

TAMILNADU NTSE STAGE 1 (2015-16)
(SAT)

101. The median of 29, 32, 48, 50, x , $x + 2$, 72, 78, 84, 95 is 63 then the value of x is _____
(A) 124 (B) 29.5 (C) 62 (D) 64
102. $F_1 = F_2 = 1$ and $F_n = F_{n-1} + F_{n-2}$ then the value of F_5 is _____
(A) 3 (B) 2 (C) 8 (D) 5
103. The lengths of the diagonals of a rhombus are 24 cm and 10 cm, then the side of the rhombus is _____
(A) 26 (B) 13 (C) 169 (D) 240
104. If a polynomial $p(x)$ is divided by $(mx + n)$, then the remainder is _____
(A) $P\left(\frac{m}{n}\right)$ (B) $P\left(\frac{-m}{n}\right)$ (C) $P\left(\frac{n}{m}\right)$ (D) $P\left(\frac{-n}{m}\right)$
105. If $\frac{32}{500} = \frac{2^3}{5^m}$, then the value of m is _____.
(A) 2 (B) 3 (C) 4 (D) 0
106. On dividing $x^3 - 3x^2 + x + 2$ by a polynomial $g(x)$, the quotient and remainder were $(x - 2)$ and $(-2x + 4)$ respectively, then $g(x)$ is _____
(A) $x^2 + x - 1$ (B) $x^2 - x + 1$ (C) $x^2 - x - 1$ (D) $x^2 + x + 1$
107. If $\cot \theta = \frac{7}{8}$ then the value of $\frac{(1 + \sin \theta)(1 - \sin \theta)}{(1 + \cos \theta)(1 - \cos \theta)}$ is _____.
(A) $\frac{64}{49}$ (B) $\frac{8}{7}$ (C) $\frac{7}{8}$ (D) $\frac{49}{64}$
108. If $\frac{9}{y} + \frac{4}{x} = \frac{12}{\sqrt{xy}}$ where $x > 0$, $y > 0$ then $3\sqrt{x} - 2\sqrt{y} =$ _____.
(A) 5 (B) 1 (C) 2 (D) 0
109. In $\triangle ABC$, if $DE \parallel BC$, $AD = 2\text{cm}$, $DB = 3\text{cm}$, $DE = 4\text{ cm}$, then the value of BC is _____
(A) 9 (B) 25 (C) 10 (D) 6
110. If $x^2 + \frac{1}{x^2} = 23$, $x > 0$ then $x + \frac{1}{x}$ is _____
(A) 2 (B) 3 (C) 4 (D) 5
111. The probability that a leap year will have 53 Fridays or 53 Saturday is _____
(A) $\frac{2}{7}$ (B) $\frac{1}{7}$ (C) $\frac{4}{7}$ (D) $\frac{3}{7}$
112. The rational form of $0.\overline{24}$ is _____
(A) $\frac{24}{100}$ (B) $\frac{8}{33}$ (C) $\frac{24}{1000}$ (D) $\frac{0.24}{100}$
113. A fraction becomes $\frac{1}{3}$ when one is subtracted from the numerator and it becomes $\frac{1}{4}$ when 8 is added to the denominator, then the fraction is _____
(A) $\frac{5}{12}$ (B) $\frac{2}{11}$ (C) $\frac{9}{11}$ (D) $\frac{1}{7}$

114. If $P = \frac{x}{x+y}$ $Q = \frac{y}{x+y}$ then the value of $\frac{1}{P-Q} - \frac{2Q}{P^2-Q^2}$ is _____

- (A) $\frac{x+y}{x-y}$ (B) 0 (C) 1 (D) $\frac{x-y}{x+y}$

115. A die is thrown 200 times and the following outcomes are noted, with their frequencies:

Outcome	1	2	3	4	5	6
Frequency	56	22	30	42	32	18

- (A) 0.28 (B) 0.22 (C) 0.15 (D) 0.21

116. If $\sin \theta = \cos \theta$, then θ is

- (A) 30° (B) 45° (C) 60° (D) 90°

117. If one of the zeros of polynomial $a^2x^2 + x + b^2$ is -1 then:

- (A) $a^2 + b^2 = 0$ (B) $a^2 + b^2 - 1 = 0$ (C) $a^2 - b^2 + 1 = 0$ (D) $a^2 + b^2 = -1$

118. $a^2 - (b-c)^2$ is :

- (A) $(a+b-c)(a-b+c)$ (B) $(a-b-c)(a-b-c)$
(C) $(a-b+c)(a+b-c)$ (D) $(a+b+c)(a+b+c)$

119. The GCD of $(x^3 - 1)$ and $(x^4 - 1)$ is

- (A) $x^3 - 1$ (B) $x^2 + 1$ (C) $x^2 - 1$ (D) $x - 1$

120. The LCM of a^3b^2, abc is

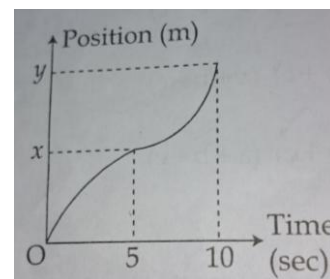
- (A) c (B) a^4b^3c (C) ab (D) a^3b^2c

121. A man walks along the footpath of a circular garden. During his motion along the circular path he makes several rounds. His net displacement will be zero whenever his distance traveled will be in multiples of :

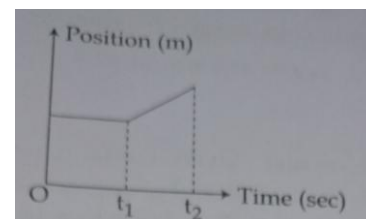
- (A) its radius (B) its diameter
(C) circumference of circular path (D) area of circle

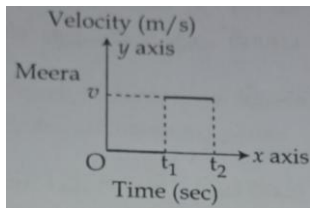
122. The under given position (VS) time graph describes which of the given options:

