100. Amit and Sujit together can complete an assignment of data entry in 5 days. Sujit's speed is 80% of Amit's speed and the total key depressions in the assignment are 576000. What is Amit's speed in key depressions per hour if they work for 8 hours a day ?

(1) 4800   (2) 6400

(3) 8000   (4) 7200

(5) None of these

101. A shopkeeper labelled the price of his articles so as to earn a profit of 30% on the cost price. He then sold the articles by offering a discount of 10% on the labelled price. What is the actual percent profit earned in the deal ?

(1) 18%   (2) 15%

(3) 20%   (4) Cannot be determined

(5) None of these

Directions (102-106) : *In each of these questions, one question is given followed by data in three staements I, II and III. You have to study the question and the data in statements and decide the question can be answered with data in which of the statements and mark your answer accordingly.*

102. What is the rate of interest p.c.p.a. ?

I. Difference between the compound interest and simple interest earned in two years on the amount invested is ₹ 100/-

II. The amount becomes ₹ 19,500/- in three years on simple interest.

III. Simple interest accrued in two years on the same amount at the same rate of interest is ₹ 3,000/-.

(1) I and II

(2) I and III

(3) II and III

(4) I and either II or III

(5) None of these

103. What is the speed of the train in kmph ?

I. The train crosses an 'x' metre long platform in 'n' seconds.

II. Length of the train is 'y' metre.

III. The train crosses a signal pole in 'm' seconds.

(1) Any two of the three   (2) II and III

(3) I and III   (4) All I, II and III

(5) Question cannot be answered even with information in all three statements.

104. How many students passed in first class ?

I. 85% of the students who appeared in examination have passed either in first class or in second class or in pass class.

II. 750 students have passed in second class.

III. Number of students passed in pass class is 28% of those passed in second class.

(1) All I, II and III

(2) I and III

(3) II and III

(4) Question cannot be answered even with information in all three statements

(5) None of the above

105. What is the amount invested in Scheme 'B' ?

I. The amounts invested in schemes 'A' and 'B' are in the ratio of 2 : 3 respectively.

II. Amount invested in Scheme 'A' is 40% of the total amount invested.

III. Amount invested in Scheme 'A' is ₹ 45,000/-

(1) I and II

(2) I and III

(3) II and III

(4) All I, II and III

(5) III and either I or II

106. What is the cost of flooring the rectangular hall ?

I. Length of the rectangle is 6 meters.

II. Breadth of the rectangle is two-third of its length.

III. Cost of flooring the area of 100 cm^2 is ₹ 45/-.

(1) I and III

(2) II and III

(3) All I, II and III

(4) Question cannot be answered with data in all three statements

(5) None of the above

Directions (107-113) : *Refer to the table and answer the given questions :*

Number of Candidates found Eligible and the Number of Candidates Shortlisted for Interviews for a recent Recruitment Process for Six Posts from Different States *(E–Eligible, S–Shortlisted)*

Post/ State	I		II		III		IV		V		VI	
	E	S	E	S	E	S	E	S	E	S	E	S
A	2500	65	7200	240	5200	76	3600	200	4600	110	5400	380
B	3200	220	8500	420	8400	190	6200	320	5800	180	6200	430
C	2800	280	4500	350	7600	160	8200	440	7300	310	3700	250
D	2400	85	4800	200	2600	55	7500	350	3900	160	4800	360
E	3000	120	5600	280	3800	75	6800	280	6100	260	7800	520
F	4800	325	6400	320	4400	220	4700	180	4900	220	8800	640
G	6500	550	7000	140	6000	325	5500	220	8100	410	2700	200

07. From State 'B', which post had the **highest** percentage of candidates shortlisted ?
(1) V
(2) IV
(3) VI
(4) II
(5) None of these

108. **Approximately**, what is the average number of candidates found eligible from all States for Post III ?
(1) 6700
(2) 6200
(3) 4200
(4) 4500
(5) 5500

109. What is the overall percentage (rounded off to one digit after decimal) of candidates shortlisted over the total number of candidates eligible from all the States together for Post I ?
(1) 9.5%
(2) 12.5%
(3) 7.2%
(4) 6.5%
(5) None of these

110. What is the ratio between total number of candidates shortlisted for all the posts together from States E and G respectively ?
(1) 307 : 369
(2) 73 : 79
(3) 6 : 5
(4) 9 : 7
(5) None of these

111. Total number of candidates found eligible from all States together for Post 1 is **approximately** what percent of the total number of candidates found eligible from all States together for Post VI ?
(1) 45
(2) 50
(3) 60
(4) 55
(5) 65

112. Which State had the **lowest** percentage of candidates shortlisted over eligible for Post IV ?
(1) G
(2) F
(3) E
(4) C
(5) None of these

113. What is the ratio between total number of candidates shortlisted from all States together for posts V and VI respectively ?
(1) 6 : 7
(2) 55 : 96
(3) 165 : 278
(4) 16 : 25
(5) None of these

Directions (114-118) : *These questions are based on the following data. Study it carefully and answer the questions that follow.*

In a school having 400 students boys and girls are in the ratio of 3 : 5 respectively. The students speak Hindi, English or both the languages. 12% of the boys speak only Hindi, 22% of the girls speak only English. 24% of the total students speak only Hindi and the number of boys speaking both the languages is six times the number of boys speaking only Hindi.

