

PART - A : GENERAL INTELLIGENCE AND REASONING

Directions : In questions no. 1 to 9, select the related letters/word/number from the given alternatives.

1. Paralysis : Nerves :: Madness : ?

- (A) Face (B) Body
(C) Eye (D) Brain

2. Giant : Dwarf :: Genius : ?

- (A) Wicked (B) Idiot
(C) Gentle (D) Tiny

3. Reasoning : Mental :: ? : Physical

- (A) Caning (B) Seeing
(C) Singing (D) Feeling

4. TRPN : LJHF :: ZXVT : ?

- (A) XWUS (B) PNLI
(C) RPMN (D) RPNL

5. TONF : AJLR :: UTSN : ?

- (A) WWQS (B) IOQS
(C) JRPT (D) WWWS

6. ZYXW : MLKJ :: RQPO : ?

- (A) DCBA (B) EDCB
(C) QPON (D) MLKJ

7. $8 \times 3 : 4 :: 6 \times 5 : ?$

- (A) 0 (B) 4
(C) 6 (D) 5

8. $35 : 4 :: 49 : ?$

- (A) 14 (B) 20
(C) 6 (D) 28

9. $7 : 36 :: 8 : ?$

- (A) 27 (B) 56
(C) 72 (D) 64

Directions : In questions no. 10 to 18, find the odd number/letters/word/number pair from the given alternatives.

10. (A) Producer (B) Director
(C) Entrepreneur (D) Investor

11. (A) Hindi (B) German
(C) Arabic (D) Sindhi

12. (A) Hindrance (B) Obstacle
(C) Obeisance (D) Impediment

13. (A) CFD (B) GJH
(C) KNM (D) JMK

14. (A) Genius (B) Character
(C) Charm (D) Clever

15. (A) Chennai (B) Aizawl
(C) Goa (D) Jaipur

16. (A) 74930 (B) 89435^{29}
(C) 66535^{18} (D) 32116^{13}

17. (A) 7 - 11 (B) 5 - 19
(C) 4 - 16 (D) 2 - 17

18. (A) 59 - 43 (B) 51 - 32
(C) 68 - 25 (D) 71 - 28

Directions : In questions no. 19 to 21, a series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

19. $AB, EF, IJ, \underline{\quad}, QR$
 (A) MN (B) KL
 (C) OP (D) CD
20. $A, C, F, J, \underline{\quad}, U, B$
 (A) K (B) O
 (C) P (D) Q
21. $ABC, CEE, FIG, \underline{\quad}, OTK$
 (A) JMD (B) JNI
 (C) JOJ (D) JKL

Directions : In questions no. 22 to 24, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

22. $ab__abb__a__bb__adb__ca$
 (A) , ccccc (B) ccbcc
 (C) cbcbc (D) bcccb
23. $adeh, ilmp,$
 (A) uv (B) ux
 (C) uy (D) uz
24. $ab__ca__ab__ca__ab__b__ca__ab__bc__$
 (A) babca (B) bcabca
 (C) bbacca (D) baccab

Directions : In questions no. 25 to 27, find the wrong number in the series.

25. 4, 11, 30, 61, 128, 219, 346
 (A) 61 (B) 30
 (C) 128 (D) 219
26. $23, 28, 38, 49, 64, 70$
 (A) 49 (B) 38
 (C) 70 (D) 64
27. $5 \quad 7 \quad 8$
 $4 \quad 3 \quad 2$
 $1 \quad 64 \quad 218$
 (A) 2 (B) 4
 (C) 64 (D) 218

Directions : In questions no. 28 and 29, from the given alternatives select the word which **cannot** be formed using the letters of the given word.

28. REFRIGERATOR
 (A) REFER (B) REGRET
 (C) REGENERATE (D) FREE
29. COMPLICATED
 (A) COMPEL (B) DUPLICATE
 (C) CAMEL (D) COMPACT
30. If $2 * 6 = 32$; $7 * 4 = 27$, then $7 * 6 = ?$
 (A) 67 (B) 42
 (C) 73 (D) 37
31. If $15 + 23 = 11$ and $22 + 32 = 10$, then $42 + 36 = ?$
 (A) 33 (B) 24
 (C) 26 (D) 28
32. If in a certain code FLOWER is written as JPSAIV, how will CURTAIN be written in that code ?
 (A) YUERMIX (B) GYUEMRX
 (C) UGYEMRX (D) GYVXEMR
33. Which alternative provides the answer ?
 If $2 + 2 = 8$, $2 + 3 = 10$, $3 + 4 = 21$, then $3 + 5 = ?$
 (A) 24 (B) 30
 (C) 45 (D) 18
34. If $324 + 289 = 35$
 $441 + 484 = 43$
 $625 + 400 = 45$
 then $256 + 729 = ?$
 (A) 33 (B) 43
 (C) 35 (D) 34

35. If 'PUNCTUATION' is coded as 'QVODUVBUJPO' and 'SING' as 'TJOH', then how is 'PARLIAMENT' coded ?

- (A) QBSMJKNFMU
 (B) QBSMJBNFOU
 (C) QTBSMJOFU
 (D) QASTMJNFOU

Directions : In questions no. 36 to 38, select the missing number from the given responses.

36. 818 (27) 926

703 (?) 639

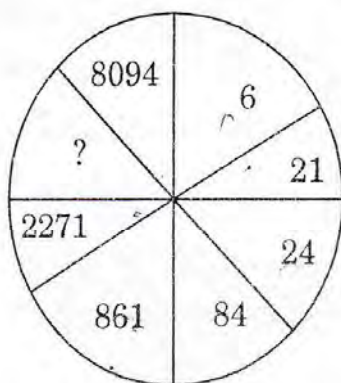
- (A) 16 (B) 17
 (C) 20 (D) 28

37.

9	3	8
6	6	6
15	8	11
12	11	?

- (A) 7 (B) 10
 (C) 8 (D) 9

38.



