ICET-2010 Key for Booklet code: A

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87. If a pump takes 6 hours to fill $\frac{3}{7}$th of a cistern, the total time required to completely fill the cistern (in hours) is

ఒక పంపు ఒక నీటి తొట్టెలో $\frac{3}{7}$ వంతు నింపేందుకు 6 గంటలు తీసుకొంటుంది. ఆ నీటి తొట్టె పూర్తిగా నింపేందుకు పట్టే సమయం (గంటలలో)

✓ (1) 14   (2) 13   (3) 12   (4) 11

88. A tank can be filled by one tap in 20 minutes and by another in 25 minutes. If both the taps are opened for 5 minutes and then the second tap is turned off, in how many more minutes the tank is completely filled ?

ఒక తొట్టెను ఒక కుళాయి 20 నిమిషములలోనూ, ఇంకొక కుళాయి 25 నిమిషములలోనూ నింపగలవు. రెండు కుళాయిలను 5 నిమిషముల పాటు తెరచి తర్వాత రెండవ కుళాయిని మూసివేస్తే ఇంకా ఎన్ని నిముషాలకు తొట్టె పూర్తిగా నిండుతుంది ?

(1) 12   ✓ (2) 11   (3) 9   (4) 6

89. If HCF(1152, 1664) = 128, then LCM(1152, 1664) =

గ.సా.భా. (1152, 1664) = 128 అయితే, క.సా.గు (1152, 1664) =

(1) 1152   (2) 1154   ✓ (3) 14976   (4) 16872

90. What is the remainder when 2^{13416} is divided by 5 ?

2^{13416} ను 5 చే భాగిస్తే వచ్చే శేషం ఎంత ?

(1) 4   (2) 3   (3) 2   ✓ (4) 1

91. A certain amount of money deposited for compound interest becomes 4 times in 4 years. In how many years will that amount be 64 times the deposited amount if it is given for the same rate of interest ?

కొంత మొత్తాన్ని చక్రవడ్డీకి ఇచ్చినప్పుడు అది 4 సంవత్సరాలలో 4 రెట్లు అవుతుంది. అదే సొమ్ము అదే వడ్డీ రేటుతో 64 రెట్లు కావాలంటే ఎన్ని సంవత్సరాలు పడుతుంది?

(1) 18   (2) 16   (3) 15   ✓ (4) 12

92. The perimeter of a rhombus is 100 cm and one of its diagonals is 40 cm. The area of the rhombus in sq. cm. is

ఒక సమ లంబ చతుర్భుజం (రాంబస్) చుట్టుకొలత 100 సెం.మీ. దాని ఒక కర్ణం 40 సెం.మీ. ఆ సమ చతుర్భుజం (రాంబస్) వైశాల్యం చ.సెం.మీలలో

(1) 400   (2) 500   ✓ (3) 600   (4) 800

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93. The lengths of parallel sides of a trapezium are 20 m and 35 m and the distance between them is 8 m. The area of the trapezium in sq. m. is

ఒక సమ లంబ చతుర్భుజం (ట్రెపీజియం) లోని సమాంతర భుజాల పొడవులు 20 మీ, 35 మీ. వాటి మధ్య దూరం 8 మీ. ఆ సమలంబ చతుర్భుజం వైశాల్యం చ.మీ.లలో

   (1) 110   ✓(2) 220   (3) 330   (4) 440

94. The area of a right isosceles triangle is 4.5 sq. m. Its perimeter in metres is

ఒక లంబ సమ ద్విబాహు త్రిభుజ వైశాల్యం 4.5 చ.మీ. దాని చుట్టుకొలత మీటర్లలో

   ✓(1) $6 + 3\sqrt{2}$ (2) $3 + 3\sqrt{2}$ (3) $1 + 3\sqrt{2}$ (4) $3 + \sqrt{2}$

95. A circular road runs around a circular ground. If the difference between the circumferences of the outer circle and inner circle is 66 m, the width of the road in metres is (taking the value of π as $\frac{22}{7}$)

ఒక వృత్తాకారపు మైదానం చుట్టూ ఒక వృత్తాకారపు దారి ఉంది. బాహ్య, అంతర వృత్తాల పరిధుల బేధం 66 మీ. అయితే, ఆ దారి వెడల్పు మీటర్లలో (π విలువ $\frac{22}{7}$ అనుకుంటే)

   (1) 10   ✓(2) 10.5   (3) 9.5   (4) 9

96. The height of a cone is 84 cm and the area of its base is 3850 sq. cm. The area of the curved surface of the cone in sq. cm. is (taking the value of π as $\frac{22}{7}$)

ఒక శంకువు ఎత్తు 84 సెం.మీ. దాని భూ వైశాల్యం 3850 చ.సెం.మీ. ఆ శంకువు పత్రతల వైశాల్యం చ.సెం.మీ.లలో (π విలువ $\frac{22}{7}$ అనుకుంటే).

