

SSC Combined Graduate Level (CGL) Paper (2013)

PART-A: GENERAL INTELLIGENCE & REASONING

Directions: In the following, select the related letter/ward from the given alternatives.

1. Horse : Neigh :: Bells : ?
(a) Beat (b) Chime (c) Rustle (d) Roar
2. A - E : R - V :: B - F : F - J
(a) CTDH (b) BSCG (c) FUGK (d) CSOG
3. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
a bba bba bb
(a) bba (b) aab (c) abb (d) bbb

Directions: In question nos 4 to 12, a series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

4. EFA, GHC, IJE, ___?___
(a) KDA (b) JKG (c) KLG (d) HIF
5. 13, 10, ___?___, 100, 1003, 1000, 10003.
(a) 130 (b) 1030 (c) 1130 (d) 103
6. 61, 52, 63, 94, 46, ___?___ .
(a) 19 (b) 18 (c) 17 (d) None
7. 5, 13, 29, 61, 125, ___?___
(a) 145 (b) 253 (c) 196 (d) 245
8. YZ, VYZ, SYZ, PYZ, ___?___
(a) XYZ (b) TYZ (c) RYZ (d) MYZ
9. P 3 C, R S F, T 8 I, V12 L ___?___ .
(a) X16O (b) X17M (c) X17O (d) Y17O
10. NP MK RT IG ___?___
(a) VX (b) UW (c) FD (d) BC
11. AZ, CX, EV, GT, ___?___, KP, ___?___ .
(a) IR and MN (b) IR and NM
(c) RI and MN (d) RI and NM
12. T Q N K H E B Y V S P ???
(a) MJH (b) NKG (c) NKI (d) MJG

1 2 3 4 5 6 7 8 9 0
  ([] d D) ^ _
 What is the number indicated by these symbols?
 [] ^ _ d

23. INTELLIGENCE
- | | |
|-------------|------------|
| (a) NEGLECT | (b) GENTLE |
| (c) INCITE | (d) CANCEL |

24. In the following question, the number of letters skipped in between adjacent letters in the series is successive even numbers. Which of the following series observes this rule ?
 (a) FINUZ (b) ADGJM (c) BEJQZ (d) BDGKQ
25. If MOBILE is written as ZAMSUM, how TUMOR can be written in that code?
 (a) BRAIN (b) HGYAD (c) GGXYA (d) IHZBE
26. In a question paper, there are 12 questions in all out of which only six are to be answered. Six questions have an alternative each. Each question has four parts. How many questions including parts are there in the question paper?
 (a) 24 (b) 48 (c) 72 (d) 96
27. If $\times$ stands for addition, $<$ for subtraction, $+$ stands for division, $>$ stands for multiplication, $=$ stands for equation, $\div$ stands for greater than, and $<$ stands for less than, state which of the following is true?
 (a) $3 \times 24 \div 16 > 2 + 4$ (b) $5 > 8 + 4 = 10 < 4 \times 8$
 (c) $3 \times 4 > 2 - 9 + 3 < 3$ (d) $5 \times 3 < 3 \div 8 + 4 \times 1$
28. If $55 + 66 = 33$ and $22 + 99 = 33$, what is $44 + 88$?
 (a) 33 (b) 36 (c) 38 (d) 40

Directions: In questions no. 29 to 34, select the missing number from the given responses.

29.

3	4	6
5	7	3
1	2	7
35	69	?

 (a) 82 (b) 94 (c) 84 (d) 42
30.

16	49	64
25	36	81
9	13	?

 (a) 21 (b) 22 (c) 17 (d) 14
31.

19	18	34	32	44	41
2		4		?	

 (a) 3 (b) 6 (c) 9 (d) 4
32.

4		3		2
36	2	100	7	?
				5

 (a) 71 (b) 49 (c) 64 (d) 81
33. 5, 11, 24, 51, 106, __?__
 (a) 115 (b) 122 (c) 217 (d) 221
34. 3917, 3526, __?__, 2857
 (a) 3082 (b) 3174 (c) 3389 (d) 2682

35. A and B both are walking away from point 'X'. A walked 3 m and B walked 4 m from it, then A walked 4 m north of 'X' and B walked 5 m south of A. What is the distance between them now?

- (a) 11.40m (b) 9.5m (c) 9m (d) 16m

36. Pipe A can fill a tank completely in 5 hours. However, on account of a leak at the tank, it takes 3 more hours to fill the tank. How long will the leak take to empty the full tank when pipe A is closed/shut?

- (a) 13 hours 20 minutes (b) 7.5 hours
(c) 14 hours 40 minutes (d) 12 hours 20 minutes

Directions: In questions no. 37 and 38, one/two statements are given followed by two/ three conclusions I, II and III. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

37. **Statement:** Sun is the source of light.

Conclusions: (I) Moon is not the source of light.

(II) Light has only one source.

- (a) Only conclusion (I) follows
(b) Only conclusion (II) follows
(c) Both conclusions (I) and (II) follow
(d) Neither conclusions (I) nor (II) follows

38. **Statement:** (I) All cities are towns.

(II) Some cities are villages.

Conclusions: (I) All villages are towns

(II) No village is a town

(III) Some villages are towns.

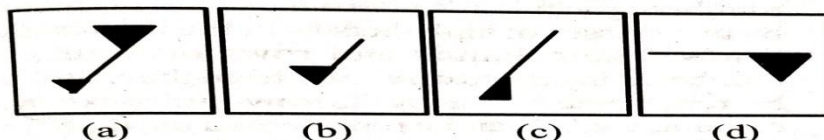
- (a) Only conclusion (III) follows
(b) Only conclusion (I) follows
(c) Only conclusion (II) follows
(d) None of these

Directions: In questions no. 39 to 41, which answer figure will complete the question figure?

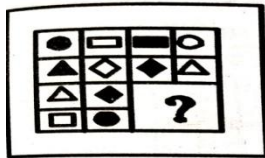
39.