- (A) 2154 (B) 2254
 (C) 2245 (D) 2454

39. A man walked 10 km towards South from his house. Then he turned right and walked 6 km. He again turned right and walked 10 km. Thereafter, he turned right and walked 6 km. How far was he from the starting point ?

- (A) 2 km (B) 0 km
 (C) 3 km (D) 4 km

40. John walks 8 metres towards East and then back 13 metres; then he turns left and walks 4 metres; then walks 5 metres after turning left; he turns left again and walks 3 metres. How far is he from the starting point ?

- (A) 1 metre (B) 3 metres
 (C) 5 metres (D) 2 metres

41. A carriage driving in a fog passed a man who was walking at the rate of 3 km an hour in the same direction. He could see the carriage for 2 minutes and it was visible to him upto a distance of 100 m. What was the speed of the carriage ?

- (A) 6 km/hour (B) 8 km/hour
 (C) 2 km/hour (D) 4 km/hour

Directions : In questions no. 42 and 43, one/two statements are given, followed by two conclusions I and II. 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, follows from the given statements.

42. Statement :

Illiterate people are poor.

Conclusions :

- I. All poor people are illiterate.
 II. Some poor people are illiterate.

- (A) Only conclusion I follows
 (B) Only conclusion II follows
 (C) Neither conclusion I nor II follows
 (D) Both conclusions I and II follow

43. Statements :

1. Every year world's population increases.
 2. World's food problem increases every year due to population explosion.

Conclusions :

- I. Population control will minimise food problem in the world.
 II. Increase in population needs production of more food.

- (A) Only conclusion I follows
 (B) Only conclusion II follows
 (C) Both conclusions I and II follow
 (D) Neither conclusion I nor II follows

44. If South-East becomes North, North-East becomes West, then what will North-West become ?
- (A) East (B) South
(C) South-West (D) South-East

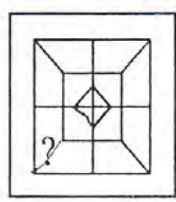
45. Which of the following sets of operation with the usual notation replacing the star in their order makes the statement valid ?

$$10 * 2 * 10 * 10$$

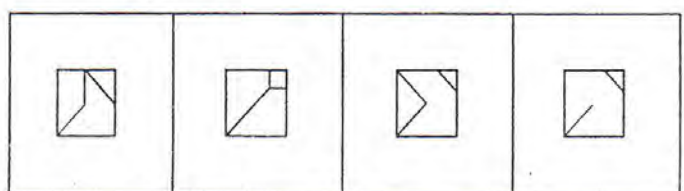
- (A) \uparrow, \geq, \times (B) $\uparrow, >, \times$
(C) $\uparrow, <, \times$ (D) $\times, >, \uparrow$

46. Which answer figure will complete the form in the question figure ?

Question figure :



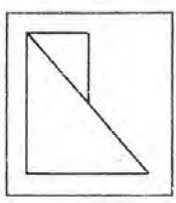
Answer figures :



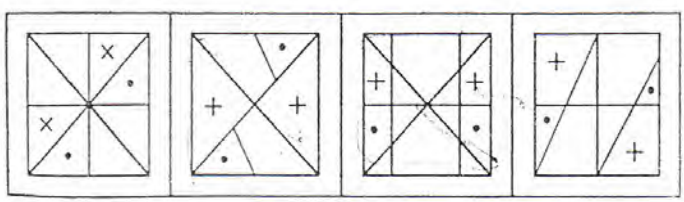
- (A) (B) (C) (D)

47. Which one of the answer figures is hidden in the given question figure ?

Question figure :



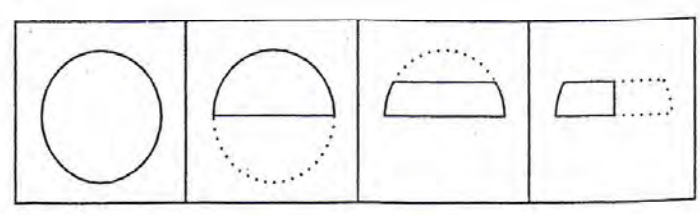
Answer figures :



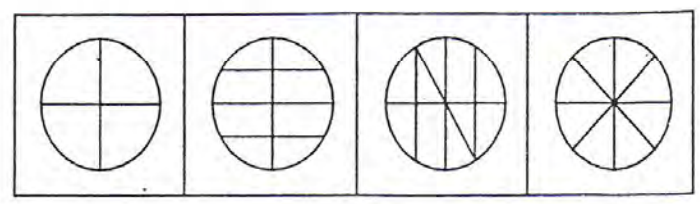
- (A) (B) (C) (D)

48. A sheet of paper has been folded as shown by the question figures. You have to figure out from amongst the four answer figures, how it will appear when opened ?

Question figures :



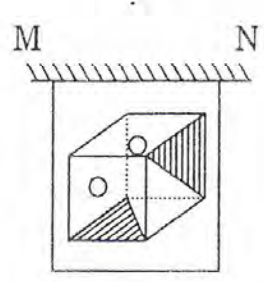
Answer figures :



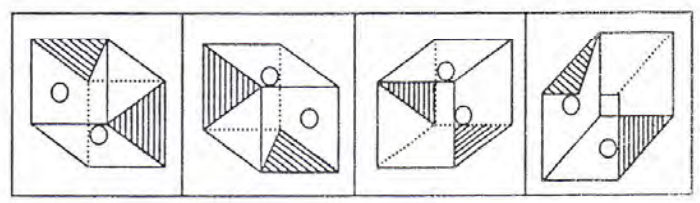
- (A) (B) (C) (D)

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

Question figure :



Answer figures :



- (A) (B) (C) (D)

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 two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented *first by its row* and *next by its column*, e.g. 'T' can be represented by 31, 76, etc. and 'S' can be represented by 14, 99, etc. Similarly, you have to identify the set for the word MANGO.