   (1) 1010   (2) 10001   ✓(3) 10010   (4) 11010

97. The ratio of the weights of three solid spheres is 8 : 27 : 64. The ratio of their diameters is

మూడు ఘన గోళాల బరువుల నిష్పత్తి 8 : 27 : 64. వాటి వ్యాసాల నిష్పత్తి

   (1) 1 : 2 : 3   (2) 1 : 3 : 4   (3) 2 : 4 : 6   ✓(4) 4 : 6 : 8

98. A rectangular plot is of 50 m × 30 m dimensions. Roads of width 2 m are laid joining the mid points of opposite sides and also a path of same width running inside and along the length and the breadth of it. What is the total area of the roads and the path in sq. metres ?

50 మీ. × 30 మీ. కొలతలు గల ఒక దీర్ఘ చతురస్రాకారపు స్థలం ఉంది. 2 మీ. వెడల్పు గల రోడ్లను ఎదుటి భుజాల మధ్య బిందువులను కలుపుతూ, దీర్ఘ చతురస్రం లోపలి భాగంలో పొడవు వెడల్పుల వెంబడి కూడా అంతే వెడల్పు గల బాటను వేశారు. రోడ్లు, బాటల మొత్తం వైశాల్యం చ.మీ.లలో ఎంత ?

   ✓(1) 444   (2) 448   (3) 928   (4) 1056

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99. A cylinder and a cone have the same height and the radius of the base. The ratio between the volumes of the cylinder and the cone is

ఒక స్థూపం, ఒక శంకువుల ఎత్తులు, భూ వ్యాసార్ధాలు సమానంగా వున్నాయి. ఆ స్థూపం, శంకువుల ఘన పరిమాణాల నిష్పత్తి

(1) $2:1$ ✓(2) $3:1$ (3) $2:3$ (4) $3:2$

100. The side of a cube is 5 cm. Its total surface area in sq. cm. is

ఒక ఘనం యొక్క భుజం 5 సెం.మీ. దాని సంపూర్ణ ఉపరితల వైశాల్యం చ.సెం.మీలలో

(1) 30   (2) 90   ✓(3) 150   (4) 200

101. The least 3 digit positive integer x such that $x \equiv 3 \pmod 8$ is

$x \equiv 3 \pmod 8$ అయ్యేట్లు 3 అంకెల కనిష్ట ధన పూర్ణాంకం

(1) 105   ✓(2) 107   (3) 108   (4) 115

102. The set of integral solutions of the equation $x + 8 \equiv 9 \pmod 2$ is

$x + 8 \equiv 9 \pmod 2$ సమీకరణానికి పూర్ణాంక సాధనాల సమితి

(1) $2\mathbb{Z}$ (2) $3\mathbb{Z}$ (3) $\mathbb{Z} - 3\mathbb{Z}$ ✓(4) $\mathbb{Z} - 2\mathbb{Z}$

103. If the sides of a rectangle are in the ratio $2:1$ and if its area is same as that of a square of side 8 cm., then the perimeter of the rectangle in cm. is

ఒక దీర్ఘ చతురస్రం భుజాలు $2:1$ నిష్పత్తిలో ఉంటూ, దాని వైశాల్యం 8 సెం.మీ భుజంగా గల చతురస్ర వైశాల్యానికి సమానమయితే, ఆ దీర్ఘ చతురస్రపు చుట్టుకొలత సెం.మీలలో

✓(1) $24\sqrt{2}$ (2) $12\sqrt{2}$ (3) $8\sqrt{2}$ (4) $4\sqrt{2}$

104. The number of divisors of 36000 is

36000 భాజకాల సంఖ్య

(1) 30   ✓(2) 72   (3) 640   (4) 720

105. $\sqrt{47 - 4\sqrt{33}} =$

(1) $\sqrt{22} - \sqrt{6}$ (2) $\sqrt{45} - \sqrt{2}$ ✓(3) $\sqrt{44} - \sqrt{3}$ (4) $\sqrt{35} - \sqrt{12}$

