payments

113. If borrowings and other liabilities are added to the budget deficit we get _____
   (a) Revenue deficit
   (b) Capital deficit
   (c) Primary deficit
   (d) Fiscal deficit
Consider Sumit’s production data given in the table. Use Table to answer questions 114-118

<table>
<thead>
<tr>
<th>Number of Workers</th>
<th>Total Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
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<td>4</td>
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<td>5</td>
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<td>8</td>
<td>58</td>
</tr>
<tr>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>61</td>
</tr>
</tbody>
</table>

114. Suppose Sumit has to pay his worker Rs. 20 per hour, and further suppose there are no other production costs at all. What is the marginal product of the 5th worker?

(a) 12
(b) 9
(c) 7
(d) 8

115. In Table Sumit’s Average Total Cost when 40 units are produced is:

(a) Rs. 2.
(b) Rs. 80.
(c) Rs. 5
(d) Rs. 20

116. Using date in Table we know that the approximate marginal cost of the 52nd unit of output is:

(a) Rs. 0.25
(b) Rs. 1.25
(c) Rs. 2.50
(d) Rs. 4.00

117. Suppose Sumit decides to purchase fire insurance which costs Rs. 87,600 a year. (As it happens, it works out to be Rs. 10 per hour) The approximate marginal cost of the 52nd unit now is:

(a) Rs. 0.25
(b) Rs. 1.25
(c) Rs. 2.50
(d) Rs. 4.00

118. Sumit’s marginal product of the 9th worker:

(a) 2 units
(b) 3 units
(c) 5 units
119. A necessity is defined as a good having:
   (a) A positive income elasticity of demand
   (b) A negative income elasticity of demand
   (c) An income elasticity of demand between zero and 1.
   (d) An income elasticity of more than 1.

120. If a firm’s average variable cost curve is rising, its marginal cost curve must be:
   (a) Constant.
   (b) Above the total cost curve
   (c) Above the average variable cost curve
   (d) All of the above

121. Which among the following is incorrect?
   (a) India adopted planning as her way of life because she wanted to quicken industrialization and economic development with optimum utilization of resources and reduction in inequalities.
   (b) Removal of poverty and the attainment of self reliance were two basic objectives of the fifth plan.
   (c) India has never been able to achieve its targeted rate of growth.
   (d) The Second plan was a very ambitious plan as seeds of industrialization were sowed.

122. Reserve Bank of India is India’s:
   (a) Central Bank
   (b) Biggest commercial Bank
   (c) Biggest cooperative bank
   (d) All of the above

123. Indian economy is mixed economy because:
   (a) Agriculture and Industry have both simultaneously developed in India.
   (b) Agriculture and Industry have both developed in the public sector.
   (c) Private ownership and public ownership over means of production co-exist.
   (d) Any of the above.

124. Indian Population registered a growth of 1.25% per annum during the decade _______.
   (a) 1941 – 51
   (b) 1961 – 71
   (c) 1971 – 81
   (d) 1981 – 91

125. Suppose India’s GNP increased at an annual average rate of 6.6% during the Tenth Plan, presuming that the growth rate of population is 2 per cent per annum; per capita income would increase at an annual average rate of _______.
   (a) 3.3%
   (b) 4.6%
   (c) 6.6%
126. Product method of calculating national income is also known as _______
   (a) Income method 
   (b) Value added method 
   (c) Expenditure method 
   (d) Distribution method 

127. NDP is GDP minus ____.
   (a) Depreciation 
   (b) Indirect taxes. 
   (c) Subsidies 
   (d) NNP 

128. Which of the following statements is correct?
   (a) In a two-good economy, the production possibilities frontier reflects the maximum amount of one good that can be produced when a given amount of the other good is produced. 
   (b) Microeconomics is the study of the behavior of the economy as a whole. 
   (c) Positive economics focuses on welfare of the people of a society 
   (d) None of the above 

129. An individual firm in a perfectly competitive market faces a demand curve which is:
   (a) Downward sloping 
   (b) Relatively inelastic 
   (c) Perfectly elastic 
   (d) Upward sloping 

130. Which of the following statements is correct?
   (a) Countries which are industrially well-developed generally have higher per capita income than countries which are not 
   (b) India is a capital surplus economy 
   (c) Agriculture sector need not depend upon industrial sector for its growth 
   (d) None of the above. 