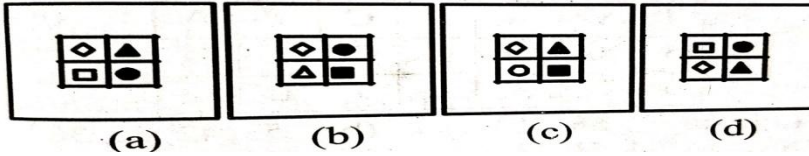
Answer Figures :



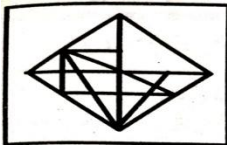
40. Question Figure:



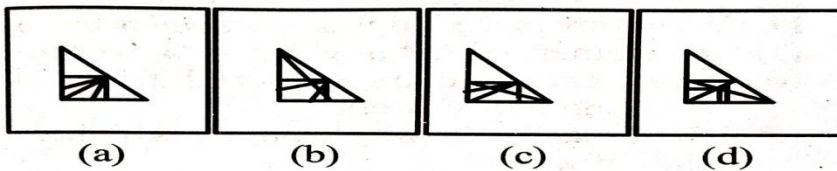
Answer Figures :



41. Question Figure:

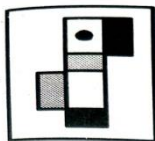


Answer Figures :

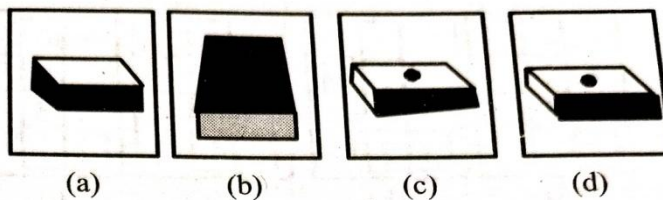


42. Which one of the following box can be created by folding the given key design?

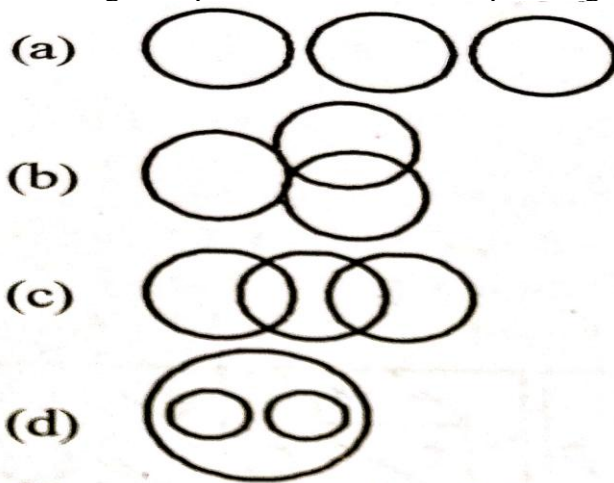
Question Figure :



Answer Figures :



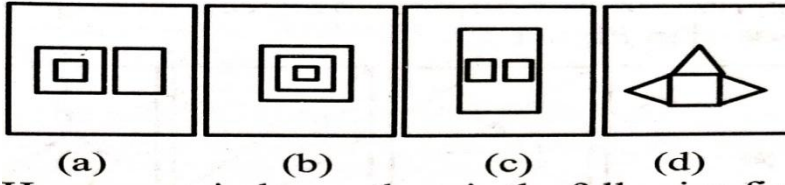
43. Which figure represents the relationship among Sun, Moon, Molecule ?



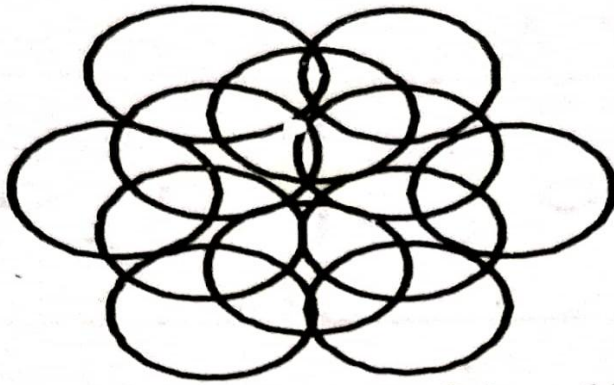
44. Choose from the following diagrams (a), (b), (c) and (d) the one that illustrates the relationship among three given classes :

North America, United States of America, New York

Answer Figures :



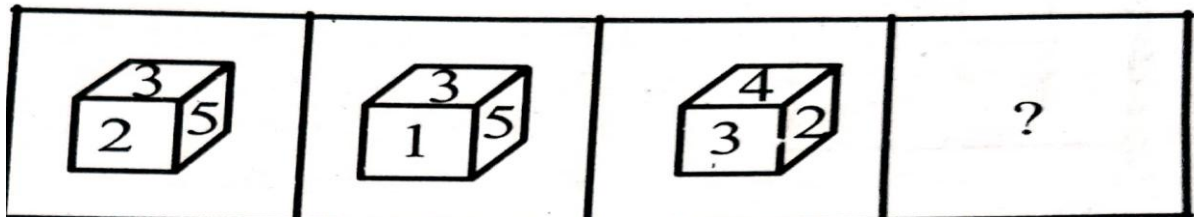
45. How many circles are there in the following figure?



- (a) 11 (b) 12 (c) 13 (d) 14

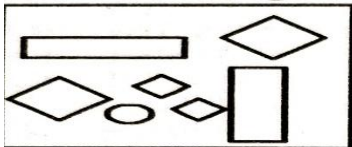
46. Three views of the same cube are given. All the faces of the cube are numbered from 1 to 6. Select one figure which will result when the cube is unfolded.