106. The number of diagonals of a regular polygon with 18 sides is

18 భుజాలు గల క్రమ బహుభుజి కర్ణాల సంఖ్య

(1) 189   (2) 171   (3) 153   ✓(4) 135

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107. In a class of 70 students consisting of boys and girls, a sum of Rs. 2,350 is distributed. If each boy gets Rs. 30 and each girl gets Rs. 35, then the number of boys in the class is

70 మంది బాల బాలికలు గల ఒక తరగతిలో 2,350 రూ. ను పంచారు. ప్రతి బాలునికి 30 రూ., ప్రతి బాలికకు 35 రూ. వస్తే, తరగతిలోని బాలుర సంఖ్య

(1) 40 (2) 30 (3) 25 ✓(4) 20

108. If n, a, b are natural numbers, n < 9 and $n^5 = 10a + b$, then b =

n, a, b లు సహజ సంఖ్యలవుతూ n < 9 మరియు $n^5 = 10a + b$ అయితే b =

(1) 2 ✓(2) n (3) 3 (4) 9

109. If $\dfrac{8^{\frac{3}{4}} \times 9^{\frac{4}{3}}}{27^{\frac{3}{2}} \times 16^{\frac{2}{3}}} = 2^a \cdot 3^b$, then a − b =

$\dfrac{8^{\frac{3}{4}} \times 9^{\frac{4}{3}}}{27^{\frac{3}{2}} \times 16^{\frac{2}{3}}} = 2^a \cdot 3^b$ అయితే, a − b =

(1) $\dfrac{6}{11}$ (2) $\dfrac{11}{6}$ ✓(3) $\dfrac{17}{12}$ (4) $\dfrac{12}{17}$

110. If the perimeter of a regular hexagon is 24 cm, then its area in sq. cm. is

ఒక క్రమ షడ్భుజి చుట్టుకొలత 24 సెం.మీ. అయితే దాని వైశాల్యం చ.సెం.మీలలో

(1) $12\sqrt{6}$ (2) 18 (3) $18\sqrt{3}$ ✓(4) $24\sqrt{3}$

(ii)   Algebraical and Geometrical Ability   (Marks : 30)

111. The digit in the units place of 3^{741} is

3^{741} అనే సంఖ్యలో ఒకట్ల స్థానంలోని అంకె

✓(1) 3 (2) 9 (3) 7 (4) 1

112. If A, B, C are three sets, then A − (B ∩ C) =

A, B, C లు మూడు సమితులయితే A − (B ∩ C) =

(1) (A − B) ∩ (A − C) (2) A − (B ∪ C)

✓(3) (A − B) ∪ (A − C) (4) A − (B − C)

113. Which of the following is a tautology ?

కింది వానిలో ఏది నిత్య సత్యము ?

(1) p → (p − q) ✓(2) (p ∧ q) → p

(3) (p − q) → (p ∧ q) (4) p ∨ q → p

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114. If a set A has 5 elements, then the number of subsets of A with not exceeding 4 elements is

ఒక సమితి A లో 5 మూలకాలుంటే, A కి 4 మించకుండా మూలకాలున్న ఉప సమితుల సంఖ్య

✓(1) 31   (2) 26   (3) 5   (4) 16

115. If $\cos \theta = -\dfrac{12}{13}$ and θ is not in third quadrant, then $\sin \theta + \tan \theta =$

$\cos \theta = -\dfrac{12}{13}$ మరియు θ మూడో పాదంలో లేని కోణం అయితే $\sin \theta + \tan \theta =$

(1) $\dfrac{125}{156}$ (2) $\dfrac{5}{156}$ (3) $\dfrac{-125}{156}$ ✓(4) $\dfrac{-5}{156}$

116. If α, β are the roots of the equation $x^2 + x + 1 = 0$, then the value of $\alpha^{28} - \beta^{56} =$

$x^2 + x + 1 = 0$ సమీకరణానికి మూలాలు α, β అయితే $\alpha^{28} - \beta^{56}$ విలువ

(1) −1   (2) α − β   (3) α + β   ✓(4) 0

117. For any positive integer n, let A_n = set of all positive integral divisors of n, then the number of elements in $A_{18} \cap A_{24}$ is

ప్రతీ ధన పూర్ణాంకం n కి, A_n = n యొక్క ధన పూర్ణాంక భాజకాల సమితి అనుకుంటే $A_{18} \cap A_{24}$ లోని మూలకాల సంఖ్య