- (A) from $t = 0$ sec to $t = 5$ sec the object accelerates and then it decelerates.
(B) from $t = 0$ sec to $t = 5$ sec the object decelerates and then it accelerates.
(C) from $t = 0$ sec to $t = 5$ sec it travels with uniform velocity and then travels with non – uniform velocity.
(D) from $t = 0$ sec to $t = 5$ sec it travels with non – uniform velocity and then travels with uniform velocity

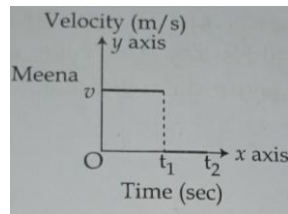


123. A teacher assigned a job of converting position (VS) time graph into velocity (VS) time graph. All the four Meera, Meena, Trisha and Akshaya plotted the graphs as under. The person to give the correct answer is :

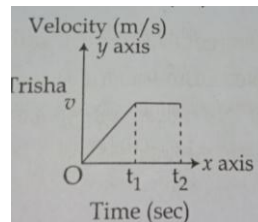




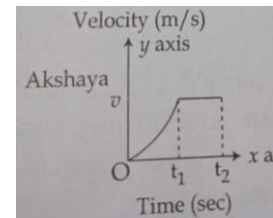
(A)



(b)



(C)



(D)

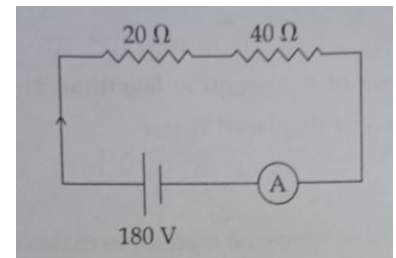
124. A hovering helicopter drops food packets from an altitude of 200 m towards passenger of a stranded boat affected with flood. Each packet is of mass 500 gm. It is packed so well that it can withstand a momentum upto 60 Ns. Find out which of the following is correct:
 (A) The packet will break since the momentum of packet on reaching the surface is more than 60 Ns.
 (B) The packet will not break since its momentum on reaching the surface is less than 40 Ns.
 (C) the packet will break since its momentum on reaching the surface is 50 Ns.
 (D) The packet will not break since its momentum on reaching the surface is 50 Ns.

125. Kerosene of mass 100 gm is mixed with 100 gm of water. One of the under given options that well describes the reason for Kerosene to float on water is :
 (A) Mass of displaced water is less than the mass of Kerosene of equal volume
 (B) Mass of Kerosene is more than the mass of equal volume of water
 (C) Mass of Kerosene is less than the mass of displaced water
 (D) Mass of Kerosene is equal to mass of displaced water

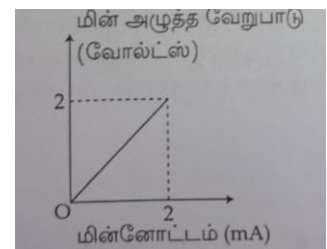
126. A car of mass one metric ton accelerate from rest at the rate of 2 m/s^2 from $t = 0 \text{ sec}$ to $t = 10 \text{ sec}$. There after it travels with a uniform velocity. The measure of net retarding force acting on the car after 10 sec is :
 (A) 4000 N (B) 2000 N (C) 0 N (D) -2000 N

127. For no change in the mass of the earth, if its radius is halved the weight of an object of mass 10 kg will be:
 (A) 40 kg wt. (B) 10 kg wt. (C) 80 kg wt. (D) 20 kg wt.

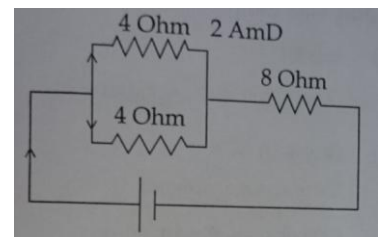
128. The number of electrons that travel through the given resistor 20Ω in the circuit in one second is : (Given that $1 \text{ coulomb} = 6.25 \times 10^{18}$ electron)
 (A) 18.75×10^{18} (B) 18.75×10^{19}
 (C) 1.875×10^{18} (D) 1.875×10^{19}



129. The resistance of the given resistor that is calculated from the graph is :
 (A) 1Ω (B) 10Ω
 (C) 100Ω (D) 1000Ω



130. The voltage across 8Ω resistance is
 (A) 42 V (B) 32 V
 (C) 22 V (D) 20 V



131. A force acting on an object of mass 500 gm changes its speed from 200 cm/s to 0.2 m/s. The change in momentum is:
 (A) increase by 0.90 Ns (B) decrease by 0.90 Ns

(C) increase by 90 g cm/s

(D) decrease by 90 g cm/s

132. An object of mass 10 kg is dropped from a Building of height 40 m. Give the best description of relationship between gravitational Potential energy and kinetic energy, after 2 sec. ($g = 10 \text{ m/s}^2$)
(A) Potential energy > Kinetic energy (B) Potential energy < Kinetic energy
(C) Potential energy \leq Kinetic energy (D) Potential energy = Kinetic energy
133. Best relationship between Momentum and Kinetic energy possesses by an object in terms of mass:
(A) momentum = $(2m \times \text{Kinetic energy})^{1/2}$ (B) $(\text{momentum})^{1/2} = 2 \times \text{Kinetic energy}$
(C) $(\text{Kinetic energy})^{1/2} = 2 \times \text{momentum}$ (D) Kinetic energy = $(2 \times \text{momentum})^{1/2}$
134. $2\text{Pb}(\text{NO}_3)_2 \xrightarrow{\Delta} 2\text{PbO} + 4\text{NO}_2 \uparrow + \text{O}_2 \uparrow$
In the above reaction:
(A) Reddish brown coloured oxygen gas is evolved
(B) Reddish brown coloured nitrogen dioxide gas is evolved
(C) Reddish brown coloured PbO gas is evolved
(D) No reddish brown gas is evolved
135. In which of the following solutions will platinum dissolve?
(A) Conc HNO_3 and Conc HCl in the ratio 3:1 (B) Conc H_2SO_4 and Conc HNO_3 in the ratio 3:4
(C) Conc HCl and Conc H_2SO_4 in the ratio 1:3 (D) Conc HCl and Conc HNO_3 in the ratio 3:1
136. M (2, 8, 2) combines with N (2, 8, 7) to form a compound. The formula of the compound so formed is :
(A) MN (B) M_2N (C) M_2N_3 (D) MN_2
137. The formula of phosphate of X is XPO_4 . The formula of its sulphate and chloride would be respectively:
(A) $\text{X}_2(\text{SO}_4)_3, \text{XCl}_3$ (B) $\text{XSO}_4, \text{XCl}_2$ (C) $\text{X}(\text{SO}_4)_2, \text{X}_2\text{Cl}$ (D) $\text{X}_2\text{SO}_4, \text{XCl}$
138. 162 g of aluminium contains _____ moles of aluminium. (atomic mass of Al = 27 u)
(A) 6 (B) 3 (C) 12 (D) 24
139. Which of the following is a suitable method to separate two miscible liquids whose difference in boiling point is 36 K?
(A) Evaporation (B) Distillation (C) Fractional distillation (D) Sublimation
140. Gases can be liquefied:
(A) by increasing temperature and pressure
(B) by increasing temperature and decreasing pressure
(C) by decreasing temperature and increasing pressure
(D) by decreasing pressure and temperature
141. Identify the elements which are very less reactive:
(1) X (2) Y (2, 8, 1) (3) Z (2, 6) (4) W (2, 8, 8)
(A) 1 and 2 (B) 2 and 3 (C) 1 and 4 (D) 2 and 4
142. 6.4 g of oxygen will contain _____ number of oxygen molecules.
(A) 6.023×10^{23} (B) 6.023×10^{22} (C) 1.2046×10^{23} (D) 1.2046×10^{22}
143. An element with atomic no. 7 will show chemical properties similar to element with atomic numbers:
(A) 10 (B) 9 (C) 15 (D) 17
144. The compound with higher molecular mass is :
[Atomic mass of Ca = 40 u
C = 12 u
O = 16 u
H = 1 u
Cl = 1 u]