Question Figure :

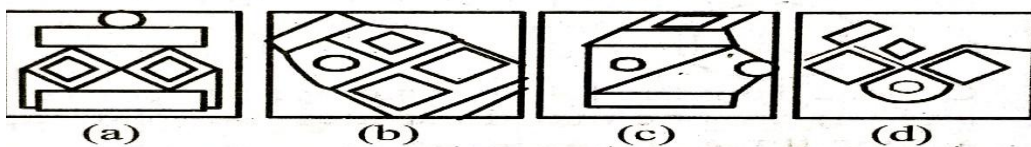


47. Which answer figure includes all the components given in the question figure?

Question Figure :

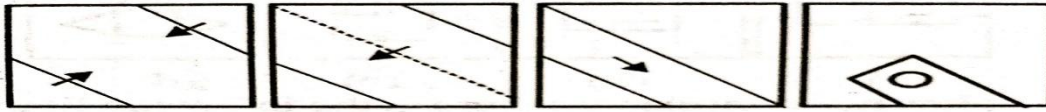


Answer Figures :

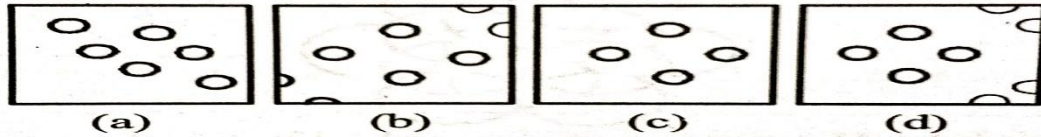


48. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.

Question Figure :

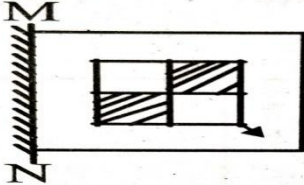


Answer Figures :

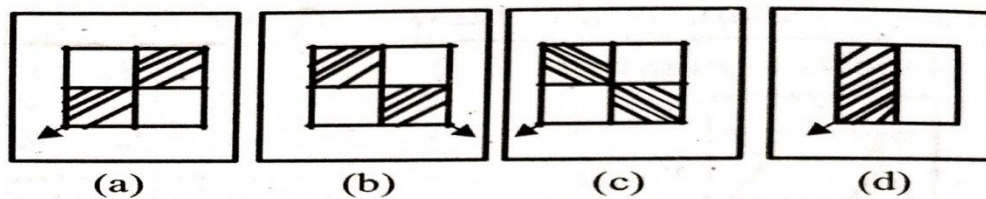


49. If a mirror is placed on the MN, then which of the answer figures is the right image of the given figure?

Question Figure :



Answer Figures :



50. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in the matrix given below. The columns and rows of Matrix are numbered from 0 to 6. A letter from the matrix can be represented first by its row and next by its column, e.g. 'A' can be represented by 42, 62, etc. and 'P' can be represented by 15, 43, etc. Similarly, you have to identify the set for the word 'CALM'

Matrix

0	1	2	3	4	5	6
1	H	R	E	I	P	S
2	S	G	N	D	Z	I
3	B	U	F	T	K	L
4	V	A	P	C	Y	A
5	M	W	C	O	X	N
6	B	A	E	J	L	O

- (a) 44, 62, 65, 51
(b) 53, 42, 65, 36
(c) 53, 54, 51, 31
(d) 44, 54, 65, 24

PART-B GENERAL AWARENESS

51. Externality theory is the basic theory of the following branch of Economics:
(a) Macro Economics (b) Environomics
(c) Fiscal Economics (d) International Economics
52. Diamonds are priced higher than water because:
(a) consumers do not buy them at lower prices.
(b) they are sold by selected firms with monopolistic powers.
(c) their marginal utility to buyers is higher than that of water
(d) their total utility to buyers is higher than that of water
53. Transboundary pollution (or) Acid rain is caused by:
(a) Nitrogen oxide and sulphur dioxide
(b) Carbon monoxide
(c) Carbon dioxide
(d) Hydrocarbon
54. "Functional Finance" is associated with
(a) Abba 'P' Lerner (c) Adam Smith
(b) Adolph Wogner (d) Adams
55. Of the following land uses, which is restricted to Special Economic Zones?
(a) Information Technology Companies
(b) Educational Institutions
(c) Free trade Centres
(d) Marketing Centres
56. Who of the following enjoys the rank of Cabinet Minister in Union Cabinet?
(a) Deputy Chairman of Planning Commission
(b) Judge of Supreme Court
(c) Secretary of Government of India
(d) Political Advisor to PM
57. Who gave the title of "Mahamana" to Madan Mohan Malviya?
(a) Bal Gandadhar Tilak (b) Dada Bhai Naurozi
(c) Gopal Krishna Gokhale (d) Mahatma Gandhi
58. The vacancy of the office of the President must be filled within:
(a) 3 months (b) 6 months (c) 12 months (d) 1 month
59. In which part of the Indian Constitution, the fundamental duties are enshrined?
(a) IV (b) IVA (c) IVB (d) V
60. Who described the Government of India Act, 1935 as a new charter of bondage?
(a) B.R. Ambedkar (b) Mahatma Gandhi
(c) Rajendra Prasad (d) Pt. Jawaharlal Nehru