✓(1) 4   (2) 6   (3) 72   (4) 36

118. If a set A has 5 elements, then the number of bijections from A to A is

ఒక సమితి A లోని మూలకాల సంఖ్య 5 అయితే A నుంచి A కు గల ద్విగుణ ప్రమేయాల సంఖ్య

(1) 2^5 (2) 5^5 ✓(3) 5 !   (4) 1

119. The equation of the straight line that makes intercepts $\dfrac{1}{5}$ and $\dfrac{1}{7}$ on X and Y-axes respectively is

X, Y అక్షాలపై వరుసగా $\dfrac{1}{5}, \dfrac{1}{7}$ అంతర ఖండాలను ఏర్పరచే సరళరేఖ సమీకరణం

(1) $5x + 7y = 35$ ✓(2) $5x + 7y = 1$ (3) $7x + 5y = 35$ (4) $7x + 5y = 1$

120. The perpendicular distance from the point (2, −3) to the line $3x + 4y − 4 = 0$ is

(2, −3) బిందువు నుంచి $3x + 4y − 4 = 0$ సరళరేఖకు లంబ దూరం

(1) $\dfrac{4}{5}$ units   ✓(2) 2 units   (3) $\dfrac{2}{5}$ units   (4) 4 units

$\dfrac{4}{5}$ యూనిట్లు   2 యూనిట్లు $\dfrac{2}{5}$ యూనిట్లు   4 యూనిట్లు

121. The intercept made by the line passing through the points (4, −5), (5, 1) on X-axis is

(4, −5), (5, 1) బిందువుల గుండా పోయే సరళ రేఖ X-అక్షంపై ఏర్పరచే అంతర ఖండం

✓(1) $\dfrac{29}{6}$ (2) $\dfrac{31}{6}$ (3) 29   (4) 31

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122. $\sin 75° =$

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

123. The minimum value of $7 - 5\cos x - 12\sin x$ is

$7 - 5\cos x - 12\sin x$ యొక్క కనిష్ట విలువ

(1) 20   (2) -5 ✓(3) -6 (4) 2

124. If $\sec\theta - \tan\theta = 5$, then $\sin\theta =$

$\sec\theta - \tan\theta = 5$ అయితే $\sin\theta =$

(1) $\dfrac{12}{13}$ (2) $\dfrac{5}{13}$ ✓(3) $\dfrac{-12}{13}$ (4) $\dfrac{-5}{13}$

125. $\dfrac{\sin\theta}{\sec\theta - 1} - \dfrac{\sin\theta}{\sec\theta + 1} =$

✓(1) $2\cos\theta\cot\theta$ (2) $2\sin\theta\sec\theta$ (3) $2\cos\theta\tan\theta$ (4) $2\cot\theta\csc\theta$

126. The angle of elevation of the sun, when the length of the shadow of a tower is 4 times the height of the tower, is

ఒక స్తంభం నీడ పొడవు ఆ స్తంభం ఎత్తుకు 4 రెట్లు ఉన్న సమయంలో సూర్యుని ఊర్ధ్వ కోణం

(1) $45°$ (2) $\tan^{-1}4$ (3) $60°$ ✓(4) $\tan^{-1}\dfrac{1}{4}$

127. If $A = \begin{bmatrix} 3 & -1 \\ 0 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 1 \\ 4 & -1 \end{bmatrix}$ then the determinant of $2A + 3B$ is

$A = \begin{bmatrix} 3 & -1 \\ 0 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 1 \\ 4 & -1 \end{bmatrix}$ అయితే $2A + 3B$ యొక్క నిర్ధారకం

(1) 12   ✓(2) 72   (3) 48   (4) 60

128. The inverse of the matrix $\begin{bmatrix} \cos\theta & \sin\theta \\ \sin\theta & -\cos\theta \end{bmatrix}$ is

$\begin{bmatrix} \cos\theta & \sin\theta \\ \sin\theta & -\cos\theta \end{bmatrix}$ మాత్రికకు విలోమము

(1) $\begin{bmatrix} -\cos\theta & -\sin\theta \\ \sin\theta & \cos\theta \end{bmatrix}$ ✓(2) $\begin{bmatrix} \cos\theta & \sin\theta \\ \sin\theta & -\cos\theta \end{bmatrix}$

(3) $\begin{bmatrix} -\cos\theta & \sin\theta \\ -\sin\theta & \cos\theta \end{bmatrix}$ (4) $\begin{bmatrix} -\cos\theta & \sin\theta \\ \sin\theta & \cos\theta \end{bmatrix}$

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129. If $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ and det $A = 5$, then the determinant of the matrix $\begin{bmatrix} 4a & 4b \\ 3c & 3d \end{bmatrix}$ is