114. Total how many boys speak Hindi ?
(1) 18
(2) 126
(3) 108
(4) 26
(5) None of these

115. How many girls speak only Hindi ?
(1) 55
(2) 117
(3) 96
(4) 78
(5) None of these

116. Total how many students speak English ?
(1) 304
(2) 79
(3) 225
(4) 117
(5) None of these

117. Number of girls speaking only Hindi is what percent of the total number of students speaking only Hindi ?
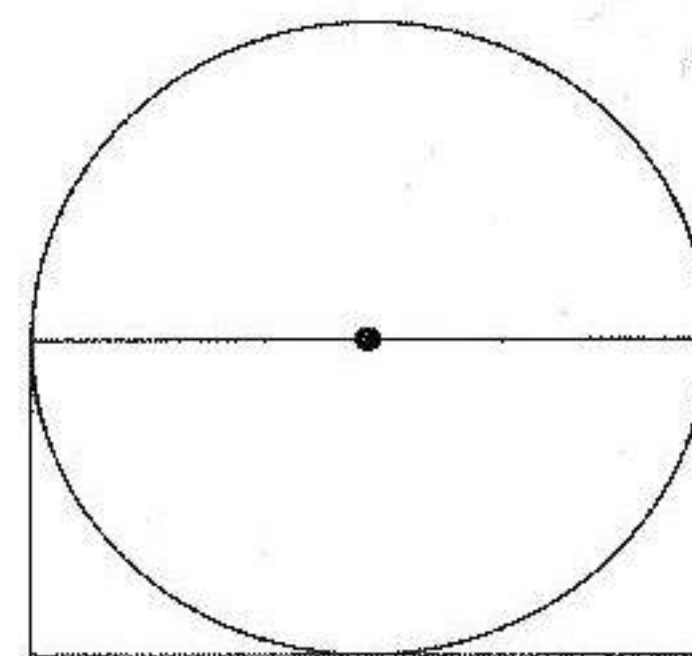(1) 38.2%
(2) 71.8%
(3) 31.2%
(4) 78%
(5) None of these

118. What is the respective ratio between the number of boys and girls speaking both the languages ?
(1) 23 : 25
(2) 12 : 25
(3) 12 : 13
(4) 25 : 13
(5) None of these

Directions (119-120) : *Refer to the graphs and answer the questions.*

119. Area of the circle is 616 cm². What is the area of the rectangle ? ('dot' indicates centre of the circle)

(1) 784 cm²
(2) 196 cm²
(3) 392 cm²
(4) Cannot be determined
(5) None of the above