MATRIX I

	0	1	2	3	4
0	G	V	E	A	C
1	R	O	N	G	S
2	M	N	E	S	I
3	O	T	I	T	A
4	N	S	N	E	P

MATRIX II

	5	6	7	8	9
5	R	E	O	N	G
6	N	P	V	E	S
7	M	T	I	O	N
8	E	A	I	C	O
9	N	T	A	R	S

(A) 75, 34, 58, 13, 30

(B) 20, 03, 21, 00, 12

(C) 75, 86, 12, 67, 99

(D) 20, 97, 42, 14, 56

46. Weight of Ram is increasing as

1994	1995	1996	1997	1998	1999
14 kg	17 kg	22 kg	29 kg	38 kg	?

Find out his weight in 1999.

(A) 49 kg (B) 48 kg

(C) 46 kg (D) 50 kg

47. From the given alternatives select the word which can be formed using the letters given in the word.

LACKADAISICAL

(A) LACHES (B) DELICT

(C) KIDDLE (D) SCALD

48. In a cricket season, India defeated Australia thrice, West Indies defeated India thrice, Australia defeated West Indies thrice, India defeated New Zealand thrice and West Indies defeated New Zealand thrice. Which country has lost more number of times ?

(A) New Zealand (B) India

(C) Australia (D) West Indies

49. A series is given, with two terms missing. Choose the correct alternative from the given ones that will complete the series.

Y, W, T, P, K, E, X, ?, ?

(A) G, H (B) P, G

(C) R, G (D) S, R

50. Find the odd number from the given alternatives.

(A) 62 (B) 144

(C) 25 (D) 529

PART - B : GENERAL AWARENESS

51. The 2004-09 Foreign Trade Policy gave emphasis to
- (A) import substitution
 (B) increasing customs duty
 (C) export promotion
 (D) long term trade relations
52. Markets fail when
- (A) they do not maximise the aggregate consumer and producer surplus
 (B) they maximise aggregate consumer and producer surplus
 (C) they equalise the aggregate consumer and producer surplus
 (D) they escalate the aggregate consumer and producer surplus
53. Neglect of agriculture in the development process will lead to
- (A) insufficient savings
 (B) shortage of foreign exchange
 (C) lower levels of production
 (D) severe bottlenecks in overall development
54. Monopolistic competition produces
- (A) Complementary goods
 (B) Homogeneous goods
 (C) Close substitutes
 (D) Perfect substitutes
55. A Socialist economy is
- (A) a non-planned economy
 (B) a democratic economy
 (C) an equalitarian economy
 (D) a planned economy
56. That India is a secular state is implied in the phrase
- (A) Equality of status
 (B) Liberty of faith and worship
 (C) Social justice
 (D) Dignity of the individuals
57. Which kind of veto can the President make use of with regard to bills by the Parliament ?
- (A) Qualified (B) Suspensive
 (C) Pocket (D) All the above
58. In which country will the Speaker soon after getting elected sever all kinds of relations with his party ?
- (A) U.S.A. (B) England
 (C) France (D) Canada
59. Gandhian economy emphasises on
- (A) Humanitarian and cultural values
 (B) Spiritual and religious values
 (C) Political and social values
 (D) Socialist and economic values
60. Which country's Constitution is a mixture of both Parliamentary and Presidential forms of Governments ?
- (A) France (B) Great Britain
 (C) U.S.A. (D) Germany
61. Who among the following rulers paid considerable attention to irrigation and public works ?
- (A) Firuz Tughlaq
 (B) Ghiyasuddin Tughlaq
 (C) Muhammad bin Tughlaq
 (D) Alauddin Khilji
62. The Ilbert Bill was introduced during the time of
- (A) Lytton (B) Ripon
 (C) Curzon (D) Minto
63. The Muslim League was founded in 1906 at
- (A) Aligarh (B) Meerut
 (C) Dhaka (D) Karachi
64. In which language was *Chachnama* written originally ?
- (A) Arabic (B) Persian
 (C) Turki (D) Prakrit
65. *Gita Govinda* was written by
- (A) Sankara (B) Manikka Vasagar
 (C) Jayadeva (D) Namdev

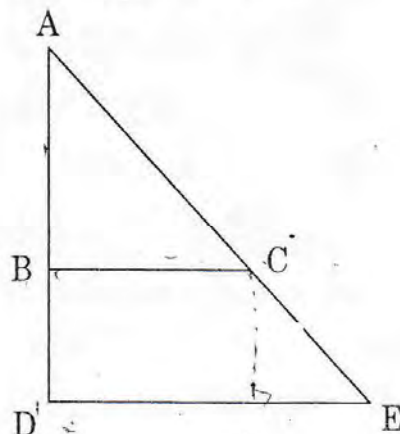
66. Magnetic Equator is closely associated with
 (A) Tidal current
 (B) Satellite launching
 (C) Natural calamities
 (D) Fishing ground
67. Lands dependent on rain are
 (A) rain-fed (B) irrigated
 (C) dry (D) arid
68. Which of the following mountain systems has the feature of syntaxial bend ?
 (A) Aravallis (B) Vindhya
 (C) Western Ghats (D) Himalayas
69. Palaeontology is the study of
 (A) Fossils (B) Rocks
 (C) Soil (D) Tree
70. The first fertiliser plant in India was set up at
 (A) Ranipet (B) Sindri
 (C) Alwaye (D) Asansol
71. When dust gets into the eye, the part that becomes inflamed and pink is the
 (A) Cornea (B) Choroid
 (C) Conjunctiva (D) Sclerotic
72. Haemoglobin is a respiratory pigment present in all chordata *except* in larvae of
 (A) Eel fish (B) Toad
 (C) Lamprey (D) Ascidia
73. Ilium is a part of
 (A) Stomach (B) Pectoral girdle
 (C) Pelvic girdle (D) Small intestine
74. The pores in leaves through which liquid water oozes out at times are called
 (A) Hydathodes (B) Lenticels
 (C) Phyllopores (D) Stomata
75. Some oil-rich seeds can be stored for long periods without any change in their oil content because of the presence of
 (A) Antioxidants (B) Fats
 (C) Proteins (D) Carbohydrates
76. Opium is a plant product obtained from
 (A) dried leaves (B) dried latex
 (C) roots (D) stem bark
77. Which one among the following is *not* a unit of weight ?
 (A) Gram (B) Dyne
 (C) Pound (D) Kilogram
78. The materials which are weakly repelled by magnets are called
 (A) para-magnetic materials
 (B) dia-magnetic materials
 (C) ferro-magnetic materials
 (D) a-magnetic materials
79. What is the distance of 'distinct vision' for normal eye ?
 (A) 12.5 cm (B) 25 cm
 (C) 37.5 cm (D) 50 cm
80. A body which is a good absorber of heat is also a
 (A) good radiator
 (B) bad radiator
 (C) good reflector
 (D) cannot be predicted
81. Which among the following was a precursor to the Internet ?
 (A) Intranet (B) Arpanet
 (C) Extranet (D) Usenet
82. In Java, _____ is an independent sequential flow of control within a process.
 (A) applet (B) method
 (C) thread (D) exception
83. The colour of cow's milk is slightly yellowish due to the presence of
 (A) ribulose (B) xanthophyll
 (C) riboflavin (D) carotene
84. Which of the following is *not* caused or aggravated by air pollution ?
 (A) Tuberculosis (B) Chronic bronchitis
 (C) Asthma (D) Pneumonia