(A) CaCO_3 (B) CaO (C) Ca(OH)_2 (D) CaCl_2

145. The acid solution with higher pH value is

- (A) 0.1 M HCl acid (B) 0.1 M H_2SO_4 acid
(C) 0.05 M HNO_3 acid (D) 0.05 M H_3PO_4 acid

146. Which is correctly matched?

Element		Electron distribution
(A) sulphur	-	2, 8, 8
(C) Phosphorous	-	2, 8, 6
(C) Aluminium	-	2, 8, 3
(D) Silicon	-	2, 8, 5

147. The cyabobacteria that helps in fixing atmospheric nitrogen:

- (A) Azolla (B) Anabaena (C) Rhizobium (D) Eudorina

148. The tissue that is responsible for secondary growth of plants:

- (A) Cambium (B) Xylem (C) Phloem (D) Pericycle

149. The Nucleolus helps in the formation of:

- (A) Lysosomes (B) Ribosomes (C) Peroxisomes (D) Centrosomes

150. Identify the nucleoside from the following:

- (A) sugar + Phosphate (B) Nitrogenous bases + sugar
(C) Nitrogenous bases + Phosphate (D) Nitrogenous bases + sugar + Phosphate

151. One molecule of glucose on complete oxidation yields:

- (A) 38 ATP (B) 36 ATP (C) 83 ATP (D) 35 ATP

152. Enzyme which cut the DNA at specific sites:

- (A) DNA polymerase (B) DNA ligase
(C) rEstriction endonuclease (D) RNA polymerase

153. A fruit developed from a single ovary with a monocarpellary or multicarpellary, syncarpous gynoecium:

- (A) Simple fruit (B) Aggregate fruit (C) Parthenocarpic fruit (D) Multiple fruit.

154. Choose the incorrect options:

- | | | | |
|----------------|-------------|-------------|-------------|
| (1) Amoeba | - | Pseudopodia | |
| (2) Paramecium | - | body setae | |
| (3) Euglena | - | petagium | |
| (4) Star fish | - | tubefeet | |
| (A) 1 and 2 | (B) 2 and 3 | (C) 3 and 4 | (D) 1 and 4 |

155. The abundant animal protein:

- (A) Collagen (B) Fibrinogen (C) Globulin (D) Albumin

156. The blood anticoagulant property that is present in the salivary glands of leeches:

- (A) Virudin (B) Hirudin (C) Rubin (D) Trypsin

157. Diabetes insipidus is caused by less production of :

- (A) ACTH (B) TSH (C) ADH (D) GH

158. Symptoms of B_{12} deficiency:

- (A) Nervous disorder (B) Dementia, dermatitis
(C) Destruction of RBC (D) Bleeding gums

159. Bone cells are known as:

- (A) Chondrocytes (B) Osteocytes (C) Lymphocytes (D) Leucocytes

160. The four lobes of Mid Brain :

- (A) Cerebral hemisphere (B) Corpora quadrigemina

(C) Cerebellum

(D) Medulla oblongata

161. "The social contract: was written by:
(A) Voltaire (B) Rousseau (C) Montesquieu (D) Robespierre
162. Political stability was established after French Revolution by :
(A) Louis XVI (B) Robespierre (C) Voltaire (D) Napoleon Bonaparte
163. The Great Economic Depression took place in :
(A) America (B) Russia (C) France (D) England
164. 'Socialism' was coined by:
(A) John Kay (B) Henry Cort (C) Robert Owen (D) Karl Marx
165. Name the present secretary General of U.N.O
(A) Javier Perez de cuellar (B) Kofi Annan
(C) Kurt Waldheim (D) Banki Moon
166. First World War came to an end in 1919 by the:
(A) Treaty of St. Germaine (B) Paris Peace Conference
(C) Treaty of Trianon (D) Treaty of Versailles
167. The European Union was formed in the year:
(A) 1958 (B) 1959 (C) 1951 (D) 1967

168. Match the following:

COLUMN – I		COLUMN – II	
1	Aristotle	i	Father of Western Medicine
2	Herodotus	ii	Teacher of Alexander
3	Socrates	iii	Father of History
4	Hippocrates	iv	Father of Western Philosophy