131. EAS stands for
   (a) Easy Assistance Scheme 
   (b) Endless Assistance Scheme 
   (c) Employment Assurance Scheme 
   (d) Employment Assessment Scheme 

132. The effect of increase CRR will be reduced or nullified if :
   (a) Bank rate is reduced 
   (b) Securities are sold in the open market 
   (c) SLR is increased 
   (d) People do not borrow from non-banking institutions
133. Which among the following is an indirect tax?
   (a) Income tax
   (b) Wealth tax
   (c) Custom duty
   (d) Gift tax

134. Net domestic expenditure is consumption expenditure plus ________
   (a) Net foreign investment
   (b) Net foreign investment plus net domestic investment
   (c) Net domestic investment
   (d) Replacement expenditure

135. Custom duties are levied on ________.
   (a) Incomes of the individual
   (b) Production of goods
   (c) Export and import of goods
   (d) Incomes of the corporate

136. If as a result of 20 percent fall in the ticket fares the demand for ‘watching movie’ in the cinema hall increases by 10 percent, then ________.
   (a) Zero
   (b) Greater than zero but less than one
   (c) One
   (d) Greater than one

137. When some people in a society are unwilling to work at the prevailing wage rate and there are people who have income from property or some other sources and need not work, such people are:
   (a) Casually unemployed
   (b) Chronically unemployed.
   (c) Voluntarily unemployed
   (d) Disguisedly unemployed

138. If out of 100 people in the labour force, 92 are in the work force, the number of people unemployed is:
   (a) 8
   (b) 192
   (c) 100
   (d) 92

139. If demand for goods and services is more than their supply, the resultant inflation is:
   (a) Cost push inflation
   (b) Stagflation.
   (c) Deflation.
   (d) Demand pull inflation.
140. Estate duty was levied on the _________.
   (a) Incomes of the individual
   (b) Production of goods
   (c) Export and import of goods
   (d) Total property passing to the heirs on the death of a person.

141. _________ countries are more subject to cyclical fluctuations.
   (a) European
   (b) Capital biased, advanced countries
   (c) Asian
   (d) American

142. Electricity generated from water is called
   (a) Thermal electricity.
   (b) Hydel electricity.
   (c) Atomic energy.
   (d) Tidal energy.

143. Suppose that the price of a new bicycle is Rs. 200. Natalie values a new bicycle at Rs. 400. What is the value of total consumer surplus if Natalie buys a new bike?
   (a) Rs. 500
   (b) Rs. 300
   (c) Rs. 200
   (d) Rs. 400

144. Suppose that at a price of Rs. 300 per month, there are 30,000 subscribers to cable television in small Town. If Small Town Cablevision raises its price to Rs. 400 per month, the number of subscribers will fall to Rs. 20,000. Using the midpoint method for calculating the elasticity, what is the price elasticity of demand for cable TV in Small Town?
   (a) 1.4
   (b) 0.66
   (c) 0.75
   (d) 2.0

145. If a buyer’s willingness to pay for a new car is Rs. 2,00,000 and she is able to actually buy it for Rs. 1,80,000 her consumer surplus is
   (a) Rs. 18,000
   (b) Rs. 20,000
   (c) Rs. 2,000
   (d) Rs. 0

146. Which of the following is not part of the opportunity cost of going on holiday?
   (a) The money you spent on a theatre show
   (b) The money you could have made if you had stayed at home and worked
   (c) The money you spent on airline tickets
(d) The money you spent on food

147. Which of the following statements is normative?
   (a) Large government deficits cause an economy to grow more slowly.
   (b) People work harder if the wage is higher
   (c) The unemployment rate should be less.
   (d) Printing too much causes inflation.