85. Which of the following is used as a mordant in dyeing ?
 (A) Aluminium salt (B) Chromium salt
 (C) Copper salt (D) All the above
86. Semiconductor materials are
 (A) Silicon and Platinum
 (B) Silicon and Germanium
 (C) Germanium and Carbon
 (D) Platinum and Carbon
87. Food chain is present in
 (A) Pond ecosystem
 (B) Marine ecosystem
 (C) Forest ecosystem
 (D) All the above
88. Green house effect in the environment is due to the increase of
 (A) Carbon dioxide
 (B) Carbon monoxide
 (C) Ozone
 (D) Sulphur dioxide
89. Which of the following phenomena is considered as associated with global warming ?
 (A) Southern Oscillation
 (B) El Nino
 (C) La Nina
 (D) Nino Modoki
90. Which one of the following countries has the highest natural gas reserves ?
 (A) Iran (B) Qatar
 (C) Russia (D) Saudi Arabia
91. The Book 'Mein Kampf' was written by
 (A) Alexander the Great
 (B) Sir Winston Churchill
 (C) Benito Mussolini
 (D) Adolf Hitler
92. The largest tiger reserve in India is
 (A) Nagarjuna (B) Manas
 (C) Pench (D) Corbett
93. The planet nearest to the Sun is
 (A) Venus (B) Mars
 (C) Mercury (D) Jupiter
94. The least populated State in India is
 (A) Goa
 (B) Sikkim
 (C) Manipur
 (D) Arunachal Pradesh
95. The first Chief Election Commissioner of India was
 (A) K.V.K. Sundaram
 (B) S.P. Senvarma
 (C) T. Swaminathan
 (D) Sukumar Sen
96. The Indian Railways inaugurated the country's first Green Station in 2011 at
 (A) Belgaum (B) Darjeeling
 (C) Manwal (D) Gorakhpur
97. Who is the author of the latest book 'Journey of a Nation : Indian National Congress – 125 years' ?
 (A) Anand Sharma (B) Ashok Sharma
 (C) Sunil Shastri (D) Vijay Dutt
98. Which of the following became the first country in Europe to apply a ban on the wearing of full-face-coverings in 2011 ?
 (A) Germany (B) Belgium
 (C) Italy (D) France
99. Who of the following was selected in 2011 for the Dada Saheb Phalke Award for the year 2010 ?
 (A) A.R. Rahman (B) Javed Akhtar
 (C) K. Balachander (D) V.K. Murthy
100. Who of the following won the Men's Singles Title in the Wimbledon 2011 Championship ?
 (A) Novak Djokovic (B) Rafael Nadal
 (C) Roger Federer (D) Andy Murray

PART - C : QUANTITATIVE APTITUDE

101. If $\sin p + \operatorname{cosec} p = 2$, then the value of $\sin^7 p + \operatorname{cosec}^7 p$ is
 (A) 1 (B) 2
 (C) 2^7 (D) 0
102. If $\sin \theta + \sin^2 \theta + \sin^3 \theta = 1$, then $\cos^6 \theta - 4 \cos^4 \theta + 8 \cos^2 \theta$ is equal to
 (A) 4 (B) 3
 (C) 2 (D) 1
103. $\sin(45 + \theta) - \cos(45 - \theta)$ is
 (A) $2 \cos \theta$ (B) 0
 (C) $2 \sin \theta$ (D) 1
104. A man is climbing a ladder which is inclined to the wall at an angle of 30° . If he ascends at a rate of 2 m/s, then he approaches the wall at the rate of
 (A) 2 m/s (B) 2.5 m/s
 (C) 1.5 m/s (D) 1 m/s
105. Value of $2(\sin^6 \theta + \cos^6 \theta) - 3(\sin^4 \theta + \cos^4 \theta) + 1$ is
 (A) 1 (B) 2
 (C) 4 (D) 0
106. If $\tan \theta = \frac{a}{b}$, then $\frac{a \sin \theta + b \cos \theta}{a \sin \theta - b \cos \theta}$ is
 (A) $\frac{a^2 - b^2}{a^2 + b^2}$ (B) $\frac{a^2 + b^2}{a^2 - b^2}$
 (C) $\frac{a}{a^2 + b^2}$ (D) $\frac{b}{a^2 + b^2}$
107. The value of $\frac{\sin 39^\circ}{\cos 51^\circ} + 2 \tan 11^\circ \tan 31^\circ \tan 45^\circ \tan 59^\circ \tan 79^\circ - 3(\sin^2 21^\circ + \sin^2 69^\circ)$ is
 (A) -1 (B) 0
 (C) 1 (D) 2