- 1 2 3 4
(A) ii iii iv i
(B) iii iv ii i
(C) ii I iii iv
(D) iv ii i iii

169. Find the odd man out:
(A) Machiavelli (B) Donatello Botticelli
(C) Raphael (D) Robbia
170. Choose the correct statements:
(1) Turkey was defeated in First Balkan War of 1912
(2) In 1856, Queen Victoria brought the administration of India under her direct control
(3) In 1757, The Nawab of Bengal Siraj – Ud Daulah opposed the British attempts to use Duty free Trade in Bengal
(4) German Battle Cruiser was destroyed in the battle of Baltic Sea
(A) 1 and 2 are correct (B) 1 and 3 are correct
(C) 3 and 4 are correct (D) 1, 2 and 3 are correct

171. Match the following:

COLUMN – I		COLUMN – II	
1	Empress Dowager	i	Blitzkreig
2	Hitler	ii	The League of Nations

3	Mussolini	iii	Old Buddha
4	Woodrow Wilson	iv	Charter of Labour

- | | | | | |
|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 |
| (A) | ii | iv | i | iii |
| (B) | iv | iii | ii | i |
| (C) | iii | i | iv | ii |
| (D) | iv | ii | iii | i |

172. Apartheid came to a close in South Africa in the year:
 (A) 1947 (B) 1950 (C) 1984 (D) 1990
173. The Democrats and Republicans are the two political parties in:
 (A) India (B) England (C) Argentina (D) America
174. UNESCO declared the title 'The Literary Society of India' to:
 (A) Chennai (B) Mumbai (C) Kolkata (D) Bengaluru
175. The bills, which can be introduced only in the Lok Sabha :
 (A) Social (B) Women (C) Education (D) Money
176. The President of India is entitled to nominate 12 members, distinguished in the field of:
 (A) Literature, Sports, Arts
 (B) Literature, Science, Arts of Social Service
 (C) Literature, Sports, Social Service
 (D) Literature, Mathematics, Arts or Social Service
177. According to _____, 'Democracy is a government in which everyone has a share'.
 (A) Prof. Mukund (B) Prof. Thomas Harley
 (C) Prof. Seeley (D) Prof. Lincoln
178. Our National Song is taken from the book:
 (A) Anand Math (B) Gulamgiri (C) Geetanjali (D) The Discovery of India
179. The tenure of Chief Election Commissioner is:
 (A) 6 years (B) 4 years (C) 5 years (D) 2 years
180. State the article of the Indian Constitution under which the president promulgates Financial Emergency:
 (A) 352 (B) 356 (C) 360 (D) 351
181. Match the following:

COLUMN – I		COLUMN – II	
1	Suez canal	i	Hamid Karzi, Afghan President
2	Congo	ii	Timmania, Indian Commander in Chief
3	Cyprus	iii	Naser, the President of Egypt
4	SAARC Summit 2007	iv	K.A.S. Raja, the Brigadier

- | | | | | |
|-----|-----|-----|----|-----|
| | 1 | 2 | 3 | 4 |
| (A) | ii | iii | i | iv |
| (B) | iii | iv | ii | i |
| (C) | iv | iii | ii | i |
| (D) | ii | i | iv | iii |

182. Article 14 – 18 of the Part – III of the Indian Constitution enshrines:
 (A) Right against exploitation (B) Right to freedom
 (C) Right to equality (D) Right to freedom of religion
183. Name the plain which is made up of deposits of fine silts in the South of Siwaliks:

(A) Terai (B) Gangetic (C) Punjab (D) Brahmaputra

184. The mountains along the eastern boundary of India is called :

(A) Uttranchal (B) Purvanchal (C) Pir Panjal (D) Khangra

185. The strong and hot dry winds that blow during day time over Northern and North – Western part of India is known as:

(A) Tropical cyclone (B) Loo winds
(C) Western disturbance (D) Retreating monsoon winds

186. Petroleum is mined from the layers of:

(A) Sedimentary rocks (B) Igneous rocks (C) Metamorphic rocks (D) Primary rocks

187. The range which lies between the Narmada and Tapti rivers is:

(A) Vindhya range (B) Satpura range (C) Aravalli range (D) Shivalik range

188. Zaid season crops are :

(A) paddy and maize (B) Wheat and mustard (C) Jute and cotton (D) Fruits and vegetables

189. Retreating monsoon winds blow from:

(A) Land to Sea (B) Sea to Land (C) Mountain to Land (D) Coastal Areas

190. Kundah Hydro – Power plant generates its power from the river:

(A) Kaveri (B) Vaigai (C) Bhavani (D) Aliyar

191. World Earth Day is celebrated on:

(A) June 5th (B) April 22nd (C) September 16th (D) October 24th

192. Match the following:

COLUMN – I		COLUMN – II	
1	Vaippar	i	Tirunelveli
2	Chittar	ii	Kanniyakumari
3	Kothiyar	iii	Tuticorin
4	Kundar	iv	Virudhunagar

1
(A) iv
(B) iii
(C) ii
(D) iv

2
(A) i
(B) ii
(C) iii
(D) iii

3
(A) ii
(B) iv
(C) i
(D) ii

4
(A) iii
(B) i
(C) iv
(D) i

193. 'Golden Revolution' is associated with the production of :

(A) Poultry (B) Oil seeds (C) Marine (D) Horticulture

194. The measurement of the total value of goods and services produced by an economy over a period of time, normally a year is :

(A) Per Capita Income (B) National Income (C) Consumption (D) Distribution

195. First five year plan was introduced in the year:

(A) 1949 (B) 1950 (C) 1951 (D) 1952

196. Human Development Report was published by:

(A) UNESCO (B) UNDP (C) UNICEF (D) WHO

197. Land, Labour and capital are the:

(A) Factors of Production (B) Factors of Distribution
(C) Factors of Income (D) Factors of Expenditure

198. The state with highest consumption of chemical fertilizers in India:
(A) Uttar Pradesh (B) Punjab (C) Haryana (D) Andhra Pradesh
199. Right to Information act was passed by the parliament on:
(A) 11th October 2005 (B) 12th October 2005 (C) 13th October 2005 (D) 14th October 2005
200. The headquarters of International Organisation for standardization is located at:
(A) Prague (B) Hague (C) Sweden (D) Geneva

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NTSE (MAT)

Direction : (Question numbers 1 to 3)

In each question the numbers / letters are arranged in a sequence based on certain principle. Select the answer from the four alternatives given under each sequence for the term marked by ‘?’