120. **Population in Millions**

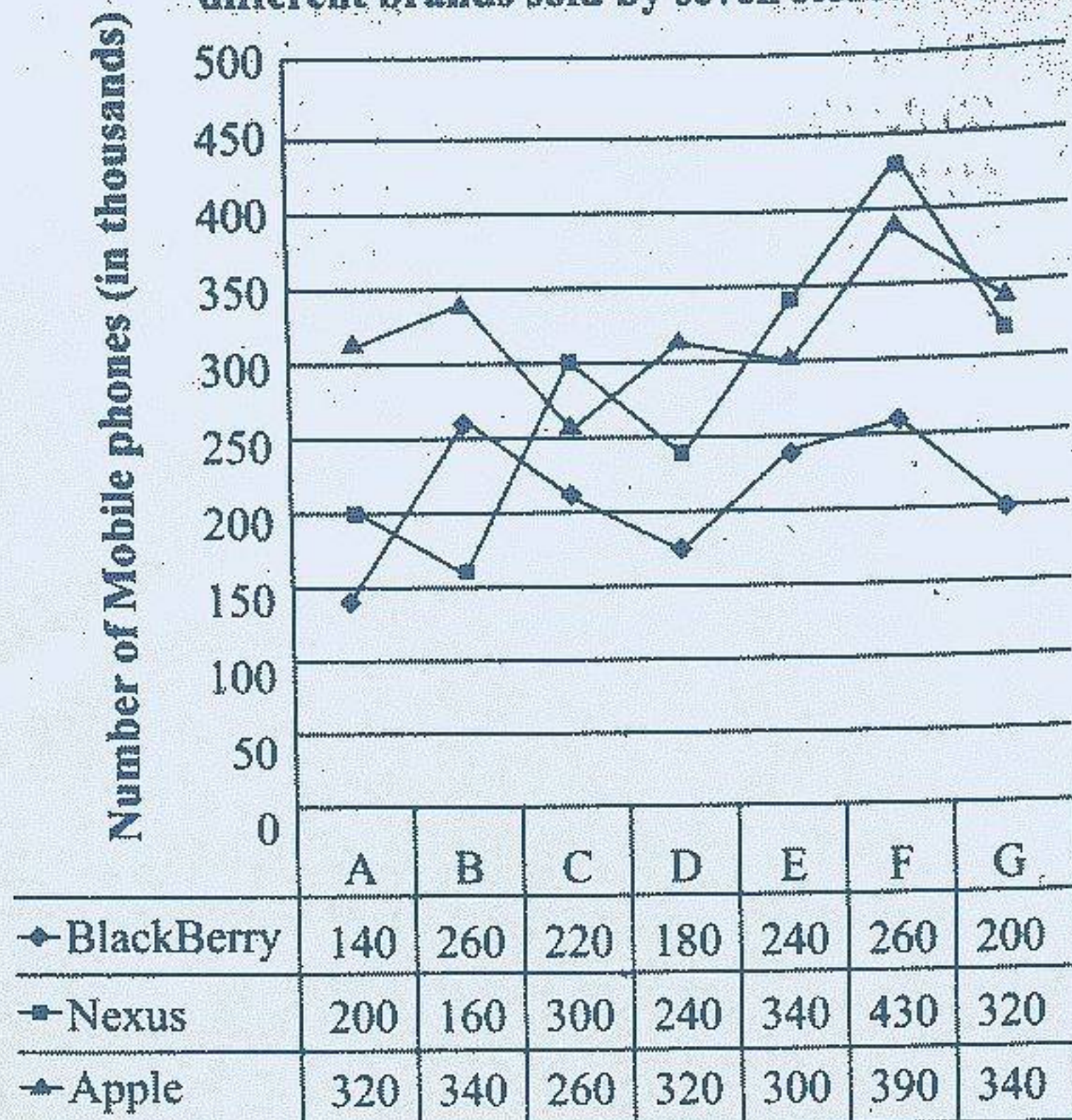| City	Total Population	Male Population
A	12	6.5
B	15	7.2
C	17	9.0
D	19	9.9
E	22	10.8

What is the average female population in million ?
(1) 8.32
(2) 8.86
(3) 8.68
(4) 9.12
(5) None of these

121. A rectangular plot has a concrete path running in the middle of the plot parallel to the length of the plot. The rest of the plot is used as a lawn, which has an area of 253 sq m. If the width of the path is 4m and the length of the plot is greater than its breadth by 8m. What is the area of the plot ? (in sq m)
(1) 896
(2) 345
(3) 432
(4) 354
(5) 682

Number of Mobile phones (in thousands) of three different brands sold by seven stores in 2008

	A	B	C	D	E	F	G
BlackBerry	140	260	220	180	240	260	200
Nexus	200	160	300	240	340	430	320
Apple	320	340	260	320	300	390	340

122. What is the respective ratio between total number of BlackBerry mobile phones sold by stores C, D and G together and the total number of Apple mobile phones sold by the same store together ?
   (1) 3 : 4
   (2) 12 : 13
   (3) 4 : 9
   (4) 15 : 23
   (5) 5 : 9

123. Average number of Nexus mobile phones sold by all the given stores together is by what percent more than the number of BlackBerry mobile phones sold by all the given stores together ?
   (1) $32\frac{1}{3}$
   (2) $33\frac{4}{9}$
   (3) $30\frac{5}{9}$
   (4) $33\frac{1}{3}$
   (5) $32\frac{2}{3}$

124. What is the difference between number of mobile phones of all three brands sold by stores F and B ?
   (1) 360000
   (2) 342000
   (3) 320000
   (4) 348000
   (5) 356000

125. If the price of each BlackBerry mobile is ₹ 22,000/- price of each Nexus mobile is ₹ 25,000/- and the price of each Apple mobile is ₹ 28,000/- by what percent are the total sales of store F more than the total sales of store D ? (rounded off to nearest integer)
   (1) 34%
   (2) 31%
   (3) 44%
   (4) 36%
   (5) 42%