108. The height of a tower is h and the angle of elevation of the top of the tower is α . On moving a distance $\frac{h}{2}$ towards the tower, the angle of elevation becomes β . The value of $\cot \alpha - \cot \beta$ is
 (A) $\frac{1}{2}$ (B) $\frac{2}{3}$
 (C) 1 (D) 2
109. If $\sec x + \cos x = 3$, then $\tan^2 x - \sin^2 x$ is
 (A) 9 (B) 4
 (C) 5 (D) 13
110. Given that $\angle ABC = 90^\circ$, BC is parallel to DE. If $AB = 12$, $BD = 6$ and $BC = 10$, then the length of DE is



- (A) 12 (B) 14
 (C) 16 (D) 15
111. AB and CD are two parallel chords drawn on two opposite sides of their parallel diameter such that $AB = 6$ cm, $CD = 8$ cm. If the radius of the circle is 5 cm, the distance between the chords, in cm, is
 (A) 5 (B) 3
 (C) 2 (D) 8
112. A chord AB of length $3\sqrt{2}$ unit subtends a right angle at the centre O of a circle. Area of the sector AOB (in sq. units) is
 (A) 9π (B) $\frac{9}{2}\pi$
 (C) $\frac{9}{4}\pi$ (D) 5π

113. ABC is a triangle with $\overline{AC} = \overline{BC}$ and $\angle ABC = 50^\circ$. The side \overline{BC} is produced to D so that $\overline{BC} = \overline{CD}$. $\angle BAD$ is
- (A) 75° ~~(B)~~ 90°
 (C) 50° (D) 45°
114. If a straight line L makes an angle θ ($\theta > 90^\circ$) with the positive direction of x-axis, then the acute angle made by a straight line L_1 , perpendicular to L, with the y-axis is
- (A) $\pi + \theta$ (B) $\pi - \theta$
 (C) $\frac{\pi}{2} + \theta$ ~~(D)~~ $\frac{\pi}{2} - \theta$
115. The radius of a circle is 6 cm. An external point is at a distance of 10 cm from the centre. Then the length of the tangent drawn to the circle from the external point upto the point of contact is
- (A) 6 cm (B) 12 cm
 (C) 8 cm (D) 10 cm
116. If G be the centroid of ΔABC and the area of ΔGBD is 6 sq. cm, where D is the mid-point of side BC, then the area of ΔABC is
- (A) 24 sq. cm (B) 36 sq. cm
~~(C)~~ 18 sq. cm (D) 12 sq. cm
117. A triangle is inscribed in a circle and the diameter of the circle is its one side. Then the triangle will be
- (A) equilateral (B) acute-angled
~~(C)~~ right-angled (D) obtuse-angled
118. AB and BC are two chords of a circle with centre O. If P and Q are the mid-points of AB and BC respectively, then the quadrilateral OQBP must be
- (A) a rectangle ~~(B)~~ a square
 (C) a rhombus (D) concyclic
119. In any triangle ABC, the base angles at B and C are bisected by BO and CO respectively. Then $\angle BOC$ is

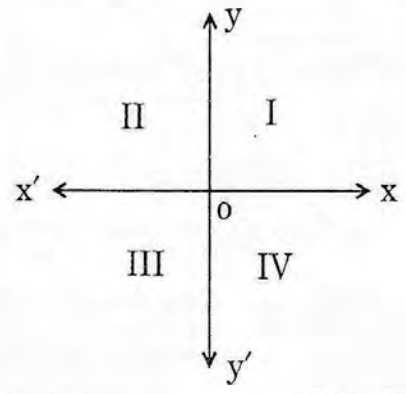
- (A) $\frac{(\pi - A)}{2}$ ~~(B)~~ $\frac{\pi}{2} + A$
 (C) $\frac{\pi}{2} + \frac{A}{2}$ (D) $\pi - \frac{A}{2}$

120. If $x = 27$ and $\sqrt[3]{x} + \sqrt[3]{y} = \sqrt[3]{729}$, then $y =$
- (A) 216 (B) 81
 (C) 64 (D) 125

121. The value of $(\sqrt{5} + \sqrt{3}) \left(\frac{3\sqrt{3}}{\sqrt{5} + \sqrt{2}} - \frac{\sqrt{5}}{\sqrt{3} + \sqrt{2}} \right)$ is
- (A) $\sqrt{2}$ ~~(B)~~ 2
 (C) $2\sqrt{2}$ ~~(D)~~ $2 - \sqrt{2}$

122. If $\frac{3-5x}{x} + \frac{3-5y}{y} + \frac{3-5z}{z} = 0$, the value of $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$ is
- ~~(A)~~ 2 (B) 3
 (C) -5 (D) 5

123. If $ab > 0$ and the point (a, b) lies in the third quadrant, the quadrant in which the point $(-b, -a)$ lies is

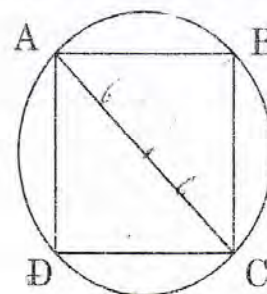


- (A) I (B) II
 (C) III (D) IV

124. If $x = \frac{\sqrt{5}-2}{\sqrt{5}+2}$, then $x^4 + x^{-4}$ is
- (A) an integer
~~(B)~~ an irrational number but not a surd
 (C) a surd
 (D) a rational number but not an integer