$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$, det $A = 5$ అయితే $\begin{bmatrix} 4a & 4b \\ 3c & 3d \end{bmatrix}$ మాత్రిక యొక్క నిర్ధారకం

   (1) 20   (2) 15   (3) 35   ✓(4) 60

130. $\lim_{x \to 0} \dfrac{\sqrt{4+x} - \sqrt{4-x}}{x} =$

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

131. $\tan 85° \tan 50° - \tan 85° - \tan 50° =$

   ✓(1) 1   (2) -1 (3) $\tan 35°$ (4) $\tan 5°$

132. $\lim_{\theta \to 0} \dfrac{\sin 7\theta - \sin \theta}{\sin 10\theta - \sin 7\theta} =$

   ✓(1) 2   (2) $\dfrac{7}{10}$ (3) $\dfrac{48}{51}$ (4) ∞

133. The coefficient of $\dfrac{1}{x^2}$ in the expansion of $\left(\dfrac{2}{x^2} - 3x\right)^4$ is

   $\left(\dfrac{2}{x^2} - 3x\right)^4$ విస్తరణలో $\dfrac{1}{x^2}$ గుణకం

   (1) 36   (2) -36 ✓(3) 216   (4) -216

134. $\dfrac{d}{dx}(\log_x 10) =$

   (1) 0   ✓(2) $\dfrac{-\log 10}{x(\log x)^2}$ (3) $\dfrac{-\log 10}{(\log x)^2}$ (4) $\dfrac{x}{\log 10}$

135. $\lim_{x \to 5} \dfrac{(x^2 - 4x - 5)^2}{|x - 5|} =$

   (1) 6   (2) -6 ✓(3) 0   (4) 36

136. When $x^3 - 2x^2 - 3$ is divided by $x - 3$, the remainder is

   $x^3 - 2x^2 - 3$ ని $x - 3$ చే భాగిస్తే వచ్చే శేషం

   (1) -48 (2) 48   (3) -6 ✓(4) 6

137. If $f(x) = \dfrac{1}{\sqrt{x}}$ then $f'(x)$ at $x = 4$ is

$f(x) = \dfrac{1}{\sqrt{x}}$ అయితే $x = 4$ వద్ద $f'(x)$ విలువ

✓ (1) $\dfrac{-1}{16}$ (2) $\dfrac{-1}{8}$ (3) $\dfrac{-1}{4}$ (4) $\dfrac{1}{8}$

138. The harmonic mean of 15, 10 is

15, 10 లకు హార మధ్యమం

(1) 12.5   (2) 13   (3) 13.5   ✓ (4) 12

139. If $f(x) = 2^{\cot x}$, then $f'(x)$ at $x = \dfrac{\pi}{4}$ is

$f(x) = 2^{\cot x}$ అయితే $x = \dfrac{\pi}{4}$ వద్ద $f'(x) =$

(1) $-2 \log 2$ ✓ (2) $-4 \log 2$ (3) $2 \log 2$ (4) $4 \log 2$

140. The area, in square units, of the rectangle formed by the lines $x = \pm 4$ and $y = \pm 3$ is

$x = \pm 4$, $y = \pm 3$ సరళరేఖలతో ఏర్పడే దీర్ఘ చతురస్ర వైశాల్యం, చదరపు యూనిట్లలో

(1) 12   ✓ (2) 48   (3) 144   (4) 72

(iii) **Statistical Ability**   **(Marks : 10)**

141. The median of the following data is

కింది దత్తాంశానికి మధ్యగతం

8, 4, 7, 1, 1, 5, 4, 3, 9, 2, 8, 6, 7

(1) 4   (2) 7   ✓ (3) 5   (4) 6

142. The arithmetic mean of $1^2, 2^2, 3^2, \ldots\ldots\ldots, 15^2$ is

$1^2, 2^2, 3^2, \ldots\ldots\ldots, 15^2$ ల అంక మధ్యమం

✓ (1) $\dfrac{248}{3}$ (2) $\dfrac{248}{15}$ (3) $\dfrac{496}{15}$ (4) $\dfrac{246}{3}$

143. The standard deviation of 105, 110, 115, 120, 125, 130, 135, is

105, 110, 115, 120, 125, 130, 135 ల క్రమ విచలనం

(1) 20   (2) 40   (3) 30   ✓ (4) 10

144. When 3 unbiased coins are tossed, the probability of getting exactly one head is

3 నిష్పాక్షిక నాణాలను ఎగుర వేసినపుడు ఖచ్చితంగా ఒక బొమ్మ రావడానికి సంభావ్యత

(1) $\dfrac{1}{3}$ ✓ (2) $\dfrac{3}{8}$ (3) $\dfrac{1}{8}$ (4) $\dfrac{1}{2}$

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145. When two dice are thrown together, the probability that the sum obtained on them is 7, is