1. 23, 35, 57, 711?
(A) 213 (B) 1311 (C) 1113 (D) 1317
2. 6, 15, 33, ?, 141
(A) 69 (B) 68 (C) 67 (D) 66
3. Z, W, S, N, H, A, ?
(A) T (B) S (C) R (D) Q

Direction : (Question numbers 4 and 5)

The diagram and the numbers / letters follow certain principle. Select the missing number / letter indicated by question mark ‘?’

4.

	5	
7	62	4
	6	

	?	
3	50	8
	6	

	5	
2	53	7
	9	

(A) 4 (B) 3 (C) 5 (D) 6

5.

A	K	Q
?	C	M
O	I	E

(A) G (B) P (C) H (D) L

Direction : (Question numbers 6 and 7)

First two terms are connected by some relationship. The same relationship is applicable for the next terms, in which one is black space. Identify the suitable term from the given four alternatives for the black space.

6. Earth : Moon :: Sun : _____.
(A) star (B) Earth (C) Sky (D) Moon
7. 26 A : J 17 :: 19 H : _____.
(A) 10 Q (B) 7 R (C) R 7 (D) Q 10

Direction : (Question numbers 8 and 10)

Identify the suitable alternative according to the questions.

8. Which one of the following is connected with ‘flood’, ‘fire’, ‘cyclon’ :
(A) water (B) House (C) Earthquake (D) Lightning
9. Choose the word which is least like the other words:
(A) India (B) England (C) Austria (D) Sri Lanka
10. Choose the word which is different from others:
(A) Diving (B) Swimming (C) Boating (D) Walking

Direction : (Question numbers 11 and 12)

Read the questions carefully and answer according to the given relationship.

11. 'A' introduces 'B' as the "daughter of the only sister of his mother's husband". How is B related to A?
(A) Daughter (B) Sister (C) Cousin (D) Mother
12. If M is greater than O but less than R, P is less than N but greater than R and O lies between Q and M then the greatest is:
(A) N (B) P (C) R (D) Q

Direction : (Question numbers 13 and 14)

Read the questions carefully and answer according to the given relationship.

13. The other girl is :
(A) D (B) C (C) A (D) B
14. F is between :
(A) A and D (B) A and E (C) A and C (D) B and D
15. The right of D is:
(A) C (B) A (C) B (D) E

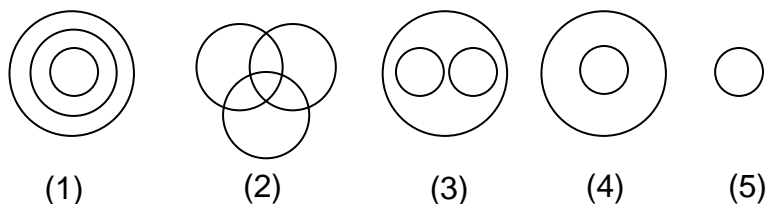
Direction : (Question numbers 16 and 17)

Words are in coded language. Identify the coded word depending upon the given situation.

16. If 'VICTORY' is coded as 'ZMGXSVC' then 'SUCCESS' is coded as:
(A) YWGGIYY (B) WYGGIWW (C) WYGHIWW (D) WYHHIWW
17. 'NEPAL' is coded as 41985 and SRILANKA is coded as 36258478 then INDIAN is coded as:
(A) 24028 (B) 24128 (C) 42028 (D) 24528

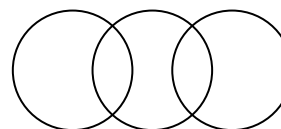
Direction : (Question numbers 18 and 19)

The following diagrams show some relationship among 3 items. For each group of elements there corresponding one diagram is (a), (b), (c) or (d). Select the diagram.



18. Square, rhombus, polygons
(A) 2 (B) 1 (C) 3 (D) 4
19. Vegetable, potato, apple
(A) 1 (B) 2 (C) 3 (D) 4

20. The three items satisfy the diagrams are:
(A) Engineers, Sportspersons, Judges
(B) Carrot, Vegetable, Food
(C) Flowers, Fruits, Liquid
(D) Birds, Animals, Human beings



Direction : (Question numbers 21 and 24)

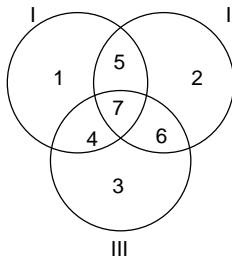
In the following diagram, the three intersecting circles, each representing certain section of people.

Different regions are marked as 1 to 7. Read the statements in questions 21 to 24 and choose number of the region which correctly represents the statement.

Circle : I represents 'Indians'

II represent 'Sportspersons'

III represents 'Graduates'



21. Indian graduates who are not sportspersons:
 (A) 6 (B) 4 (C) 7 (D) 5
22. Graduate sportsperson who are not Indians:
 (A) 5 (B) 7 (C) 6 (D) 4
23. Indian graduate sportspersons:
 (A) 7 (B) 4 (C) 5 (D) 76
24. The region 5 represents:
 (A) Graduate sportspersons who are not Indians
 (B) Indian sportspersons who are not graduates
 (C) Indian Graduates who are nto sports persons
 (D) None of these

Direction : (Question numbers 25)

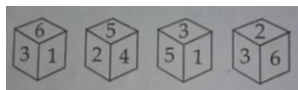
Read the contents, sense the direction and answer the questions.

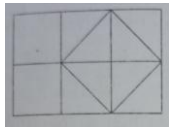
25. A person starts from a point A and travels 6 km westwards to B and then turns right and trvels half of that idstance to reach C. He again turns right and travels $\frac{5}{2}$ times the distance he covered between A and B and D. The shortest distance between the starting point and the last position is (in km).
 (A) 4 (B) 6 (C) 5 (D) 7
26. Arrange the given words in the alphabetical order and choose the third word in the order.
 (1) Bicycle (2) Binary (3) Bihar (4) Bishop
 (A) 2 (B) 1 (c) 3 (d) 4
27. If \times stands for $-$
 $+$ stands for \div
 \div stands for \times and
 $-$ stands for $+$ then
 $6 \div 4 + 3 - 7 \times 9 + 3$ is
 (A) 20 (B) 16 (C) 15 (D) 19
28. The number of the three digit numbers is:
 (A) 729 (B) 901 (C) 899 (D) 900

29. A total of 380 coins of 25 paise and 50 paise coins make a sum of Rs 130. The number of 50 paise coins is:
 (A) 140 (B) 180 (C) 120 (D) 110
30. The unit digit of $(168)^{156}$ is :
 (A) 8 (B) 6 (C) 4 (D) 2

Direction : (Question numbers 31 and 32)

A die has been thrown 4 times and produces the following four results. From the questions answer the questions 31 and 32.