126. The number of Nexus mobile phones sold by each store increased by 15% from 2008 to 2009, and the number of Apple mobile phones sold by each store increased by 10% from 2008 to 2009, what was the total number of Nexus and Apple mobile phones sold by stores B and E together in 2009 ?
   (1) 1272100
   (2) 1279000
   (3) 1177200
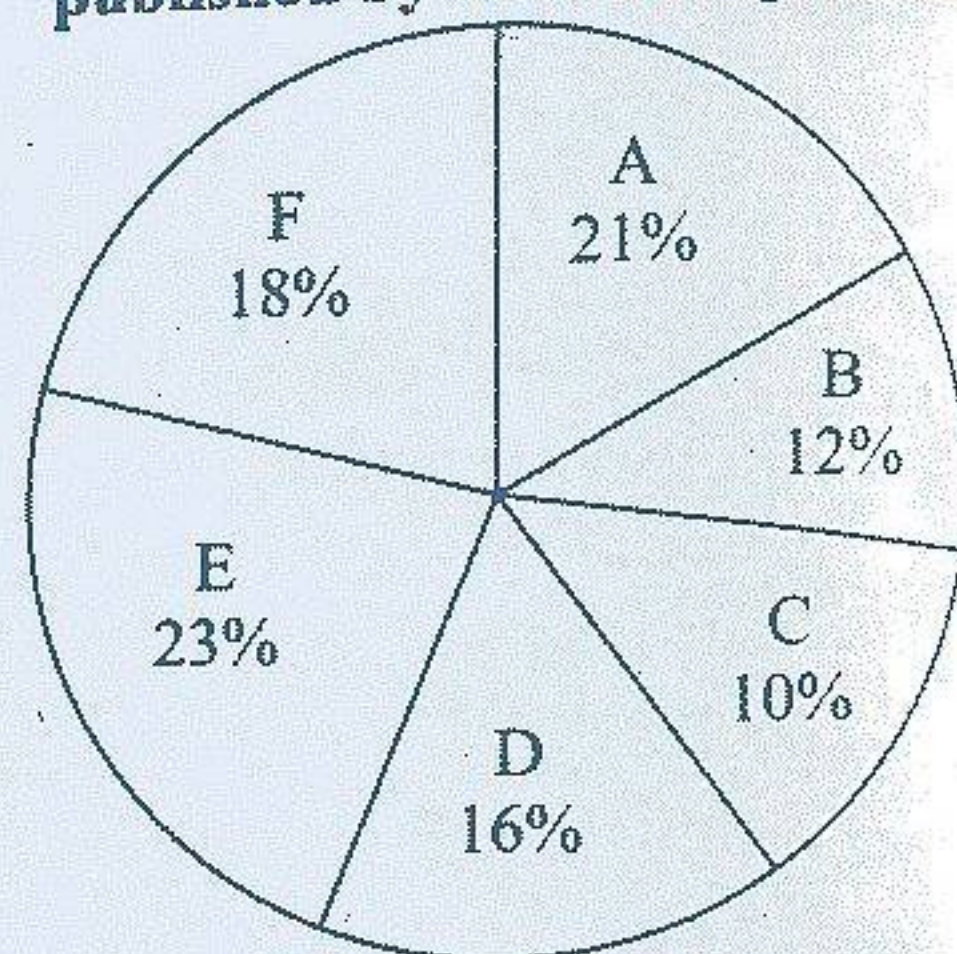   (4) 1277200
   (5) 1172100