148. If 4 farmers can do a field job which is being done by 6 farmers, this means there is:
   (a) Frictional unemployment
   (b) Disguised unemployment
   (c) Voluntary unemployment
   (d) Seasonal unemployment

149. The rate of inflation was lowest in _________
   (a) Fifties
   (b) Sixties
   (c) Seventies
   (d) Eighties

150. In the year _________, the practice of RBI lending to the government through ad hoc treasury bills was given up.
   (e) 1951
   (f) 1997
   (g) 1991
   (h) 2001
151. The sum of $n$ terms of the series $3+33+333+\ldots$ to $n$ terms

(a) \( \frac{1}{27} \left(10^{n+1} - 9n - 10\right)\)

(b) \( \frac{1}{81} \left(10^{n+1} - 9n - 10\right)\)

(c) \(10^{n+1} - 9n - 10\)

(d) None of these

152. The lines $3x-4y+5=0$, $7x-8y+5=0$ and $4x+5y-45=0$ are

(a) Concurrent

(b) Parallel

(c) Not concurrent

(d) None of these

153. If the roots of the equation $2x^2-7x+3m=0$ are reciprocals of each other then the value of $m$

(a) $\frac{7}{3}$

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

(c) $-\frac{7}{3}$

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

154. The distance from the origin to the point of Intersection of the two straight lines $3x-2y=6$ and $3x+2y=18$ is

(a) 2 units

(b) 3 units

(c) 4 units

(d) 5 units

155. \( \lim_{x \to \infty} \frac{1^2 + 2^2 + 3^2 + \ldots + x^2}{x^3} = \)

(a) \( \frac{1}{3} \)

(b) \( \infty \)

(c) \( -\infty \)

(d) None of these

156. If 6 times the no. of permutations of $n$ items taken 3 at a time is equal to 7 times the no. of Permutations of $(n-1)$ items taken 3 at a time then the value of $n$ will be

(a) 7

(b) 9
157. The number of arrangement of the letters of the word “COMMERCE”

(a) 8
(b) \(\frac{8}{2!2!2!}\)
(c) 7
(d) None of these

158. If \(y = a^x + b^e\), then \(\frac{d^2y}{dx^2}\) is equal to

(a) \(n^2y\)
(b) \(-n^2y\)
(c) \(ny\)
(d) None of these

159. If \(\frac{a}{4} = \frac{b}{5} = \frac{c}{9}\), then \(\frac{a + b + c}{c}\) is

(a) 4
(b) 2
(c) 7
(d) None of these

160. The value of \(\log_2[\log_2(\log_3(\log_2(27^3)))]\) is equal to

(a) 1
(b) 2
(c) 0
(d) None of these

161. X bought a TV costing 25,000 making down payment of Rs. 5000 and agreeing to make equal annual payment for four years. How much would be each payment if the interest on unpaid amount be 14% compounded annually? \([P(4, 0.14) = 2.91371]\)

(a) Rs.6864.10
(b) Rs.6850.63
(c) Rs.6859
(d) Rs.6871

162. From a committee of 8 persons, in how many ways can we choose a chairman and a vice chairman assuming one person cannot hold more than one position?

(a) 50
(b) 56
(c) 62
163. Find the quadratic equation given that \(5 + \sqrt{3}\) is one root
(a) \(x^2 - 10x + 22 = 0\)
(b) \(x^2 + 10x - 22 = 0\)
(c) \(x^2 - 10x - 22 = 0\)
(d) \(-x^2 - 10x + 22 = 0\)

164. If the effective interest is 12% per annum and the interest is compounded quarterly, the nominal interest per annum is.
(a) 11.78 %
(b) 11.21%
(c) 11.89%
(d) 11.49%