61. Who was the Viceroy of the time of Quit India Movement ?
 (a) Lord Irwin (b) Lord Mountbatten
 (c) Lord Wavell (d) Lord Lin Lithgow
62. Who was the other Congress leader who joined with Motilal Nehru to start the Swaraj Party in 1923?
 (a) G.K. Gokhale (b) B.G. Tilak
 (c) Chittaranjan Das (d) M.K. Gandhi
63. What is the first sermon of Buddha called as?
 (a) Mahaparinivansutta (b) Brahmajalasutta
 (c) Dhammachakkapabattanasutta (d) Kachchayanagottasutta
64. From which of the following banks did Madan Mohan Malaviya take loans for financing "The Hindustan Times"?
 (a) State Bank of India (b) Punjab National Bank
 (c) Bank of Maharashtra (d) Bank of Baroda
65. Who wrote the book "Why Socialism"?
 (a) Jayaprakash Narayan (b) Mahatma Gandhi
 (c) Acharya Narendra Dev (d) M.N. Roy
66. Multi purpose river valley projects are the "New temples of modern India"
 (a) Jawaharlal Nehru (b) Motilal Nehru
 (c) Mahatma Gandhi (d) Rajiv Gandhi
67. Where are the Todas found?
 (a) Madhya Pradesh (b) Tamil nadu
 (c) Rajasthan (d) Aruncachal Pradesh
68. The eastward continuation of the Brazil current is called:
 (a) North Atlantic drift (b) South Atlantic drift
 (c) Counter Equatorial drift (d) West Atlantic drift
69. Which of the following is an endemic species?
 (a) Nicobar pigeon (b) Horn bill
 (c) Indian Rhino (d) Pink head duck
70. The natural disaster in which carbon-di-oxide suddenly erupts from a deep lake water is known as _____.
 (a) Liminic (b) Lacustrine (c) Fluvial (d) Glacial
71. Blood group was discovered by:
 (a) Alexander Fleming (b) William Harvey
 (c) Landsteiner (d) Pavlov
72. Pick out the correct match:
 (a) Egg yolk Protein and Fat
 (b) Fleshy foods Calcium and Protein
 (c) Fish Starch and Vitamin
 (d) Milk Fibre and Minerals

73. Blood is a:
(a) reproductive tissue (b) connective tissue
(c) epithelial tissue (d) muscular tissue
74. DPT vaccine is administered to prevent diseases like:
(a) Diphtheria, Pertussis and Typhoid (b) Diphtheria, Pertussis and Tetanus
(c) Dengue, Pertussis and Typhoid (d) Dengue, Polio and Tetanus
75. The disease that has been eradicated from the world, is:
(a) Small pox (b) Leprosy (c) Poliomyelitis (d) Chicken pox
76. In dicots the pollen grains possess:
(a) one germ pore (b) two germ pores
(c) three germ pores (d) four germ pores
77. Farad is the unit of:
(a) Conductance (b) Capacitance
(c) Inductance (d) Resistance
78. Steel is more elastic than rubber because it:
(a) is harder than rubber (b) requires larger deforming force
(c) is never deformed (d) is deformed very easily
79. Communication satellites are used to:
(a) transmit communication signal only
(b) receive communication signal only
(c) receive and redirect communication signal
(d) provide information of natural resources only
80. What type of information system would be recognised by digital circuits?
(a) Hexadecimal system
(b) Binary system
(c) Both hexadecimal and binary system
(d) Only Roman system
81. Which of the following is an impact printer?
(a) Daisy wheel printer (b) Ink jet printer
(c) Bubble jet printer (d) Laser printer
82. Identify the old term amongst the following group:
(a) Coaxial cable (b) Optical fibre
(c) Twisted pair wire (d) Microwaves
83. Stains of rust on clothes can be removed by:
(a) H_2O_2 (b) Oxalic acid (c) Petrol (d) Alcohol
84. The percentage of nitrogen present in ammonium sulphate is:
(a) 18% (b) 21% (c) 25% (d) 30.5%

85. Ethanol containing 5% water is known as:
(a) Absolute alcohol (b) Dilute alcohol
(c) Power alcohol (d) Rectified spirit
86. The hormone used as an oral contraceptive is:
(a) Aldesterone (b) Cortisone
(c) Progesterone (d) Testosterone
87. Expand the term IPCC:
(a) International Pollution Control Council
(b) International Panel of Climate Control
(c) Interim Panel of Climate Change
(d) Intergovernmental Panel on Climate Change
88. The "One Straw Revolution" was written by:
(a) Masanobu Fukuoka (b) Richael Carlson
(c) M.S. Swaminathan (d) Norman Borlaug
89. Acceptable "Noise Pollution Level" in India range between:
(a) 10-15 dec (b) 16-35 dec
(c) 40-45 dec (d) 70-100 dec
90. Endosulfan spray on cashew crop resulted in the pollution to the tune of tragedy in:
(a) Tamil Nadu (b) Kerala
(c) Andhra Pradesh (d) Karnataka
91. Aung San Suu Kyi is a native to:
(a) Tibet (b) China
(c) Myanmar (d) Arunachal Pradesh
92. India and Japan inked two agreements during November 2012 to enable Tokyo to import from India:
(a) Leather goods (b) Rare earth minerals
(c) Basmati type rice (d) Rubber based products
93. Non Residential Indians (NRI) Day is marked on:
(a) January 7 (b) January 9
(c) January 17 (d) January 19
94. "Whether I earned your vote or not, I have listened to you, I have learned from you. You have made me a better President", was said by:
(a) Pranab Mukherjee (b) Barack Obama
(c) George Bush (d) APJ Abdul Kalam
95. First Hindu American to enter the US House of Representative as senator is:
(a) Tulsi Gabbard (b) Sunita Williams
(c) Jyoti Sengupta (d) Ami bera
96. Who was not a politician?
(a) H.N. Bahuguna (b) I.K. Gujral

(c) S.L. Bahuguna

(d) J.Jayalalitha

97. The WISE Prize 2012, also known as the "Nobel Prize for Education" was conferred by the WISE Summit in Doha on

(a) Dr. APJ Abdul Kalam

(b) Dr. Madhav Chavan

(c) Dr. Yash Pal

(d) Dr. M.S. Swaminathan

98. The most powerful woman in business in India as rated by the "Fortune" for the year 2012 is:

(a) Chanda Kochhar

(b) Prabha Parameswaran

(c) Debjani Ghosh

(d) Anjali Bansal

99. Indira Gandhi Prize for Peace, Disarmament and Development 2012 was awarded to:

(a) Tereza Fajksova

(b) Sunita Williams

(c) Chanda Kochhar

(d) Ellen Johnson Sirleaf

100. Hypothermia occurs due to loss of excessive heat from body due to sudden low body temperature in:

(a) Snakes

(b) Frogs

(c) Human beings

(d) Lizards

PART-C: QUANTITATIVE APTITUDE

101. If $(\frac{3}{4})^3 (\frac{4}{3})^{-7} = (\frac{3}{4})^{2x}$ then x is:

(a) $2 \frac{1}{2}$

(b) -2

(c) 2

(d) 5

102. Number of digits in the square root of 62478078 is:

(a) 3

(b) 4

(c) 5

(d) 6

103. If 10 men or 20 women or 40 children can do a piece of work in 7 months, then 5 men, 5 women and 5 children together can do half of the work in:

(a) 8 months

(b) 6 months

(c) 4 months

(d) 5 months

104. A man undertakes to do a certain work in 150 days. He employs 200 men. He finds that only a quarter of the work is done in 50 days. The number of additional men that should be appointed so that the whole work will be finished in time is:

(a) 50

(b) 75

(c) 100

(d) 125

105. A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

(a) 8

(b) 6

(c) $5 \frac{1}{2}$

(d) 5

106. The ratio of inradius and circumradius of a square is:

(a) $1 : 2$

(b) $1 : \sqrt{2}$

(c) $\sqrt{2} : \sqrt{3}$

(d) $1 : 3$

107. The perimeter of the base of a right circular cone is 8 cm. If the height of the cone is 21 cm, then its volume is:

(a) $108/\pi \text{ cm}^3$

(b) $108 \pi \text{ cm}^3$

(c) $112/\pi \text{ cm}^3$

(d) $112 \pi \text{ cm}^3$

108. A circular road runs around a circular ground. If the difference between the circumferences of the outer circle and the inner circle is 66 metres, the width of the road is (Take $\pi = 22/7$)

(a) 21 metres

(b) 10.5 metres

(c) 7 metres

(d) 5.25 metres

109. A shopkeeper marks the price of an article at 80. What will be the selling price, if he allows two successive discounts at 5% each?

(a) ₹7.2

(b) ₹72.2

(c) ₹72

(d) ₹85

110. The marked price of a mixie is ₹1600. The shopkeeper gives successive discount of 10% and x% to the customer. If the customer pays ₹1224 for the mixie, find the value of x:

(a) 8%

(b) 10%

(c) 12%

(d) 15%

111. Which of the following successive discounts is better to a customer?

(A) 20%, 15%, 10% or

(B) 25%, 12%, 8%

(a) (A) is better

(b) (B) is better

(c) (A) or (B) (both are same)

(d) None of these

112. Given A is 50% larger than C and B is 25% larger than C, then A is what percent larger than B?

(a) 20%

(b) 25%

(c) 50%

(d) 75%

113. Three numbers are in the ratio 1:2:3. By adding 5 to each of them, the new numbers are in the ratio 2:3:4. The numbers are:

(a) 5,10,15

(b) 10,20,30

(c) 15,30,45

(d) 1,2,3

114. Out of 10 teachers of a school, one teacher retires and in his place, a new teacher of age 25 years joins. As a result, average age of teachers is reduced by 3 years. The age (in years) of the retired teacher is

(a) 50

(b) 58

(c) 60

(d) 55

115. The average of 50 numbers is 38. If two numbers namely 45 and 55 are discarded, the average of 123. the remaining numbers is:

(a) 36

(b) 35

(c) 32.5

(d) 37.5

116. On selling an article for ₹170, a shopkeeper loses 15%. In order to gain 20%, he must sell that article at rupees:

(a) 210

(b) 215.50

(c) 212.50

(d) 240

117. The value of a machine depreciates every year by 10%, if its present value is ₹50,000 then the value of the machine after 2 years is _____.

(a) ₹40,500

(b) ₹40,050

(c) ₹45,000

(d) ₹40,005

118. A man can swim 3 km/hr. in still water. If the velocity of the stream is 2 km/hr. the time taken by him to swim to a place 10 km upstream and back is:

(a) $8 \frac{1}{3}$ hr

(b) $9 \frac{1}{3}$ hr

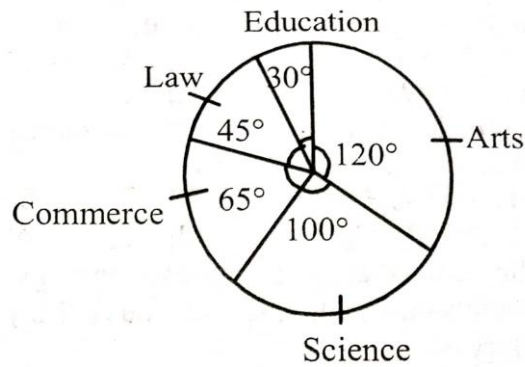
(c) 10 hr

(d) 12 hr

119. A train moving at a rate of 36 km/hr. crosses a standing man in 10 seconds. It will cross a platform 55 metres long, in:
 (a) $5\frac{1}{2}$ seconds (b) 6 seconds
 (c) 7 seconds (d) $15\frac{1}{2}$ seconds
120. The time in which ₹80,000 amounts to ₹92,610 at 10% p.a. at compound interest, interest being compounded semi annually is:
 (a) 3 years (b) $1\frac{1}{2}$ years (c) 2 years (d) $2\frac{1}{2}$ years
121. A man buys 3 cows and 18 goats in ₹47,200. Instead if he would have bought 8 cows and 3 goats, he had to pay ₹53,000 more. Cost of one cow is
 (a) ₹10,000 (b) ₹11,000
 (c) ₹12,000 (d) ₹13,000
122. If $p - 2q = 4$ then the value of $p^3 - 8q^3 - 24pq - 64$ is:
 (a) -1 (b) 2 (c) 0 (d) 3
123. If $x / (x^2 - 2x + 1) = 1/3$, then the value of $x^3 + 1/(x^3)$ is:
 (a) 27 (b) 81 (c) 110 (d) 125
124. If $a^2 + b^2 + c^2 + 3 = (2a - b - c)$, then the value of $2a - b + c$ is:
 (a) 2 (b) 3 (c) 4 (d) 0
125. If $x/a = 1/a - 1/x$ then the value of $x - x^2$ is:
 (a) a (b) -a (c) $1/a$ (d) $-1/a$
126. If $(n^t - tn + 1/4)$ be a perfect square, then the values of t are:
 (a) ± 1 (b) ± 2 (c) 1, 2 (d) 2, 3
127. If $(x + 1/x) = 4$, then the value of $x^4 + 1/(x^4)$ is:
 (a) 124 (b) 64 (c) 194 (d) 81
128. Equation of the straight line parallel to x-axis and also 3 units below x-axis is:
 (a) $x = 3$ (b) $x = -3$ (c) $y = 3$ (d) $y = -3$
129. IF $\triangle ABC$ is similar to $\triangle DEF$ such that $BC = 3\text{ cm}$, $EF = 4\text{ cm}$ and area of $\triangle ABC = 54\text{ cm}^2$ then the area of $\triangle DEF$ is:
 (a) 54 cm^2 (b) 66 cm^2 (c) 78 cm^2 (d) 96 cm^2
130. A chord AB of a circle C_1 of radius $(\sqrt{3} + 1)\text{ cm}$ touches a circle C_2 which is concentric to C_1 . If the radius of C_2 is $(\sqrt{3} - 1)\text{ cm}$, the length of AB is:
 (a) $4\sqrt{3}\text{ cm}$ (b) $2^4\sqrt{3}\text{ cm}$ (c) $8\sqrt{3}\text{ cm}$ (d) $4^4\sqrt{3}\text{ cm}$
131. In a triangle ABC, $AB = AC$, $\angle BAC = 40^\circ$. Then the external angle at B is:
 (a) 80° (b) 90° (c) 70° (d) 110°
132. A chord of length 30 cm is at a distance of 8 cm from the centre of a circle. The radius of the circle is
 (a) 19 (b) 17 (c) 23 (d) 21

133. If ABCD be a rectangle and P, Q, R, S be the mid points of $\overline{AB}$, $\overline{BC}$, $\overline{CD}$ and $\overline{DA}$ respectively, then the area of the quadrilateral PQRS is equal to:
 (a) $1/2$ area (ABCD) (b) area (ABCD)
 (c) $1/3$ area (ABCD) (d) $3/4$ area (ABCD)
134. P and Q are two points on a circle with centre at O. R is a point on the minor arc of the circle, between the points P and Q. The tangents to the circle at the points P and Q meet each other at the point S. If $\angle PSQ = 20^\circ$, $\angle PRQ = ?$
 (a) 100° (b) 80° (c) 200° (d) 160°
135. AB and CD are two parallel chords of a circle such that $AB = 10$ cm and $CD = 24$ cm. If the chords are on the opposite sides of the centre and distance between them is 17 cm, then the radius of the circle is:
 (a) 10 cm (b) 11 cm (c) 12 cm (d) 13 cm
136. ABC is an isosceles triangle such that $AB = AC$ and $\angle B = 35^\circ$. AD is the median to the base BC. Then $\angle BAD$ is:
 (a) 55° (b) 70° (c) 35° (d) 110°
137. The angle of elevation of a tower from a distance 100m from its foot is 30° . Height of the tower is:
 (a) $100\sqrt{3}$ m (b) $100 / \sqrt{3}$ m (c) $50\sqrt{3}$ m (d) $200 / \sqrt{3}$ m
138. The value of $\cos 1^\circ \cos 2^\circ \cos 3^\circ \dots \cos 177^\circ \cos 178^\circ \cos 179^\circ$ is:
 (a) $1 / \sqrt{2}$ (b) 0 (c) $1/2$ (d) 1
139. The value of $(\sin^2 25^\circ + \sin^2 65^\circ)$ is:
 (a) $2 / \sqrt{3}$ (b) $\sqrt{3} / 2$ (c) 1 (d) 0
140. The degree measure of 1 radian (taking $\pi = 22/7$) is
 (a) $57^\circ 22' 16''$ (approx.) (b) $57^\circ 61' 22''$ (approx.)
 (c) $57^\circ 16' 22''$ (approx.) (d) $57^\circ 22' 16''$ (approx.)
141. If $\sin \theta + \operatorname{cosec} \theta = 2$, then the value of $\sin^9 \theta + \operatorname{cosec}^9 \theta$ is:
 (a) 1 (b) 3 (c) 2 (d) 4
142. If $\sec \theta + \tan \theta = 2 + \sqrt{5}$, then the value of $\sin \theta + \cos \theta$ is:
 (a) $1/\sqrt{5}$ (b) $3/\sqrt{5}$ (c) $\sqrt{5}$ (d) $7/\sqrt{5}$
143. Evaluate: $\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 89^\circ$
 (a) 0 (b) 1 (c) -1 (d) 2

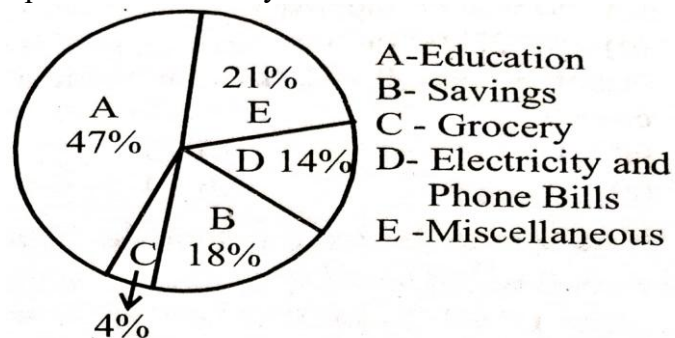
Directions: Question no. 144 to 146, the following pie-chart shows the number of students admitted in different faculties of a college. Study the chart and answer the question.