రెండు పాచికలను ఒకేసారి విసిరినపుడు వాటిపై వచ్చే అంకెల మొత్తం 7 కావడానికి సంభావ్యత

(1) $\frac{5}{36}$ ✓ (2) $\frac{1}{6}$ (3) $\frac{5}{6}$ (4) $\frac{31}{36}$

146. The probability that a number chosen at random from the set {1, 2, 3, ..., 90} is divisible by 4 or 6 is

{1, 2, 3, ..., 90} సమితి నుంచి యాదృచ్ఛికంగా ఎంచుకున్న ఒక సంఖ్య 4 లేదా 6 చే భాగింపబడటానికి గల సంభావ్యత

(1) $\frac{31}{90}$ (2) $\frac{37}{90}$ ✓ (3) $\frac{1}{3}$ (4) $\frac{1}{12}$

147. If a leap year is selected at random, the probability that there will be 53 Thursdays in that year is

ఒక లీపు సంవత్సరాన్ని యాదృచ్ఛికంగా ఎంచుకుంటే, ఆ సంవత్సరంలో 53 గురువారాలుండటానికి సంభావ్యత

(1) $\frac{1}{4}$ ✓ (2) $\frac{2}{7}$ (3) $\frac{5}{7}$ (4) $\frac{6}{7}$

148. If a 3-digit number is formed at random using the digits 0, 1, 2, 3, 4, then the probability that the number is even, (no digit is repeated) is

0, 1, 2, 3, 4 అంకెలనుపయోగించి ఒక 3 అంకెల సంఖ్యను యాదృచ్ఛికంగా ఏర్పరిస్తే, ఆ సంఖ్య సరి సంఖ్య కావడానికి సంభావ్యత (వాడిన అంకెను వాడకుండా)

(1) $\frac{3}{5}$ (2) $\frac{2}{5}$ (3) $\frac{3}{8}$ ✓ (4) $\frac{5}{8}$

149. If the median and mode of 10 observations are 12 and 16 respectively, then the mean of the data is

10 పరిశీలనలున్న ఒక దత్తాంశానికి మధ్యగతం, బాహుళకం వరుసగా 12, 16 అయితే ఆ దత్తాంశానికి అంక మధ్యమం

(1) 14   (2) 15   ✓ (3) 10   (4) 11

150. If the arithmetic means of two data having 24 and 16 observations are 10 and 15 respectively, then the arithmetic mean of the combined data is

24, 16 పరిశీలనలున్న రెండు దత్తాంశాల అంక మధ్యమాలు వరుసగా 10, 15 అయితే, వాటి ఉమ్మడి దత్తాంశానికి అంక మధ్యమం

(1) 12.5   ✓ (2) 12   (3) 20   (4) 13

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A

SECTION – C
Communication Ability

Questions : 50   Marks : 50

PART – 1

Choose the correct meaning for the word given :

151. Rapture
   (1) Gloom   ✓(2) Ecstasy   (3) Rupture   (4) Rapport

152. Downsize
   (1) Small   (2) Shortlist   (3) Recruit   ✓(4) Reduce

153. Visage
   (1) Foreign   ✓(2) Countenance   (3) Old   (4) Embassy

154. Equanimity
   (1) Amity   (2) Unanimity   (3) Anonymity   ✓(4) Composure

155. Apprehend
   (1) Punish   (2) Sympathise   ✓(3) Arrest   (4) Imitate

156. Optimize
   (1) Victimise   (2) Mesmerise
   ✓(3) To make the best use of   (4) To make the least use of

Fill in the blank choosing the correct word :

157. A tornado _____ the islands yesterday.
   (1) slushed   ✓(2) struck   (3) hurt   (4) slammed

158. The telephonic message _____ her so much that she broke down.
   ✓(1) saddened   (2) blew   (3) effected   (4) animated

159. Trespassers shall be _____.
   (1) persecuted   ✓(2) prosecuted   (3) admired   (4) harassed

160. Neither heat nor cold _____ the diligent.
   (1) misses   ✓(2) daunts   (3) encourages   (4) prompts

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PART – 2

Choose the correct answer :

161. The term CDMA is used with reference to
   (1) operating system of a desktop computer
   ✓(2) mobile phones
   (3) cathode ray tubes
   (4) programming languages