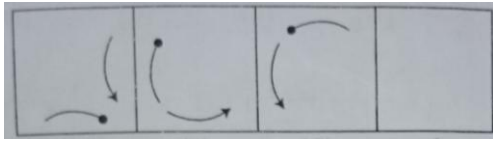


31. The number appears opposite to 4 is:
 (A) 3 (B) 5 (C) 6 (D) 2
32. The number appears opposite to 1 is:
 (A) 3 (B) 4 (C) 6 (D) 2
33. The total number squares in the figure is
 (A) 6 (B) 9
 (C) 8 (D) 3
- 
34. In a row of 20 students when 'A' was shifted by four places towards the right, he became thirteenth from the left end. His earlier position from the right end of the row is:
 (A) 11 (B) 9 (C) 12 (D) 10
35. The least number to be added to 4900 to make it a perfect cube is:
 (A) 13 (B) 0 (C) 23 (D) 33
36. If Same ranked ninth from the top and 42^{nd} from the bottom in a class, the number of students in the class is:
 (A) 51 (B) 50 (C) 49 (D) 52
37. The number of 7's in the following series which are preceded by 6 and which is not preceded by 8, is:
 87678875679761677688697689
 (A) 3 (B) 4 (C) 8 (D) 5
38. There are 42 students admitted to a class. Some students can speak only English and some students can speak only Tamil. Fifteen students can speak both Tamil and English. If the number of students who can speak English is 20, then how many students can speak Tamil?
 (A) 35 (B) 20 (C) 27 (D) 37
39. In a city 20% of the adults are illiterate while 90% of the children are literate. If the ratio of the adults to that of the children is 3 : 5, then the percent of the population of illiterate is :
 (A) 13.75 (B) 55 (C) 30 (D) none of these
40. if $9 + 3 = 6273$, $8 + 2 = 6164$ then $10 + 5 =$
 (A) 5250 (B) 5515 (C) 5502 (D) 5205

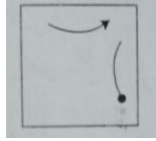
Direction : (Question numbers 41 and 42)

In each of the following questions, there is same relationship between the figures A and B. The same relationship exists between the figure C and one of the four alternative (A), (b), (C) and (D). Choose the correct option:

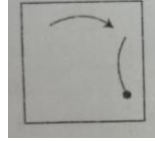
41.



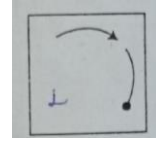
(A)



(B)

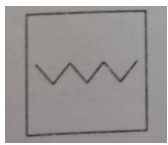
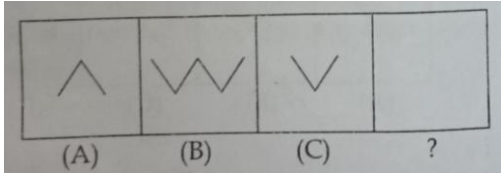


(C)



(D)

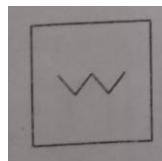
42.



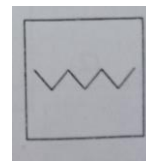
(A)



(B)



(C)

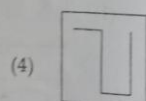
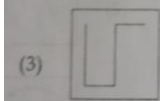
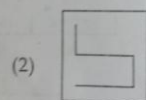
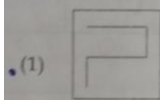
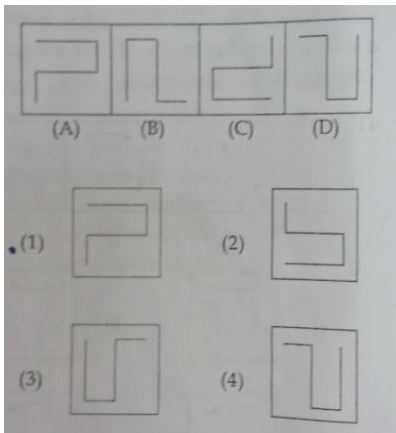


(D)

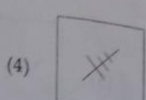
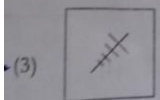
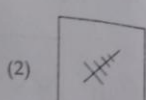
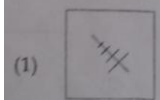
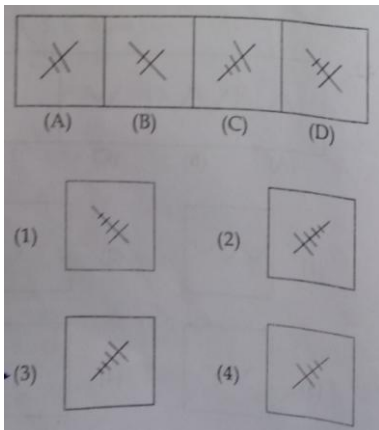
Direction : (Question numbers 43 and 44)

Select a figure from the figure (A), (b), (C) and (D), which would continue the figure 1, 2, 3, 4

43.

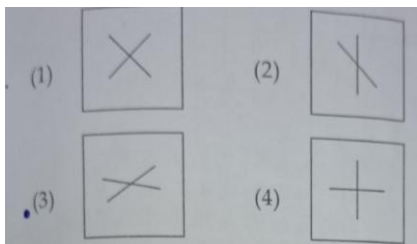


44.



Direction : (Question numbers 45 and 46)
Choose the figure which is different from other.

45.



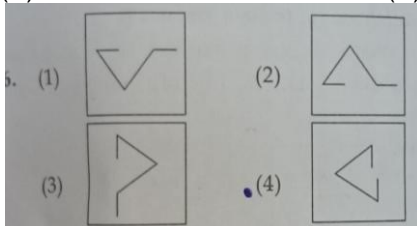
(A)

(B)

(C)

(D)

46.