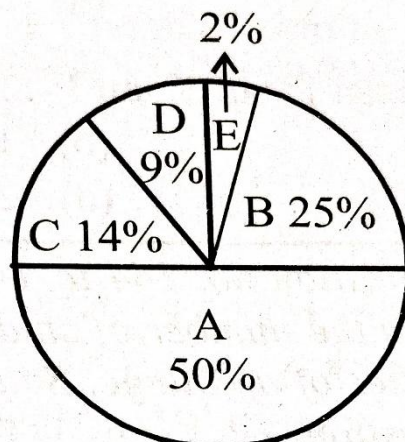
144. If 1000 students are admitted in science, what is the total number of students?
 (a) 360 (b) 180 (c) 1800 (d) 3600
145. If 1000 students are admitted in science, what is the ratio of students in science and arts?
 (a) 5:6 (b) 6:5 (c) 7:5 (d) 7:6
146. How many students are more in commerce than in law if 1000 students are in science?
 (a) 20 (b) 200 (c) 2000 (d) 500

Directions: Questions no. 147 to 150, Study the two pie-charts and answer the questions.

April months's salary: ₹24000/-



May month's salary: ₹25000/-



147. The average amount spent on Education, Grocery and Savings from April month's salary is:
(a) 5520 (b) ₹5800 (c) ₹6000 (d) ₹6325
148. From the salary of May, the amount spent on Grocery and Electricity are:
(a) ₹2160, ₹480 (b) ₹6250, ₹3360
(c) ₹960, ₹5040 (d) ₹3500, ₹2250
149. The ratio of amount spent for savings in April month's salary and miscellaneous in May month's salary is:
(a) 235:50 (b) 216:25 (c) 217:26 (d) 205:13
150. What is the percent increase in Education in May month than April month?
(a) 10.82% (b) 9.56% (c) 12.35% (d) 20%

PART-D: ENGLISH COMPREHENSION

Directions: In question numbers 151 to 155, some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error. If a sentence is free from error, blacken the oval corresponding to (d) in the Answer Sheet.

151. You can eat/ as much as you like/ at the newly lunch bar/ No Error
(a) (b) (c) (d)
152. The teacher, as well as the students/ have gone on an excursion/ to Ooty during their summer vacation/ No Error.
(a) (b) (c) (d)
153. The US/ don't want/ Indian in the Security Council/ No Error
(a) (b) (c) (d)
154. The cruel lady made/ her step-daughter to do/ all the household chores./ No Error
(a) (b) (c) (d)
155. My sister asked me/ that how long/ I would stay there./ No Error
(a) (b) (c) (d)

Directions: In question numbers 156 to 160, sentences are given with blanks to be filled with an appropriate word(s).

156. He was assured by his friends _____ every type of help in an emergency.
(a) about (b) by (c) of (d) with
157. He was not a man _____ intelligence.
(a) empty of (b) lacking of (c) devoid of (d) absent of

158. The work _____, he left his office.
 (a) having been over (b) having completed
 (c) having been completed (d) on being finished
159. Our monthly expenditure _____ by five hundred rupees when we decided to buy milk from the milkman.
 (a) grew up (b) shot up (c) got up (d) lifted up
160. _____ to people looked well enough, but when one looked more closely one saw that their faces were filled with despair.
 (a) At first sight (b) At first looking
 (c) At first observation (d) On first sight

Directions: In question numbers 161 to 163, out of the four alternatives, choose the one which best expresses the meaning of the given.

161. Advocate:
 (a) predict (b) pronounce (c) support (d) determine
162. Preamble
 (a) definition (b) mediation (c) conclusion (d) introduction
163. Students are asked to collate for an important programme by the principal.
 (a) assemble (b) describe (c) narrate (d) prescribe

Directions: In question numbers 164 to 166, choose the word opposite in meaning to the given

164. Ambiguous
 (a) easy (b) plain (c) clear (d) simple
165. Accolade
 (a) permeate (b) blame (c) reticent (d) decorate
166. Wary:
 (a) rash (b) conscientious (c) daring (d) thrifty

Directions: In question numbers 167 to 171, four alternatives are given for the Idiom/phrase underlined. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

167. Villagers always call a spade a spade.
 (a) to speak about spades
 (b) to speak in a straightforward manner
 (c) to call someone a spade
 (d) to speak ill about someone
168. Marty broke a dining-room window and had to face the music when her father got home.
 (a) accept the punishment (b) listen carefully
 (c) ask a lot of questions (d) listen to music

169. To play second fiddle

- (a) to be happy, cheerful and healthy
- (b) to reduce the importance of one's senior
- (c) take a subordinate role
- (d) to do back seat driving

170. Why are you jumping down my throat ? I wasn't even in the house when it happened.

- (a) running away
- (b) making a joke
- (c) scolding me
- (d) forcing me to eat

171. I am out of my wits and therefore cannot find a way to solve the problem immediately.

- (a) not intelligent enough
- (b) greatly confused
- (c) helpless without power
- (d) totally ignorant

Directions: In question numbers 172 to 181, a sentence/ part of the sentence is underlined. Below are given alternatives to the underlined sentence/part of the sentence at (a), (b) and (c) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (d).

172. If he had time he will call you

- (a) would have
- (b) would have had
- (c) has
- (d) No improvement

173. The workers are hell bent at getting what is due to them.

- (a) hell bent on getting
- (b) hell bent for getting
- (c) hell bent upon getting
- (d) No improvement

174. We are looking forward to see you tomorrow:

- (a) looking forward towards seeing
- (b) looking forward for seeing
- (c) looking forward to seeing
- (d) No improvement

175. they could not tell me why did he not eat his lunch.

- (a) why not had he eaten
- (b) why he did not eat
- (c) why had he not eaten
- (d) No improvement

176. He who will bid the highest will get the product.

- (a) who bids the highest
- (b) who the highest bids
- (c) who would bid the highest
- (d) No improvement

177. John had told me that he hasn't done it yet.

- (a) told
- (b) tells
- (c) was telling
- (d) No improvement

178. The clients are waiting outside since morning and will continue to wait until you meet them.

- (a) have waited
- (b) have been waiting
- (c) were waiting
- (d) No improvement

179. He may have grown taller when i last saw him

- (a) from when I last saw him
- (b) since I last saw him

- (c) before I last saw him (d) No improvement

180. While crossing the highway, a five year old child was knocked out by a passing car.
(a) away (b) up (c) down (d) No improvement

181. During his long discourse, he did not touch that point.
(a) touch upon (b) touch in (c) touch of (d) No improvement

Directions: In question numbers 182 to 188, out of the four alternatives, choose the one which can be substituted for the given words/sentence.