Percentage of Academic books published by seven companies
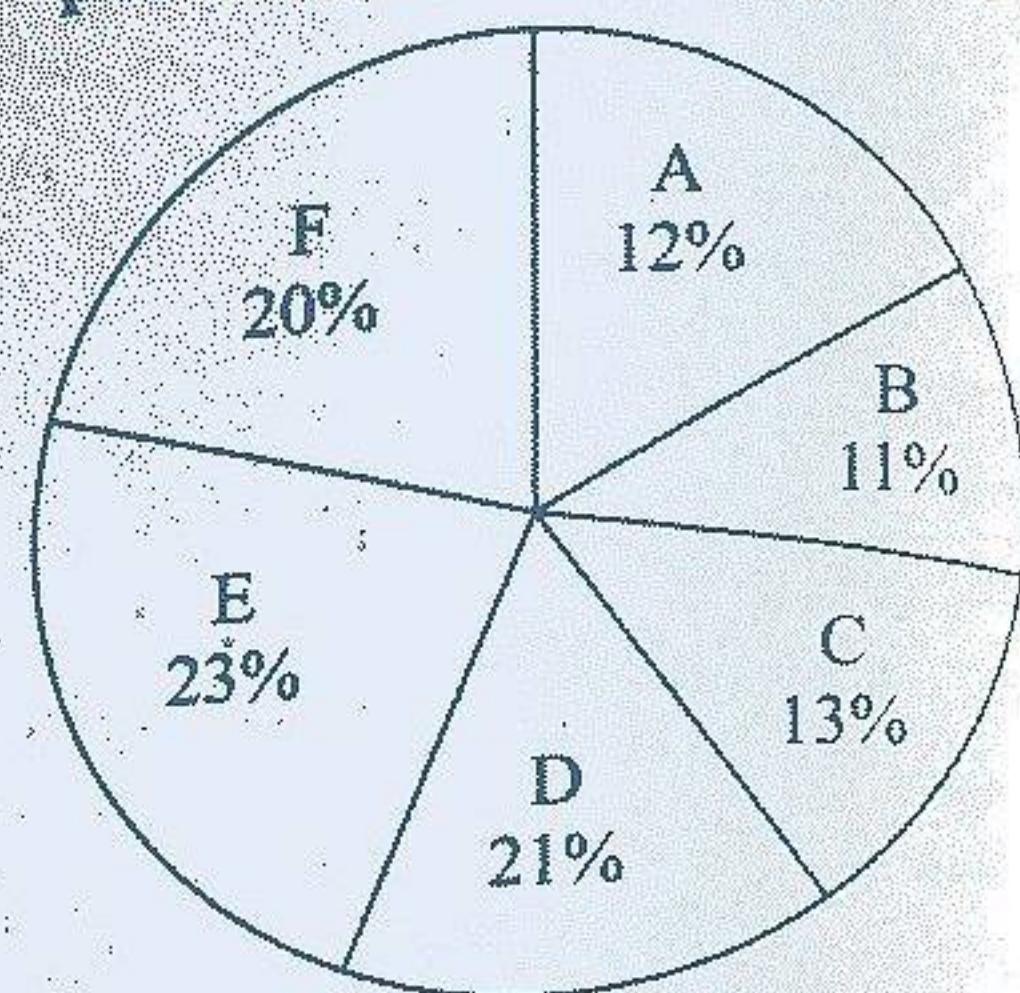
Total number of Academic books published by all the companies together = 19200

Percentage of Non-Academic books published by seven companies

Total number of Non-Academic books published by all the companies together = 25600

127. The number of Academic books published by Company F what percent less than the number of Non-Academic books published by the same company ?
   (1) $40\frac{5}{6}$%
   (2) $45\frac{5}{11}$%
   (3) $41\frac{1}{6}$%
   (4) $43\frac{2}{11}$%
   (5) 25%

128. The number of Non-Academic books published company C is what percent of the total number Non-Academic books published by company B and together ?
   (1) 36%
   (2) 40%
   (3) 38%
   (4) 48%
   (5) 32%

129. What is the respective ratio between the number Academic books published by Company A and the number of Non-Academic books published by company D ?
   (1) 5 : 7
   (2) 9 : 16
   (3) 7 : 9
   (4) 4 : 5
   (5) 3 : 5

130. What is the difference between the number of Academic books and Non-Academic books published by company F ?
   (1) 580
   (2) 640
   (3) 512
   (4) 644
   (5) 768

131. The number of Non-Academic books published by company A is **approximately** what percent more than the number of Academic books published by company E ?

(1) 26%   (2) 22%

(3) 10%   (4) 18%

(5) 32%

132. How many Non-Academic books were published by company D ?

(1) 3722   (2) 3658

(3) 3264   (4) 3584

(5) 4096

133. ₹ 1,500/- were invested for 5 years in scheme A which offers simple interest at a rate of 14% p.a.. The amount received after 5 years and some additional money, is then invested in scheme B. For 2 years, which offers compound interest (compounded annually) at a rate of 20% p. a. . If the compound interest received from scheme B after 2 years is ₹ 1,408/-, what was the additional money invested in scheme B apart from the amount received from scheme A ?

(1) ₹ 450/-   (2) ₹ 650/-

(3) ₹ 500/-   (4) ₹ 280/-

(5) ₹ 520/-

134. In what respective ratio two varieties of rice costing ₹ 36 per kg and ₹ 60 per kg be mixed; so that by selling the mixture of ₹ 54 per kg 20% profit is earned ?

(1) 3 : 2   (2) 7 : 5

(3) 5 : 3   (4) 5 : 2

(5) 4 : 3

135. 8 years ago, Jyoti's age was equal to the Swati's present age. If the sum of Jyoti's age 10 years from now and Swati's age 6 years ago is 88 years. What was Kusum's age 14 years ago if Kusum is 8 years younger to Swati ? (in years)

(1) 22   (2) 14

(3) 25   (4) 24

(5) 16

Directions (136-140) : *In the given questions, two equations numbered I and II are given. You have to solve both the equations and*

Give answer :

(1) If $x < y$ (2) If $x > y$

(3) If $x \geq y$ (4) If $x \leq y$

(5) If relationship between x and y cannot be established.