125. If $x + \frac{1}{x} = 3$, the value of $x^5 + \frac{1}{x^5}$ is
- (A) 123 (B) 120
 (C) 122 (D) 118

126. If $x^2 - 3x + 1 = 0$ and $x > 1$, then the value of $(x - \frac{1}{x})$ is
 (A) $-\sqrt{5}$ only (B) $\pm\sqrt{5}$
 (C) $\sqrt{5}$ only (D) 1
127. If the operation 'o' among real numbers is defined by $x \circ y = x^2 - 2y$, then values of x satisfying $2x \circ 4 = 2 \circ x$ is
 (A) $\frac{2}{3}, 2$ (B) $\frac{1}{2}, -2$
 (C) $-\frac{1}{2}, 3$ (D) $-2, \frac{3}{2}$
128. If $a^x = (x + y + z)^y$, $a^y = (x + y + z)^z$ and $a^z = (x + y + z)^x$, then the value of $x + y + z$ (given $a \neq 0$) is
 (A) 1 (B) a
 (C) 0 (D) a^3
129. If $x = 2 + \sqrt{3}$, the value of $\frac{x^6 + x^4 + x^2 + 1}{x^3}$ is
 (A) 69 (B) 67
 (C) 65 (D) 56
130. If 50% of $(x - y) = 30\%$ of $(x + y)$, then what percent of x is y ?
 (A) 25% (B) 30%
 (C) 35% (D) 40%
131. B borrowed ₹ 5,000 from A at 6% p.a. simple interest and lends it to C at compound interest of 10% p.a. If B collects the money back from C after 2 years and repays A, the profit made by B in the transaction is
 (A) ₹ 500 (B) ₹ 450
 (C) ₹ 600 (D) ₹ 1,050
132. Two trains starting at the same time from two stations 200 km apart and going in opposite directions cross each other at a distance of 110 km from one of the stations. The ratio of their speeds is
 (A) 9 : 20 (B) 11 : 9
 (C) 11 : 20 (D) 20 : 9
133. An article was sold for ₹ 96. If percentage of profit was numerically equal to the cost price, the cost price of the article is
 (A) ₹ 90 (B) ₹ 100
 (C) ₹ 70 (D) ₹ 60
134. The average of 7 numbers is 8. If one number is added, their average is 9. Then the added number is
 (A) 16 (B) 14
 (C) 12 (D) 11
135. With an average speed of 40 km/hr, a train reaches its destination in time. If it goes with an average speed of 35 km/hr, it is late by 15 minutes. The total journey is
 (A) 70 km (B) 50 km
 (C) 35 km (D) 60 km
136. Three students A, B and C play cricket. The runs scored by A and B respectively are in the ratio 3 : 2. B's runs to C's runs are also in the same ratio. Together they score 342 runs. Then the runs scored by B are
 (A) 90 (B) 171
 (C) 216 (D) 108
137. A trader fixes selling prices of commodities after increasing them by 10% and offers 10% rebate on selling prices. The percent gain or loss is
 (A) 1.2% loss (B) 1% loss
 (C) 1% gain (D) 0.9% gain
138. If the area of the circle in the figure is 36 sq. cm. and ABCD is a square, then the area of ΔACD , in sq. cm, is



- (A) 12 (B) 18
 (C) 12π (D) $\frac{36}{\pi}$

139. 40 men can finish a work in 15 days. If the work is to be completed 3 days earlier, how many more people should be employed ?

- (A) 15 (B) 10
(C) 8 (D) 3

140. A father is 7 years older than the mother and the mother's age now is 3 times the age of the daughter. The daughter is 10 years old now. What was the father's age when the daughter was born ?

- (A) 15 years (B) 40 years
(C) 27 years (D) 37 years

141. Of the three numbers, the first is twice the second and is half of the third. If the average of these numbers is 56, the numbers in order are

- (A) 48, 96, 24 (B) 48, 24, 96
(C) 96, 24, 48 (D) 96, 48, 24

142. The least number which when divided by 40 and 60 leaves the remainder 7 is

- (A) 1207 (B) 607
(C) 609 (D) 593

143. The least number which is divisible by the natural numbers upto and including 10 is

- (A) 5040 (B) 2520
(C) 7560 (D) 1260

144. The value of

$$(3^2 - 2^2)^2 + (5^2 - 4^2)^2 + (6^2 - 5^2)^2$$

is

- (A) 236 (B) 227
(C) 216 (D) 206

145. The value of

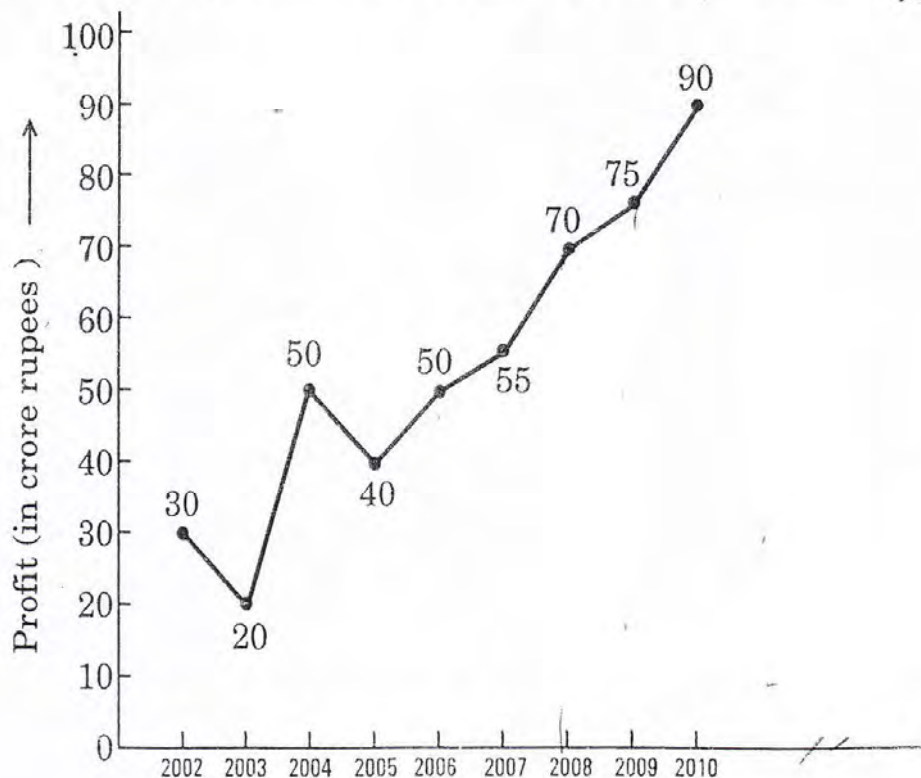
$$2 \times (2 \cdot 11 + 2 \cdot 23 + 2 \cdot 16)$$

is

- (A) 13 (B) 14
(C) 15 (D) 16

Directions : Study the graph carefully and answer the questions no. 146 to 150 :

Profit Earned by a company (in crore rupees) during certain years



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146. What is the approximate percent (to the nearest integer) profit of the year 2006, if the income of that year was ₹ 120 crores ?

