SSC CGL QUESTION PAPER

(April 21, 2013) (Evening Shift)

PART - A : GENERAL INTELLIGENCE & REASONING

Directions : In question nos. 1 and 2, which of the following interchange of signs would make the given equation correct ?

1. $10 + 10 \div 10 - 10 \times 10 = 10$
   (A) + and −
   (B) + and ÷
   (C) + and ×
   (D) ÷ and +

2. $(8 - 8) + 8 \times 32 = 64$
   (A) ×, +, −
   (B) −, ÷, +
   (C) +, ÷, +
   (D) +, ÷, ×

3. If 'R' stands for '−', 'A' stands for '+', 'B' stands for '÷' and 'C' stands for '×', then what is the value of the given equation ? (BODMAS rule will not be applicable)
   $25 A 37 C 2 B 4 R 1 = ?$
   (A) 32
   (B) 35
   (C) 30
   (D) 27

Directions : In question nos. 4 to 9, select the related letter/word/number from the given alternatives.

4. Chisel : Sculptor :: Harrow : ?
   (A) Gardener
   (B) Mason
   (C) Blacksmith
   (D) Guard

5. Moon : Satellite :: Earth : ?
   (A) Sun
   (B) Planet
   (C) Solar system
   (D) Round

6. BJCI : JBIC :: CXDW : ?
   (A) JCDU
   (B) BCJU
   (C) EVFU
   (D) XCWD

7. AB : NO :: LM : ?
   (A) OL
   (B) KP
   (C) PK
   (D) YZ

8. AG : IO :: EK : ?
   (A) LR
   (B) MS
   (C) PV
   (D) SY

9. 25 : 175 :: 32 : ?
   (A) 150
   (B) 170
   (C) 162
   (D) 160

Directions : In question nos. 10 to 15, select the one which is different from the other three responses.

10. (A) Shimla
    (B) Darjeeling
    (C) Ooty
    (D) Agra

11. (A) Foal
    (B) Hen
    (C) Lamb
    (D) Leveret

12. (A) BADC
    (B) XWZY
    (C) VUST
    (D) NMPO

13. (A) DCFG
    (B) FEHI
    (C) JILM
    (D) HGJL

14. (A) (1, 0)
    (B) (2, 3)
    (C) (3, 8)
    (D) (4, 27)

15. (A) (96, 24)
    (B) (39, 18)
    (C) (81, 54)
    (D) (82, 64)

16. Which one of the given responses would be a meaningful order of the following words in ascending order ?
    1. Accomodation
    2. Perception
    3. Scheme formation
    4. Assimilation
    5. Sensation
    (A) 1, 2, 3, 5, 4
    (B) 5, 2, 3, 4, 1
    (C) 5, 1, 4, 2, 3
    (D) 5, 2, 4, 3, 1

17. Which of the given responses would be a meaningful order of the following starting from the inner layer ?
    1. Hydrosphere
    2. Atmosphere
    3. Biosphere
    4. Lithosphere
    (A) 4, 1, 3, 2
    (B) 2, 4, 3, 1
    (C) 3, 1, 2, 4
    (D) 1, 2, 3, 4

Directions : In question nos. 18 to 21, a series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

18. EJO, FKP, GLQ, HMR, ?
    (A) ABC
    (B) DEF
    (C) MNO
    (D) INS

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19. B O C N D M E ? ?
    (A) L F   (B) O P
    (C) K L   (D) E F

20. 7, 2 = 59; 5, 3 = 28; 9, 1 = 810; 2, 1 = 13; 5, 4 = ?
    (A) 19   (B) 9
    (C) 20   (D) 239

21. 120, 440, 960, 1680, ?
    (A) 2600   (B) 3240
    (C) 3040   (D) 2400

Directions : In question nos. 22 to 24, select the missing number from the given responses.

22.
81	64	16
4	9	49
36	16	25
108	96	?

(A) 230   (B) 140   (C) 120   (D) 410

23.
25	5	5
30	5	6
35	?	5

(A) 5   (B) 4   (C) 6   (D) 7

24.
24	51	67
2	4	6
5	7	5
53	211	?