136. I. $2x^2 - 7x + 3 = 0$

II. $2y^2 - 7y + 6 = 0$

137. I. $4x^2 + 16x + 15 = 0$

II. $2y^2 + 3y + 1 = 0$

138. I. $9x^2 - 45x + 56 = 0$

II. $4y^2 - 17y + 18 = 0$

139. I. $2x^2 + 11x + 14 = 0$

II. $2y^2 + 15y + 28 = 0$

140. I. $6x^2 + 11x + 4 = 0$

II. $4y^2 - 7y - 2 = 0$

141. Poverty line is expressed in terms of an overall ....:

(1) Per Capita income

(2) Per Capita consumption expenditure

(3) Per Capita entertainment expenditure

(4) Per Capita development expenditure

(5) Per Capita GDP

142. Who of the following is the author of the English novel 'The Namesake' ?

(1) Shobha De   (2) Jhumpa Lahiri

(3) Shashi Tharoor   (4) Upamanyu Chhaterjee

(5) V. S. Naipaul

143. The Abbreviation 'UIDAI' stands for ....

(1) Unique Identification Division of All India

(2) Unique Identification Department of Ancient India

(3) Unique Identity Division of Ancient India

(4) Unique Identification Authority of India

(5) None of the above

144. Kanha Tiger Reserve is situated in Mandla District of :

(1) Rajasthan   (2) Uttar Pradesh

(3) Chattisgarh   (4) Madhya Pradesh

(5) Maharashtra

145. Which of the following is a global international organization dealing with the rules of trade between nations ?

(1) IMF   (2) IDA

(3) UNO   (4) WTO

(5) UNESCO

146. Excise duty is the tax levied on :

(1) Production of goods   (2) Import of goods

(3) Sale of goods   (4) Profits on sale of goods

(5) Income from other sources

147. Union Budget is presented in the parliament by the ....

(1) Prime Minister

(2) Commerce Minister

(3) Minister for Parliamentary Affairs

(4) Union Finance Minister

(5) Lok Sabha Speaker

148. A tax based on the value of the property/product is called :

(1) Fringe Benefit Tax

(2) Value Added Tax

(3) Minimum Alternative Tax

(4) Turnover Tax

(5) Ad Valorem tax

149. The term 'Plastic money' refers to ....

(1) ATM/Credit Cards

(2) Plastic coated Currency Notes

(3) Foreign Currency Notes

(4) Travelers Cheque

(5) None of the above

150. It is mandatory to quote the following identification number on all large value financial transactions.

(1) PAN number   (2) Voter ID

(3) PIN   (4) Ration Card number

(5) Phone number

151. The Term 'FTZ' stands for ....
    (1) Free Trade Zone   (2) Food Trade Zone
    (3) Foreign Trade Zone   (4) Fiscal Trade Zone
    (5) Financial Trade Zone

152. International day of 'Non-Violence' is observed every year on ....
    (1) 15th August   (2) 2nd October
    (3) 26th January   (4) 31st January
    (5) None of these

153. In addition to India and China the following nations are also members of 'BRICS' ....
    (1) Bangladesh, Russia and Sri Lanka
    (2) Belgium, Romania and South Africa
    (3) Belgium, Russia and Saudi Arabia
    (4) Brazil, Russia and South Africa
    (5) Bhutan, Russia and Sri Lanka

154. Which of the following is a Statutory quasi-judicial authority mandated by the parliament to preserve the freedom of press and maintain and improve the standards of newspapers ?
    (1) Press Trust of India   (2) Press Information Bureau
    (3) United News of India   (4) NAM News Network
    (5) Press Council of India

155. India's largest 700MW ultra mega solar power plant is planned in the state of Madhya Pradesh in :
    (1) Bhopal district   (2) Ujjain district
    (3) Khandwa district   (4) Rewa district
    (5) Indore district

156. India's Tax Administration Reform Commission submitted its first report to Finance Minister in June 2014 and this commission is headed by :
    (1) Shri Y. V. Reddy
    (2) Shri D. Subba Rao
    (3) Other than those given as option
    (4) Shri Parthasarathy Shome
    (5) Shri Bimal Jalan

157. The remote sensing satellite 'Yaogan XX' has recently been put in orbit by :
    (1) Australia   (2) Singapore
    (3) China   (4) Thailand
    (5) New Zealand

158. Gagan Narang is an Indian sportsman associated with :
    (1) Badminton   (2) Air rifle shooting
    (3) Golf   (4) Wrestling
    (5) Athletics