- (A) 41% (B) 43%
(C) 42% (D) 51%

147. What is the approximate percent (to nearest integer) increase in the profit in the year 2009 from that of the previous year ?

- (A) 7% (B) 8%
(C) 9% (D) 10%

148. If the income in the year 2003 was ₹ 60 crores and the expenditure of that year equals the expenditure of the year 2005, the income of the company (in crore rupees) in 2005 was

- (A) 65 (B) 70
(C) 75 (D) 80

149. If the expenditure in the year 2007 was ₹ 60 crores, then the income (in crore rupees) in that year was

- (A) 85 (B) 90
(C) 115 (D) 120

150. The year in which the percentage increase in the profit from that of the previous year is the highest is

- (A) 2002 (B) 2004
(C) 2006 (D) 2008

146. A train travelling with constant speed crossed a 96 m long platform in 12 seconds and another 141 m long platform in 15 seconds. Find the speed of the train.

- (A) 50 kmph (B) 54 kmph
(C) 58 kmph (D) 60 kmph

147. A can do a piece of work in 3 days, and B can do it in 6 days. Together, they finish the work in

- (A) 1 day (B) 2 days
(C) $1\frac{1}{2}$ days (D) $2\frac{1}{2}$ days

148. If $x + \frac{4}{x} = 4$, then the value of $x^2 + \frac{4}{x^2}$ is

- (A) 8 (B) 12
(C) 5 (D) 3

149. The sum of the HCF and LCM of two numbers is 680 and their LCM is 84 times the HCF. If one of the numbers is 56, the other is

- (A) 8 (B) 12
(C) 84 (D) 96

150. Mr. X observed a kite flying at a height of 120 m from the ground and at an angle of elevation 60° . Find the distance of the kite from Mr. X.

- (A) $120\sqrt{3}$ m (B) $40\sqrt{3}$ m
(C) $60\sqrt{3}$ m (D) $80\sqrt{3}$ m

PART - D : ENGLISH COMPREHENSION

In questions no. 151 to 155, some parts of the sentences have errors and some have none. Find out if a sentence has an error and blacken the rectangle [■] corresponding to the appropriate C). If a sentence is free from error, blacken the rectangle [■] corresponding to (D) in the

- vernment wanted to play the role / of a felicitator only and was /
 (A) (B)
 keen on optimal development. / No error.
 (C) (D)
152. Admittance for / the inaugural ceremony was / only by special tickets. / No error.
 (A) (B) (C) (D)
153. Pulses when well cooked / are not only appetizing / as well as nutritious. / No error.
 (A) (B) (C) (D)
154. Martin Luther king was one of the leaders / who / has followed Mahatma Gandhi. / No error.
 (A) (B) (C) (D)
155. I could / hardly believe / what he said. / No error.
 (A) (B) (C) (D)

Directions : In questions no. 156 to 160, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate rectangle [■] in the Answer Sheet.

- | | |
|--|---|
| <p>156. The two parties have to _____ each other's sensibilities and _____ towards a win-win merger.
 (A) respect; work (B) accept; develop
 (C) seek; move (D) develop; look</p> <p>157. I _____ that my pocket _____ picked.
 (A) realized; is
 (B) had realized; has been
 (C) realized; had been
 (D) had realized; was</p> <p>158. Joseph _____ from his job because he was _____ for promotion.
 (A) left; asked
 (B) resigned; sidelined
 (C) left; declined
 (D) gave up; refused</p> <p>159. Only _____ people are _____ after death.
 (A) brave; forgotten
 (B) vicious; admired
 (C) virtual; known
 (D) virtuous; remembered</p> | <p>160. In certain traditions, the husband is _____ as the breadwinner and the wife is expected to play a _____ role.
 (A) perceived; subordinate
 (B) believed; subservient
 (C) counted; unequal
 (D) treated; unique</p> <p>Directions : In questions no. 161 to 165, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet</p> <p>161. Diligent
 (A) hardworking (B) proud
 (C) conceited (D) great</p> <p>162. Garrulous
 (A) friendly (B) talkative
 (C) grumpy (D) important</p> <p>163. Zenith
 (A) pinnacle (B) reality
 (C) hope (D) ideal</p> <p>164. Proximity
 (A) prospect (B) rapport
 (C) nearness (D) affinity</p> <p>165. Fallacy
 (A) famous invention
 (B) mistaken belief
 (C) smart move
 (D) unfounded fear</p> |
|--|---|

Directions : In questions no. 166 to 170, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.

166. Archaic
(A) modern (B) obsolete
(C) updated (D) antediluvian
167. Inadvertent
(A) indifferent (B) deliberate
(C) advertise (D) pretend
168. Verbose
(A) written (B) rubbish
(C) bogus (D) brief
169. Gregarious
(A) social (B) stern
(C) delight (D) unsociable
170. Taciturn
(A) tactful (B) foolish
(C) talkative (D) yielding

Directions : In questions no. 171 to 175, 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.