162. A set of related programmes that protect a private network from users of other networks is called
   (1) Electronic Mail   ✓(2) Firewall
   (3) Digitizer   (4) Input Device

163. Resolution is
   (1) forming characters on a page   ✓(2) the fineness of scan of an image
   (3) transferring an image to a carrier (4) identification of the directory

164. An exact copy of written or printed material is called
   ✓(1) facsimile   (2) copier   (3) concord   (4) faction

165. Multimedia hardware consists of
   (1) television and camcorders
   (2) microphone and cassette recorders
   ✓(3) speakers, a soundboard and a CD ROM drive
   (4) television and VCR

166. Stocks and property owned by a person or organisation are called
   (1) estate   (2) holdings   ✓(3) assets   (4) liabilities

167. A record of the proceedings and resolutions passed or decisions taken at a meeting is referred to as
   (1) agenda   (2) notice   (3) circular   ✓(4) minutes

168. The arrangement of funding capital from abroad by a company directly from an investor is known as
   ✓(1) FDI   (2) FII   (3) FERA   (4) FEMA

169. Convertible debentures are converted into company's _____.
   (1) deposits   ✓(2) shares   (3) commercial papers   (4) bonds

170. A document which has a monetary value, such as a draft or a cheque is called
   ✓(1) Financial Instrument   (2) Financial Document
   (3) Financial Agreement   (4) Financial Bond

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PART – 3

Choose the correct answer :

171. "I beg your pardon, I never said that at all." Here 'I beg your pardon' expresses
    ✓(1) disagreement   (2) anxiety   (3) surprise   (4) sorrow

172. A : "How nice of you to drop me home !"
    B : "I had no choice."
    B is
    (1) happy   (2) indifferent   ✓(3) resentful   (4) emotional

173. "You shall not enter my house." The sentence is a
    ✓(1) command   (2) promise   (3) entreaty   (4) request

174. Local people raised a terrible 'hue and cry' against the committee's decisions. What does
    hue and cry mean ?
    (1) demand   ✓(2) clamour   (3) sorrow   (4) acceptance

175. "Kartik burnt his fingers while trying to help his brother's company." Here burnt his
    fingers means
    (1) that he was insulted.
    (2) that his fingers were burnt in an accident.
    ✓(3) that he suffered the unpleasant results of his actions.
    (4) that he was totally ignored.

176. When Tom accidentally erased some files in Dick's computer, he wanted to make a clean
    breast of it. The underlined words mean
    (1) wipe out all evidences.   (2) restore all the files.
    ✓(3) confess the truth.   (4) shed tears inviting sympathy.

177. "He builds castles in the air" means
    (1) he is an architect.   (2) he is an engineer.
    ✓(3) he is a daydreamer.   (4) he is a visionary.

Fill in the blank with the appropriate phrase/verb/preposition :

178. Honest people _____ their work.
    (1) stick up   ✓(2) stick to   (3) stick over   (4) stick off

179. Will the seminar _____ ?
    ✓(1) come off   (2) come up   (3) come down   (4) come out

180. The plane _____ to a great height.
    (1) lifted   (2) raised   (3) elevated   ✓(4) rose

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181. The doctor wanted the patient to be _____ on the bed.
    (1) lied   ✓(2) laid   (3) slept   (4) laying

182. Much water _____ under the Ganges.
    (1) flew   (2) had flown   (3) fled   ✓(4) flowed

183. The police took the miscreants _____ custody.
    ✓(1) into   (2) in   (3) for   (4) from

184. He finished the work _____ two hours.
    (1) on   (2) by   ✓(3) in   (4) till

185. He quickly jumps _____ conclusions.
    (1) along   ✓(2) to   (3) after   (4) over

PART – 4

Read the following passage and answer questions **186-190** :

The animal mind is like a telephone exchange, it receives stimuli from outside through the sense organs and sends out appropriate responses through the nerves that govern muscles, glands and other parts of the body. The organism is constantly interacting with its surroundings receiving messages and acting on the new state of affairs that the messages signify.

But the human mind is not a simple transmitter like a telephone exchange. It is more like a great projector ; for instead of merely mediating between an event in the outer world and a creature's responsive action, it transforms or, if you will, distorts the event into an image to be looked at, retained and contemplated. For the images of things we remember are not exact and faithful transcriptions even of our actual sense impressions. They are made as much by what we think as by what we see. It is a well-known fact that if you ask several people the size of moon's disk as they look at it, their estimates will vary from the area of dime to that of a barrel top. Like a magic lantern, the mind projects its ideas of things on the screen of what we call 'memory' ; but like all projections, these ideas are transformations of actual things. They are in fact, symbols of reality, not pieces of it.