182. Detailed plan of a journey:

- (a) Travelogue (b) tavel kit
(c) Schedule (d) itinerary

183. One who cannot be corrected:

- (a) Incurable (b) Incorrigible
(c) Hardened (d) Invulnerable

184. A general pardon granted by the Government to political offenders.

- (a) Pardon (b) Excuse
(c) Honesty (d) Amnesty

185. One who hates women:

- (a) Misogynist (b) Misogamist
(c) Ambivert (d) Misanthrope.

186. A person who consumes human flesh

- (a) Cannibal (b) Javage
(c) Captor (d) Carnivore

187. A school boy who cuts classes frequently is a:

- (a) Defeatist (b) Sycophant
(c) Truant (d) Martlinet

188. Stealing of ideas or writings of someone else.

- (a) autism (b) scepticism
(c) mesmerism (d) plagiarism

Directions: In question numbers 189 and 190, four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet.

189. The laboratories are _____ with high tech electronic gadgets.

- (a) equipped (b) equippped (c) equipped (d) equepped

190. Software companies have ushered in _____ culture along with advanced technology.

- (a) foreign (b) forcegn (c) forigen (d) foreign

Directions: In question number 191 to 200, you have two passages with 5 questions in each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives.

PASSAGE-I

The World health Organisation is briefly called W.H.O. It is a specialised agency of the United Nations and was established in 1948.

International health workers can be seen working in all kinds of surroundings in deserts, jungles, mountains, coconut groves, and rice fields. They help the sick to attain health and the healthy to maintain their health.

This global health team assists the local health workers in stopping the spread of what are called communicable diseases, like cholera. These diseases can spread from one country to another and so can be a threat to world health.

W.H.O. assists different national health authorities not only in controlling diseases but also in preventing them altogether. Total prevention of diseases is possible in a number of ways. Everyone knows how people, particularly children, are vaccinated against one disease or another. Similarly, most people are familiar with the spraying of houses with poisonous substances which kill disease-carrying insects.

191. "It is a specialised agency of the United Nations and was established in 1948" Here specialised means:

- (a) made suitable for a particular purpose
- (b) expert
- (c) extraordinary
- (d) uncommon

192 "International health workers can be seen working in all kinds of surroundings: in deserts, jungles, mountains, coconut groves, and rice fields". Here International means:

- (a) belonging to the whole world
- (b) drawn from all countries of the world
- (c) believing in cooperation among nations
- (d) belonging to an organisation which has something to do with different nations.

193. They help the sick to attain health and the healthy to maintain their health. here they stands for

- (a) deserts
- (b) rice fields
- (c) international health workers
- (d) jungles

194. "WHO assists different national health authorities not only in controlling diseases but also in preventing them altogether". The above sentence implies that

- (a) W.H.O. assist many others in addition to the national health authorities
- (b) W.H.O. assists more in preventing diseases than in controlling them.
- (c) W.H.O. assists in controlling diseases only if they have not been prevented.
- (d) W.H.O. assists both in controlling diseases and in preventing them.

195. "Total prevention of diseases is possible in a number of ways". The author has given illustrations of:

- (a) only two such ways
- (b) only one such way
- (c) more than two such ways
- (d) none of these

PASSAGE-II

who don't I have a telephone? No because I pretend be wise or pose as unusual. There are two chief reasons: because I don't really like the telephone, and because I find I can still work and play, eat, breathe, and sleep without it. Why don't I like the telephone? because I think it is a pest and time waster. It may Create unnecessary suspense and anxiety, as when you wait for an expected call, that doesn't come; or irritating delay, as when you keep ringing a number that is always engaged. As for speaking in a public telephone booth, it seems to me really horrible. You could not use it unless you were in a hurry, and because you are in a hurry, you will find other people waiting before you. When you do get into the booth, you are half suffocated by the stale, unventilated air. flavored with cheap face powder and chain smoking; and by the time you have began your conversation your back is chilled by the cold looks of somebody who is moving about restlessly to make your place,

If you have a telephone in your house, you will admit that it tends to ring when you least want it to ring; when you are asleep, or in the middle of a meal or a conversation, or when you are just going out, or when you are in your bath. Are you strong minded enough to ignore it, to say to yourself." Ah well, it will be all the same in hundred years time". You are not. You think there may be some important news or message for you. Have you never rushed dropping from the bath, of chewing from the table, or dazed from bed, only to be told that you are a wrong number? You were told the truth. In my opinion all telephone numbers are wrong numbers. If, of course, your telephone rings and you decide not to answer it, then you will have to listen to an idiotic bell ringing and ringing in what is supposed to be the privacy of your own home. You might as well buy a bicycle bell and ring it yourself.

196. The author does not have a telephone because:

- (a) he pretends to be wise
- (b) he poses as unusual
- (c) he would prefer to do something else
- (d) he thinks that it can create unnecessary suspense and anxiety.

197. He hates speaking in a public telephone booth because

- (a) it is costlier
- (b) he is suffocated by the stale, unventilated air, flavoured with cheap face power and chain-smoking
- (c) others look at him angrily
- (d) the other side may not know your number

198. _____ your back is chilled by the cold look of somebody means;

- (a) other look at you angrily
- (b) you feel cold at the back
- (c) you feel uneasy because the person next in the queue looks at you restlessly
- (d) people are very cold.

199. 'Ah well, it will be all the same in hundred years time'. This sentence means:

- (a) Nothing is going to change even if you don't answer the telephone bell.
- (b) Things have not changed for the past 100 years.
- (c) Things will remain the same for 100 years to come.
- (d) One should be strong minded.

200 'All telephone numbers are wrong numbers', because

- (a) the author always gets wrong calls
- (b) whenever he tries it always goes wrong.
- (c) he doesn't give much importance to telephone and telephone numbers
- (d) none of the statements given above.