159. James Bond, often referred by his code name, 007 is the fictional protagonist of a series of novels and short stories, first published in 1953. The character was originally created by journalist and author :
    (1) John Pearson   (2) Kingsley Amis
    (3) Ian Fleming   (4) Raymond Benson
    (5) Johan Gardner

160. Who amongst the following has recently been selected to receive the 2014 Rajiv Gandhi National Sadbhavana Award for his outstanding contribution towards the promotion of communal harmony, peace and goodwill ?
    (1) Spiritual leader Dalai Lama
    (2) Noted flute player Pt. Hari Prasad Chaurasia
    (3) Noted film director Shyam Benegal
    (4) Noted film maker Muzaffar Ali
    (5) Superstar of Indian film music Illayaraja

161. The 'World's AIDS Day' is observed throughout the world on
    (1) first of December every year
    (2) last Monday of September
    (3) last Sunday of November
    (4) first of November every year
    (5) first Sunday of October

162. The 'Cabinet Committee on Investments' has been set up to
    (1) scrutinize investment proposals
    (2) attract overseas investors
    (3) facilitate stalled projects
    (4) market and policies of the government
    (5) clear investment proposals expeditiously

163. The official currency of the 'Republic of Austria' is
    (1) Euro   (2) Peso
    (3) Austrian Pound (4) Lira
    (5) Austrian Dollar

164. The host of the Eighteenth (2014) SAARC summit is
    (1) Sri Lanka   (2) India
    (3) Bhutan   (4) Pakistan
    (5) Nepal

165. The process by which the central bank of a country controls the supply of money in the economy by exercising its control over interest rates in order to maintain price stability and achieve high economic growth is known as :
    (1) Economic Policy   (2) Monetary Policy
    (3) Fiscal Policy   (4) Credit Policy
    (5) Budgetary Policy

166. The scientist who co-discovered the deadly 'Ebola' strain in 1976 is :
    (1) Professor Peter Piot
    (2) Professor Butel Janet
    (3) Professor Paul Farrell
    (4) Professor Michel Heffernan
    (5) Professor Graham David

167. The national capital of Brazil is :
    (1) Quito   (2) Santiago
    (3) Salvador   (4) Brasilia
    (5) Bogota

168. A banknote, of which a portion is missing or which is composed of more than two pieces is known as :
    (1) A mutilated banknote
    (2) A counterfeit banknote
    (3) A soiled banknote
    (4) A damaged banknote
    (5) A defective banknote

169. The abbreviation NTCA stands for :
    (1) National Thermal Control Authority
    (2) National Terrorist Control Authority
    (3) National Transportation Control Authority
    (4) National Transport Corporation Authority
    (5) National Tiger Conservation Authority

170. As stated by Shri Arun Jaitley in his Budget Speech for 2014-15, the amount provided for 2014-15 for the Welfare of Scheduled Castes under the SC plan is :
(1) ₹ 50,548/-
(2) ₹ 54,548/-
(3) ₹ 32,548/-
(4) ₹ 32,387/-
(5) ₹ 50,387/-

171. In India, the regulator of the commodity market is :
(1) Forward Markets Commission (FMC)
(2) National Stock Exchange (NSE)
(3) Securities and Exchange Board of India (SEBI)
(4) Insurance Regulatory and Development Authority (IRDA)
(5) Reserve Bank of India (RBI)

172. For his role in one of the biggest corporate frauds in the country, market regulator SEBI recently barred B. Ramalinga Raju, founder and former chairman of Satyam Computer Services from the market for a period of :
(1) 18 years
(2) 12 years
(3) 10 years
(4) 21 years
(5) 14 years

173. As per Census 2011, the total population of India on 1st March 2011 was 1210.6 million. Of this the urban population was :
(1) 433.1 million
(2) 399.1 million
(3) 477.1 million
(4) 377.1 million
(5) 499.1 million

174. In order to promote financial inclusion, the Reserve Bank of India has recently allowed minors to operate bank accounts independently provided their age is above :
(1) 14 years
(2) 13 years
(3) 16 years
(4) 10 years
(5) 08 years

175. Finance Minister Arun Jaitley recently announced launch of 'Van Bandhu Kalyan Yojana' for the welfare of :
(1) Tribal Communities
(2) Economically weaker sections
(3) Minority Communities
(4) Other than those given as options
(5) Rural and Village Communities

176. The recent WTO talks failed to agree on TFA or Global Customs Rules. Expand the term TFA.
(1) Trade Fostering Agreement
(2) Trade Factoring Agreement
(3) Trade Facilitation Agreement
(4) Trade Featuring Agreement
(5) Other than those given as options

177. The process of conversion of a physical cheque into electronic form is known as :
(1) Cheque Negotiation
(2) Cheque Endorsement
(3) Cheque Truncation
(4) Cheque Alteration
(5) Cheque Crossing