186. An animal mind and a human mind differ like
    ✓(1) a telephone exchange and a projector.
    (2) a screen and an image.
    (3) a lantern and a candle.
    (4) projections and illusions.

187. Human memory is subject to
    ✓(1) thought and visual impression.   (2) thought and reasoning.
    (3) fancy and fantasy.   (4) nothing but hard training.

188. The animal mind's stimuli emanate from
    (1) within   ✓(2) without
    (3) human agencies   (4) nowhere in particular

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189. The human mind
(1) modifies an image.   (2) sticks blindly to images.
(3) does not record images at all.   (4) fails to respond to things.

190. Memory is
(1) the mind's screen.   (2) like the moon's disk.
(3) like a barrel top.   (4) like a magic lantern.

Read the following passage and answer the questions **191-195** :

Paper is different from other waste produce because it comes from a sustainable resource : trees unlike the minerals and oils used to make plastics and metals, trees are replaceable. Paper is also biodegradable, so it does not pose as much threat to the environment when it is discarded. While 45 out of every 100 tonnes of wood fibre used to make paper in Australia comes from waste paper, the rest comes directly from virgin fibre from forests and plantations. By the world standards this is a good performance since the world average is 33 percent waste paper. Governments have encouraged waste paper collection and sorting schemes and at the same time, the paper industry has responded by developing new recycling technologies that have paved the way for even great utilization of used fibre. As a result, industry's use of recycled fibres is expected to increase at twice the rate of virgin fibre over the coming years.

191. The most suitable title for this passage is
(1) Paper Production   (2) Paper Recycling
(3) Paper Manufacture   (4) Wood Fibre

192. Paper is different from other waste products, because
(1) it cannot be easily destroyed.
(2) it comes from an irreplaceable source.
(3) it comes from a sustainable resource.
(4) it is not biodegradable.

193. A special mention of Australia is made in the passage, because
(1) Australia's performance in paper production is extraordinary.
(2) Australia is performing very well in growing forests and plantations.
(3) Australia's performance in recycling is much lower than the world average.
(4) Australia's performance in paper recycling is much higher than the world average.

194. Which of the following is true, according to the passage ?
(1) Paper industry's use of recycled fibre will go up in the coming years.
(2) Plastics and metals are biodegradable.
(3) It is better to use virgin fibre rather than recycled fibre.
(4) Paper waste causes the greatest threat to the environment.

195. Which of the following is not directly related to paper recycling ?
(1) Collection of waste paper   (2) Growing forests and plantations
(3) Sorting of waste paper   (4) Development of new technologies

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Read the following passage and answer questions **196-200** :

Make your meaning, whatever it is, plain to your audience. Though unclear speech is usually due to unclear thought, this is not always so. Some persons who think clearly have not learned to express themselves clearly, because they are nervous in public, or have an insufficient command of words. In such cases, it may be better to resort to the device, otherwise to be condemned, of reading a speech rather than confuse the audience. Let the construction of sentences in your speech be simple enough for the hearers to follow and the words such as they cannot fail to understand. To find themselves puzzled over your meaning, and while they are still puzzling over your last sentence, to be unable to attend to the next one annoys your hearers and lessens the chance of pleasing or persuading them. This may result in their losing their interest in the speech as a whole. Ultimately they may simply leave the hall.

196. According to the writer, unclear speech
    (1)   is always an indication of confused thinking.
    ✓(2)   may not be due to confused thinking.
    (3)   may be due to the confused minds of the audience.
    (4)   may be due to some voice defect.

197. Some persons who think clearly, fail to impress a large audience because they
    (1)   have a feeble voice.   (2)   make clumsy gestures.
    ✓(3)   are overpowered by fear.   (4)   do not modulate their voice.

198. It is stated in the passage that reading out a speech
    (1)   is the best method for impressing an audience.
    (2)   should never be recommended.
    ✓(3)   may be useful in some cases.
    (4)   is necessary on formal occasions.

199. According to the writer, the audience is generally annoyed by the speaker's
    (1)   unpleasant body language.   (2)   lucid sentence structure.
    ✓(3)   high flown language.   (4)   use of rhetorical devices.

200. The annoyed audience, according to the author of the passage, may
    (1)   find the speech persuasive.   (2)   start talking among themselves.
    (3)   start booing.   ✓(4)   quit the venue.