165. If \(f(x) = x + 3\), \(g(x) = x^2\), then \(fog(x)\)
(a) \(x^2 + 3\)
(b) \(x^2 + x + 3\)
(c) \((x + 3)^2\)
(d) none of these

166. The Sum of First \(n\) terms of an A.P is \(5n^2 + 7n\). The 10\(^{th}\) term is
(a) 101
(b) 96
(c) 84
(d) 102

167. A function \(f(x)\) is defined as

\(f(x) = x - 1\) for \(x < 0\)
\(= -1/2\) for \(x = 0\)
\(= x + 1\) for \(x > 0\)

Then \(f\) is
(a) Continuous at \(x = 0\)
(b) Discontinuous at \(x = 0\)
(c) Undefined at \(x = 0\)
(d) None of these

168. The Supreme Court has given a 6 to 3 decision upholding a lower court; the number of ways it can give a majority decision reversing the lower court is.
(a) 256
(b) 276
(c) 245
(d) 226

169. The equation of the curve which passes through the point (1,3) and has the slope \(4x - 3\) at any point \((x,y)\) is
(a) \(y = 2x^3 - 3x + 4\)

11
(b) \( y = 2x^2 - 3x - 4 \)
(c) \( x = 2y^2 - 3y + 4 \)
(d) none of these

170. If \( x^m \cdot y^n = (x+y)^{m+n} \) prove that \( \frac{dy}{dx} = \)

(a) \( \frac{y}{x} \)
(b) \( -\frac{x}{y} \)
(c) \( -\frac{y}{x} \)
(d) \( \frac{x}{y} \)

171. The domain of \( \{(1,7), (2,6)\} \) is

(a) \( (1,6) \)
(b) \( (7,6) \)
(c) \( (1,2) \)
(d) \( (6,7) \)

172. \( \int_0^2 \frac{\sqrt{x}}{\sqrt{x} + \sqrt{2-x}} \, dx = \)

(a) 0
(b) 2
(c) 1
(d) \( \frac{1}{2} \)

173. \( \int_0^a \left[ f(x) + f(-x) \right] \, dx \) is

(a) 0
(b) \( 2 \int_0^a f(x) \, dx \)
(c) \( a \)
(d) \( \int_{-a}^a f(x) \, dx \)

174. \( x : y : z = 2 : 3 : 5 \) . If \( x + y + z = 60 \) then the value of \( z \) is

(a) 30
(b) 15
(c) 9
(d) 12

175. The future value of annuity on Rs. 5000 a year for 7 years at 14% per annum compound interest is given \( (1.14)^7 = 2.5023 \)

(a) Rs.5300
(b) Rs.53653.57
(c) Rs.5480
(d) Rs.5465.23

PART B: STATISTICS

176. _____ in the entire upper part of the table which includes columns and sub-column numbers, unit(s) measurement
(a) Stub
(b) Box-head
(c) Body
(d) Caption

177. Mode of distribution can be obtained from
(a) Histogram
(b) Less than type of ogives
(c) More than type of ogives
(d) Frequency polygon

178. The sum of the squares of deviations of a Set of observations has the smallest value. when the deviations are taken from their:
(a) A.M
(b) H.M
(c) G.M
(d) None of these

179. An areophane flies from A to B at the rate of 500 Km/hr and comes back from B to A at the rate of 700 km/hr. The average speed of the areophane
(a) 600 km/hr
(b) 583.33km/hr
(c) $100\sqrt{35}$ km/hr
(d) 620 km / hr

180. ____& _______ are called ratio averages
(a) H.M and G.M
(b) H.M and A.M
(c) A.M and G.M
(d) None

181. if x and y are related as $3x + 4y = 20$ and the quartile deviation of x in 12. Then the Quartile deviation of y is:
(a) 16
(b) 14
(c) 10
182. The two lines of regression becomes Perpendicular when
(a) \( r = 1 \)
(b) \( r = -1 \)
(c) \( r = 0 \)
(d) \( (a) \) or \( (b) \)