(A)

(B)

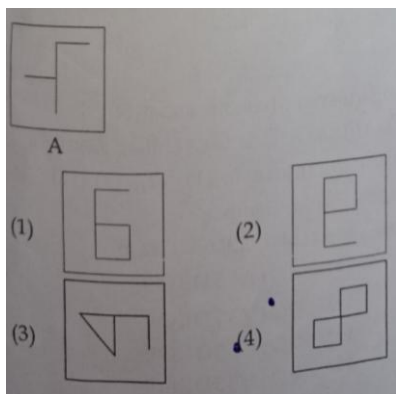
(C)

(D)

Direction : (Question numbers 47)

Figure A followed by four alternative figure (A), (B), (C) and (D) such that the figure A is embedded in one of them. Identify the correct alternative.

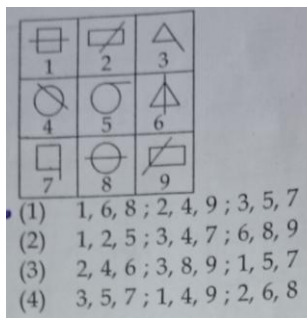
47.



Direction : (Question numbers 48)

In the following collection of 9 figures, group the figures into three classes using each figure only once.

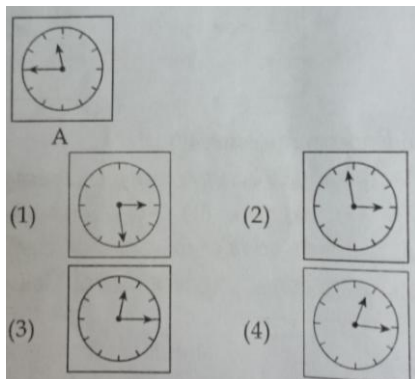
48.



Direction : (Question numbers 49)

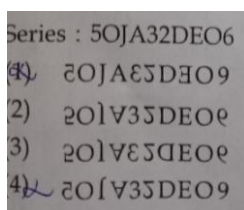
Choose the correct mirror image of the figure A, from the four alternative figure A, B, C and D.

49.



Direction : (Question numbers 50)

Choose the correct water image of the given series from the given four alternatives.



50.

LANGAUAGE TEST

Direction : (Question numbers 51 and 55)

Read the following passage and answer the questions given below:

There are two problems which cause great worry to our educationists, the problem of religious and moral instruction in a land of many faiths and the problem arising out of a large variety of languages. Taking up the education of children, we see that they should be trained to love one another, to be kind and helpful to all, to be tender to the lower animals and to observe and think right. The task of teaching them how to read and write and to count and calculate is important, but it should not make us lose sight of the primary aim of moulding personality in the right way. For this, it is necessary to call into aid, culture, tradition and religion. But in our country we have, in the same school, to look after boys and girls born in different faiths and belonging to families that live diverse ways of life and follow different forms of worship associated with different denominations of religion. It will not do to tread the easy path of evading the difficulty by attending solely to physical culture and intellectual education. We have to evolve a suitable technique and method for serving the spiritual needs of school children professing different faiths. We would thereby promote an atmosphere of mutual respect, a fuller understanding and helpful co-operation among the different communities in our society. Again we must remain one people and we have therefore to give basic training in our schools to speak and understand more languages than one and to appreciate and respect the different religions prevailing in India. It is not right for us in India to be dissuaded from this by considerations as to overtaking the young mind. What is necessary must be done. And it is not in fact too great a burden.

51. The main objective of education in India is _____.
 (A) imparting knowledge (B) moulding proper personality
 (C) developing language skills (D) teaching physical culture
52. India is a _____ country.
 (A) multilayered (B) multicoloured (C) multinational (D) multilinguistic
53. It is a challenge for the educationists to cater to the spiritual needs of Indian students because _____.
 (A) they are not exposed to many languages
 (B) they don't tolerate each other
 (C) they practice different faiths
 (D) they live diverse ways of life

54. _____ Should not be considered a burden for the school children in India.
 (A) Learning more languages (B) Understanding mathematical calculations
 (C) Adopting new techniques and methods (D) following age – old culture and tradition
55. Pick the word from the passage which means 'escape or avoid'.
 (A) evolve (B) prevail (C) tread (D) evade

Direction : (Question numbers 56 and 60)

Read the following poem and answer the questions given below:

As summer draws it's final breath
 to prepare its curtain call,
 the monarchs begin their epic trek
 to user in the autumn.

The northern wind breathes out its chill
 As songs begin to hush,
 and paints the trees upon the hill,
 With its artist brush.

From green to red, orange to brown
 the trees discard their masks,
 and lay them gently upon the ground,
 For us to begin our tasks.

56. A curtain call refers to _____
 (A) calling for the curtains to be lowered
 (B) raising the curtains for the performance to begin
 (C) final appearance of actors on the stage
 (D) when actors appear one last time to be applauded
57. The monarchs referred to in the poem are _____
 (A) rulers (B) butterflies (C) kings (D) moths
58. The figure of speech used in the poem is _____
 (A) simile (B) metaphor (C) personification (D) onomatopoeia
59. The masks that the trees discard are _____
 (A) leaves (B) fruits (C) flower (D) bark
60. The task we have to begin is _____
 (A) planting more trees (B) raking up the leaves
 (C) taking out the garbage (D) cutting down the old trees

Direction : (Question numbers 61 and 65)

Fill in the blanks with the most appropriate option given below:

When it comes ot fitness, I'll _____61_____ just two magic words, which have helped me _____62_____. The first one is _____63_____. You need to take that first step. Even if it's a baby step, you need to take and work towards the change. Use all the _____64_____ resources you have at your disposal. The second one is _____65_____. Even if you are taking baby steps, take it everyday. Do something for five minutes, but do it everyday.