171. The secretary had the information at her fingertips.
(A) in the compact disc
(B) not accessible
(C) on her typewriter
(D) readily available
172. In spite of his recent financial troubles, Ashok has not learnt to cut his coat according to his cloth.
(A) improve his tailoring abilities
(B) live within his income
(C) overcome his problems
(D) wear modest clothes
173. She keeps blowing hot and cold and therefore, nobody can befriend her for long.
(A) being unfriendly and critical
(B) being good and bad alternately
(C) being friendly at one moment and unfriendly the next
(D) trying to cool the situation down and then raking it up again

174. Consoling her daughter, the mother said that there was no use crying over spilled milk.
(A) worrying about the milk that was spilled
(B) to cry having a glass of milk
(C) to slip and spill milk
(D) complaining about an event that cannot be changed

175. To take the bull by the horns
(A) to face danger
(B) to restrain anger
(C) to check rumours from spreading
(D) to inflict a crushing defeat upon the enemy

Directions : In questions no. 176 to 180, a part of the sentence is underlined. Below are given alternatives to the underlined part at (A), (B) and (C) which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (D).

176. Hardly had he finished the novel than the principal called him.
(A) when the principal called him
(B) then the principal called him
(C) and the principal called him
(D) No improvement
177. It is rumoured that the road will be closed tomorrow.
(A) has been talked
(B) has been told
(C) has been announced
(D) No improvement
178. You should meet the concerned programme co-ordinators for registration.
(A) respected programme co-ordinators
(B) programme co-ordinators
(C) programme co-ordinators concerned
(D) No improvement
179. The patient was writhing in depression on the bed.
(A) happiness (B) pain
(C) sorrow (D) No improvement
180. It rained bitterly throughout the day, spoiling all our plans to go out.
(A) intermittently (B) strongly
(C) fiercely (D) No improvement

Directions : In questions no. 181 to 185, out of the four alternatives, choose the one which can be substituted for the given words/sentence.

181. Spending too much time thinking about and admiring one's own appearance or abilities
(A) Aphorism (B) Euphemism
(C) Narcissism (D) Nepotism
182. Socio-economic order that existed in medieval Europe
(A) Communism (B) Democracy
(C) Socialism (D) Feudalism
183. Scholarly and learned
(A) Stoic (B) Erudite
(C) Wise (D) Vivacious
184. A system of government in which the laws of the State are believed to be the laws of God.
(A) Secularism (B) Socialism
(C) Theocracy (D) Democracy
185. The book won the prestigious award after the death of its author.
(A) vicariously (B) posthumously
(C) inordinately (D) successively

Directions : In questions no. 186 to 190, there are four different words out of which one is misspelt. Find the misspelt word and indicate it by blackening the appropriate rectangle [■] in the Answer Sheet.

186. (A) privilage (B) carriage
(C) cartilage (D) marriage
187. (A) democracy (B) idiosyncracy
(C) autocracy (D) hypocrisy
188. (A) foundry (B) observatory
(C) laboratory (D) dispensery
189. (A) gaudy (B) gaurantee
(C) gauge (D) gauze
190. (A) rapture (B) remainder
(C) territoreal (D) pharmacy

Directions : In questions 191 to 200, you have two brief passages with 5 questions following each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives and mark it in the Answer-Sheet.

Passage I (191 - 195)

Modernity-snobbery, though not exclusive to our age, has come to assume an unprecedented importance. The reasons for this are simple and of a strictly economic character. Thanks to modern machinery, production is outrunning consumption. Organized waste among consumers is the first condition of our industrial prosperity. The sooner a consumer throws away the object he has bought and buys another, the better for the producer. At the same time the producer must do his bit by producing nothing but the most perishable articles.

191. The best definition of the term 'Modernity-snobbery' is
(A) better status for those who are up-to-date
(B) those who are modern get more respect in the society
(C) paying too much attention to use things of the latest design
(D) giving undue attention to social position
192. According to the author, 'modern machinery' is vining rise to
(A) more markets
(B) variety to the consumers
(C) more waste
(D) industrial prosperity
193. The expression 'production is outrunning consumption' means
(A) production is in excess of consumption
(B) production and consumption are running close to each other
(C) production is falling short of consumption
(D) consumption is much more than production

194. For industrial prosperity, 'modernity-snobbery' is important because it induces people to
- (A) buy articles which are perishable
 - (B) discard old things for new ones
 - (C) buy only the most expensive articles to maintain social position
 - (D) help in the production of duplicate articles
195. The production of more dispensable articles is necessary because it will
- (A) attract more customers
 - (B) keep the factories working
 - (C) satisfy the immediate needs of the customers
 - (D) compel the customers to go in for new articles

Passage II (196 - 200)

Reality television is a genre of television programming which, it is claimed, presents unscripted dramatic or humorous situations, documents, actual events, and features ordinary people rather than professional actors. Although the genre has existed in some form or another since the early years of television, the current explosion of popularity dates from around 2000. Part of reality television's appeal is due to its ability to place ordinary people in extraordinary situations. Reality television also has the potential to turn its participants into national celebrities, in talent and performance programmes such as Pop Idol, though frequently 'Survivor' and 'Big Brother' participants also reach some degree of celebrity. Some commentators have said that the name "reality television" is an inaccurate description for several styles of programmes included in the genre. In competition based programmes such as 'Survivor' and other special-living-environment shows like 'The Real World', the producers design the format of the show and control the day-to-day

activities and the environment, creating a completely fabricated world in which the competition is worked out. Producers specifically select the participants, and use carefully designed scenarios, challenges, events, and settings to encourage particular behaviour and conflicts.

196. In the first sentence, the writer says, 'it is claimed' because
- (A) he agrees with the statement
 - (B) everyone agrees with the statement
 - (C) some people insist on the statement
 - (D) he wants to distance himself from the statement
197. Reality television
- (A) has been popular since the start of television
 - (B) has been popular since well before 2000
 - (C) has only been popular since 2000
 - (D) has been popular approximately since 2000
198. Reality TV appeals to some because it
- (A) shows eligible males dating women
 - (B) uses exotic locations
 - (C) shows average people in exceptional circumstances
 - (D) can turn ordinary people into celebrities
199. The participants in the Reality Shows are
- (A) professional actors
 - (B) ordinary people
 - (C) comedians
 - (D) national celebrities
200. The format of competition based programmes is decided by the
- (A) producer
 - (B) participants
 - (C) writer of the script
 - (D) professional actors