178. The earlier system of Prime Lending Rate (PLR) has now been replaced by :
(1) Reverse Repo Rate System
(2) Repo Rate System
(3) Exchange Rate System
(4) Bank Rate System
(5) Base Rate System

179. The author of the book 'Strictly Personal : Manmohan and Gursharan' recently published by Harper Collins is :
(1) Natwar Singh
(2) P. C. Parekh
(3) Gursharan Kaur
(4) Sanjaya Baru
(5) Daman Singh

180. In his Budget (2014-15) Speech Minister of Railways Shri D. V. Sadananda Gowda has informed that the number of unmanned Level Crossings is around :
(1) 11563
(2) 21348
(3) 21563
(4) 30348
(5) 11348

PART - V : Computer Knowledge

181. A Compact Disk (CD) is a(n) .... data storage of the type.
(1) Magnetic
(2) Sequencer
(3) Electro-mechanical
(4) Electrical
(5) Optical

182. What does the term GUI in computing stand for ?
(1) Graphical Utility Interface
(2) Graphical User Input
(3) Graphical User Interface
(4) Graphics User Intake
(5) Graphics User Information

183. Which one of the following is not the operation of operating system ?
(1) Networking
(2) Process management
(3) Booting
(4) Resource management
(5) File management

184. One advantage of dial-up internet access is ....
(1) It utilizes existing telephone service
(2) Modem speeds are very fast
(3) It utilizes broadband technology
(4) It uses a router for security
(5) It is wireless service

185. A document created in a word processing program or a budget created in a spreadsheet are , both examples of documents created in ....
(1) machine language
(2) an operating system
(3) a window platform
(4) system software
(5) application software

186. A saved document is referred to as ....
(1) file
(2) folder
(3) project
(4) data
(5) word

187. Programs such as Internet Explorer that serve as navigate windows into the web are called :
(1) Networks
(2) Hypertext
(3) Web Site
(4) Web Browser
(5) Internet

188. By an intranet we mean :
(1) A LAN of an organization
(2) A wide area network for all branches of an organization
(3) Personal Network of top management of an organization
(4) A network connecting all computers of an organization using Internet protocol
(5) Metropolitan Area Network

189. The brain of a computer is ....
(1) Floppy Disk
(2) CPU
(3) CD
(4) COBOL
(5) Megabyte

190. Example of telecommunication device is a ....
(1) modem
(2) printer
(3) keyboard
(4) scanner
(5) mouse

191. What is the full form of internet communication language TCP/IP ?
(1) Transmission Control Practice/ Internet Practice
(2) Transmission Control Protocol/ Internet Protocol
(3) Transport Control Protocol/ Internet Protocol
(4) Transport Component Practice/ International Practice
(5) Telephone Call Protocol/ International Protocol

192. Chip is a common nickname for a(n) ....
(1) Transistor
(2) Semi conductor
(3) Resister
(4) Hard disk
(5) Integrated circuit

193. A device that not only provides surge protection, but also furnishes the computer with battery backup power during a power outage is ....
(1) Battery strip
(2) UPS
(3) Surge strip
(4) USB
(5) Memory

194. Select the best description of Read Only Memory (ROM).
(1) Volatile used to store only memory
(2) Volatile used to store information that does not change during system operation
(3) Volatile used to store information that changes during system operation
(4) Non-volatile used to store information that changes during system operation
(5) Non-volatile used to store information that does not change during system operation

195. MIPS in measuring processor speed stands for ....
(1) Monthly Instructions Per Second
(2) Million Instructions Per Second
(3) More inputs per system
(4) Million inputs per second
(5) More instructions per system

196. What is the ultimate purpose of defragmentation ?
(1) Delete temporary files
(2) Format the PC
(3) Make the PC faster
(4) Create more free space
(5) Reduce power consumption

197. Programs such as Mozilla Firefox that serve navigate windows into the web are called ....
(1) Web browser
(2) Networks
(3) Internet
(4) Hyper Text
(5) Word processor

198. In ROM BIOS, the acronym BIOS stands for ....
(1) Basic Input Output System
(2) Basic Input Organizational System
(3) Basic Industry Operating System
(4) Base Input Operating Set
(5) Basic Initiative Output Set

199. .... is a method in which multiple communication devices are connected to one another efficiently.
(1) Routing
(2) Redundancy
(3) Detecting
(4) Modem
(5) None of the above

200. The Database Management System (DBMS) is ....
(1) Hardware system stores information
(2) Hardware system used to create, maintain and provide controlled access to a database
(3) Hardware system used to create, maintain and provide uncontrolled access to a database
(4) Software system used to create, maintain and provide uncontrolled access to a database
(5) Software system used to create, maintain and provide controlled access to a database