61. (A) demand (B) develop (C) propagate (D) exercise
62. (A) tremendously (B) fixedly (C) casually (D) beneficially
63. (A) Exposure (B) endurance (C) initiative (D) medication
64. (A) crucial (B) essential (C) delicate (D) habitual

65. (A) contingency (B) constancy (C) consistency (D) consultancy

Direction : (Question numbers 66 and 67)

Rearrange the parts and complete the sentences. The beginning of the sentences are already given. Choose the order from the options given:

66. The book narrates:
P. personal irritation to
Q. emanating from
R. national and social havocs
S. all forms of worries.
(A) RQPS (B) QPSR (C) SQPR (D) RPQS
67. Etiquette is a set of rules:
P. have changed as time has gone by
Q. and though the rules of etiquette
R. Which govern people's behaviour
S. certain customs are still the same
(A) RPQS (B) QRSP (C) PRQS (D) RQPS

Direction : (Question numbers 68 and 70)

Fill in the blanks with the correct tense form of the verb, choosing from the options given:

68. The court case came to a conclusion as we _____.(guess)
(A) are guessing (B) would guess (C) have guessed (D) had guessed
69. Were I a millionaire, I _____ (take) my wife to the moon.
(A) can take (B) would take (C) will be taking (D) have taken
70. The telephone rang, when I _____ (brush my teeth).
(A) was brushing (B) brushes (C) have been brushing (D) am brushing

Direction : (Question numbers 71 and 75)

Choose the appropriate meaning of the idiomatic expressions used in the given sentences:

71. The Government did a lot of spadework before the launch of this project.
(A) hard labour (B) systematic work
(C) preliminary research (D) comprehensive analysis
72. We can play it by the ear and decide where to meet later.
(A) pull a person's ear (B) tell someone a secret
(C) whisper (D) improvise
73. The policeman blew a fuse as soon as he realized that he was cheated.
(A) turn angry (B) feel upset (C) remain calm (D) get disappointed
74. Mr. X got the axe last week because he did not stop arguing.
(A) incur a loss (B) obtain a divorce (C) lose a job (D) undergo punishment
75. They think that looking after babies is a piece of cake.
(A) amusing (B) easy (C) tedious (D) delightful

Direction : (Question numbers 76 and 80)

Choose the most suitable word from the options given and fill in the blank.

Disney World in Orlando, Florida _____76_____ in October 1971. Millions of people from over 100 countries _____77_____ Disney World every year. There _____78_____ so many wonderful things to do at Disney World that many people _____79_____ it the Vacation kingdom of the world. Every visitor to this special place _____80_____ many wonderful memories back home with him.

76. (A) opens (B) have opened (C) has opened (D) opened

77. (A) visit (B) visited (C) visits (D) had visited
78. (A) be (B) is (C) are (D) were
79. (A) calls (B) call (C) is calling (D) will have been calling
80. (A) taken (B) take (C) are taken (D) takes

Direction : (Question numbers 81 and 85)

Choose the most suitable the phrasal verbs in the given sentences:

81. The organizers plan to wrap up the programme before 3 pm.
(A) conclude (B) advance (C) inaugurate (D) terminate
82. Rampant corruption will eat away the basic foundation of a country's economy.
(A) strangle (B) shrink (C) erode (D) digest
83. Reena handed out her wedding invitations to all her colleagues.
(A) circulated (B) delivered (C) issued (D) distributed
84. The street vendor salted away a part of his daily profit to buy a pushcart.
(A) spent (B) saved (C) adjusted (D) frittered
85. We bumped into a far relative of ours in the function.
(A) visited (B) enquired (C) met (D) surrounded

Direction : (Question numbers 86 and 90)

Identify which of the four sentences is correct.

86. (A) The father and son walked between the river.
(B) the father and son walked besides the river
(C) the father and son walked beside the river
(D) the father and son walked behind the river.
87. (A) My sister hardly does household chores, would be?
(B) My sister hardly does household chores, doesn't she?
(C) My system hardly does household chores, wont she?
(D) My sister hardly does household chores, does she?
88. David said, 'I' m glad to be here this evening.
(A) David said that he is glad to be here this evening.
(B) David said that he was glad to be here this evening.
(C) David said the he was glad to be there that evening.
(D) David sad that he is glad to be there that evening
89. Identify the complex sentence
(A) He spoke loudly and os he was heard.
(B) He spoke loudly os that he could be hear.
(C) He spoke loudly to be heard
(D) He spoke loudly, therefore he was heard'
90. Identify the correct passive form of the sentence:
The pianist receive a standing ovation when he played Beethoven's Symphony No.7
(A) A standing ovation was received by the pianist when he played Beethoven's Symphony No.7
(B) The pianist received a standing ovation when Beethoven's Symphony No.7 was played by him
(C) Beethoven's Symphony No.7 was played by the pianist and he received a standing ovaion.
(D) A standing ovation was received by the pianist when Beethoven's symphony no.7 was played by him.

Direction : (Question numbers 91 and 92)

Choose the correct synonym of the under line word.

91. She spoke in dulcet tones.

(A) harsh (B) rough (C) sweet (D) unkind

92. His gregarious nature won him many friends.
(A) companionable (B) unreserved (C) introverted (D) critical

Direction : (Question numbers 93 and 94)

Choose the appropriate antonyms of the underlined word in the sentences from the options given:

93. The speaker made an obscure reference to that incident.
(A) accurate (B) unsafe (C) indecent (D) clear
94. The members of the union raised a pertinent question during the discussion.
(A) invaluable (B) irrelevant (C) improper (D) insignificant

Direction : (Question numbers 95 and 98)

Spot the errors in the following sentences. the given sentences:

95.

1	2	3	4
The young boy	returned back home	later than	he had promised.

(A) 1 (B) 2 (C) 3 (D) 4

96.

1	2	3	4
Rashmita	Who lives in Mumbai	Is my	Cousin sister.

(A) 1 (B) 2 (C) 3 (D) 4

97.

1	2	3	4
My mother	poured the coffee	in	the cup

(A) 1 (B) 2 (C) 3 (D) 4

98.

1	2	3	4
I	Read	Baghvad Gita	every morning

(A) 1 (B) 2 (C) 3 (D) 4

Direction : (Question numbers 99 and 100)

Choose the best meaning for the given proverb.

99. People who live in glass houses must not throw stones.
(A) always be careful when playing with stones.
(B) do not criticize unless you are perfect.
(C) it is not polite to be rude to others.
(D) if you are rude you will not get many friends
100. Make a mountain out of a molehill.
(A) raise from a humble beginning
(B) earn a lot of money
(C) exaggerate things
(D) boast about a simple success