183. The odds in favour of an event is 2:3 and the odds against another event is 3:7. Find the probability that only one of the two events occurs.
(a) \( \frac{27}{50} \)
(b) \( \frac{17}{50} \)
(c) \( \frac{37}{50} \)
(d) none of these

184. Given that \( P(A) = 1/2 \) and \( P(B) = 1/3 \), \( P(A \cap B) = 1/4 \), what is \( P(A' B') \)
(a) \( 1/2 \)
(b) \( 7/8 \)
(c) \( 5/8 \)
(d) \( 2/3 \)

185. What is the coefficient of variation of \( x \), characterised by the following probability density function: \( f(x) = \frac{1}{4\sqrt{2\pi}} e^{-\frac{(x-\alpha)^2}{32}} \) for \(-\alpha < x < \alpha\)
(a) \( 50 \)
(b) \( 60 \)
(c) \( 40 \)
(d) \( 30 \)

186. A binomial distribution has \( n = 48 \), \( p = \frac{1}{3} \). Then variance
(a) \( 9 \)
(b) \( 3 \)
(c) \( 6 \)
(d) \( 8 \)

187. Which one is not a condition of Poisson model
(a) the probability of having failures in a small time interval is constant
(b) the probability of having success more than one in a small time interval is very small
(c) the probability of having success in this time interval is independent of time ‘t’ as well as earlier success
(d) the probability of having success in a small time interval \((t, t+td)\) is \(Kt\) for a positive constant \(k\).

188. Which sample provides separate estimates for population means for different segments and also overall estimate?
(a) Multistage sampling
(b) Stratified sampling
(c) Simple random sampling
(d) Systematic sampling

189. \(X\) is a normal variable with mean = 5 and SD = 10. Find the value of \(b\) such that the probability of the interval \([25, b]\) is 0.4772 given \(\phi (2) = 0.9772\)
(a) 45
(b) 55
(c) 65
(d) 75

190. According to Neyman’s allocation, in stratified sampling
(a) Sample size is proportional to the population size
(b) Sample size is proportional to the sample SD
(c) Sample size is proportional to the sample variance.
(d) Population size is proportional to the sample variance.

191. Under normal curve \(\mu \pm 3\sigma\) covers ______ of the area of items
(a) 100%
(b) 99.73%
(c) 99%
(d) 99.37%

192. The best average particular suitable for the construction of Index number is
(a) AM
(b) GM
(c) HM
(d) None

193. Consumer price Index number from a year 2004 to 2010 changed 100 to 300. The salary of an employee has changed from Rs. 3,000 to
(a) Rs. 3,500
(b) Rs. 2,500
(c) Rs. 9,000
(d) Rs. 3,500

194. In a normal distribution skewness is ___
(a) 0
(b) >3
(c) <3
195. For two numbers "a" and "b", Standard Deviation given by

(a) \( \frac{|a - b|}{2} \)

(b) \( \sqrt{\frac{a - b}{2}} \)

(c) \( \frac{a + b}{2} \)

(d) \( \sqrt{\frac{a + b}{2}} \)

196. Which measure of dispersion is not affected in the presence of extreme observations?

(a) Range
(b) Mean deviation
(c) Standard deviation
(d) Quartile deviation

197. The two regression lines are 16x-20y+132=0 and 80x-30y-428=0, the value of correlation coefficient is

(a) 0.6
(b) -0.6
(c) 0.54
(d) 0.45

198. If the two quartiles of N (\( \mu, \sigma^2 \)) are 14.6 and 25.4 respectively, what is the Standard deviation of the distribution?

(a) 9
(b) 6
(c) 10
(d) 8

199. If every observation is increased by 5 then

(a) SD increased by 5
(b) MD increased by 5
(c) QD increased by 5
(d) None affected

200. The value of e is

(a) 2.7183
(b) 2.1786
(c) 2.1643
(d) 0