(A) 135   (B) 235   (C) 347   (D) 407

25. G is fatter than H but not as fat as M. Q is also not as fat as M. Who is the most lean person in the group ?
    (A) Q   (B) H   (C) G   (D) M

26. A man walks 15 metres south. Then turning to his right he walks 15 metres. Then turning to his left, he walks 10 metres. Again turns to his left and walks 15 metres. How far is he from his initial position ?
    (A) 10 m   (B) 25 m
    (C) 15 m   (D) 60 m

27. There are five buses M, N, O, P, Q in a row on a road. Bus M is standing at the front and Q is standing at the back end. Bus N stands between M and O. Bus P stands between O and Q. Which bus is in the middle of the five ?
    (A) M   (B) P   (C) N   (D) Q

Directions : In question nos. 28 to 30, from the given alternative words, select the word which *cannot* be formed using the letters of the given word.

28. DISTANCE
    (A) DANCE   (B) STAND
    (C) SANE   (D) TEASE

29. RESURRECTIONIST
    (A) TOURIST   (B) NOISE
    (C) SORCERER   (D) TENDER

30. COMMERCIALISM
    (A) CROME   (B) LANCER
    (C) MISER   (D) OSCAR

31. If DIVINE is coded as AFSFKB, then POWERFUL is coded as
    (A) XLHOJVIM   (B) MLTBDCRI
    (C) MLWBOCRI   (D) HLTBNCRI

32. If NOTE is written as PQVG, then TIME is written as
    (A) VQOG   (B) VKOG
    (C) VOKG   (D) VGKO

33. If SMART is coded as UKCPV, then WONDER is coded as
    (A) YMPPRT   (B) YMPBGP
    (C) YMPBFP   (D) YMBPPG

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34. If '+' stands for 'multiplication', '<' stands for 'division', '÷' stands for 'subtraction', '−' stands for 'addition' and '×' stands for 'greater than'. identify which expression is correct.

(A) $20 - 4 \div 4 + 8 < 2 \times 26$
(B) $20 \times 8 + 15 < 5 \div 9 - 8$
(C) $20 < 2 + 10 \div 4 - 6 \times 100$
(D) $20 < 5 + 25 \div 10 - 2 \times 96$

35. One day, Nita left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometres will she have to cycle to reach her home straight ?

(A) 10 km   (B) 15 km
(C) 20 km   (D) 25 km

36. Rajat moves from his office to the canteen straight at a distance of 12 metres. Then he turned left and walked for 2 metres. Then he turns left again and walks straight for 12 metres. How far is he from his office ?

(A) 10 metres   (B) 12 metres
(C) 8 metres   (D) 2 metres

Directions : In question nos. 37 and 38, two/four statements are given followed by two/four conclusions I, II, III and IV. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

37. Statements : I. All apples are bananas.
                II. All bananas are sweet.
Conclusions : I. Some apples are sweet.
                II. Some bananas are apples.

(A) Conclusion I follows.
(B) Conclusion II follows.
(C) Either conclusion I or II follows.
(D) Both conclusions I and II follow.

38. Statements : 1. All metals are silver.
                2. All silver are diamond.
                3. Some diamonds are gold.
                4. Some gold are marbles.
Conclusions : I. Some gold are metals.
                II. All metals are diamond.
                III. Some silver are marble.
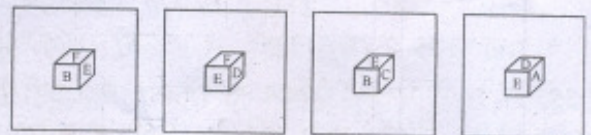   IV. Some gold are silver.

(A) Only conclusion I follows.
(B) Only conclusion II follows.
(C) Only conclusion III follows.
(D) Only conclusion IV follows.

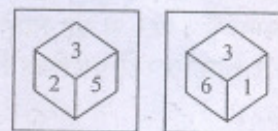39. Which of the following cubes can be created by folding the given figure ?

Question figure
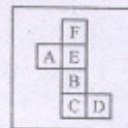
Answer figures

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

40. Two positions of a dice are given. Which number would be at the top when bottom is 2 ?
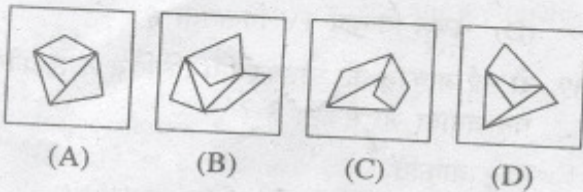

(A) 4   (B) 1   (C) 5   (D) 6

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41. Identify the response figure from which the question figure's pieces have been cut.
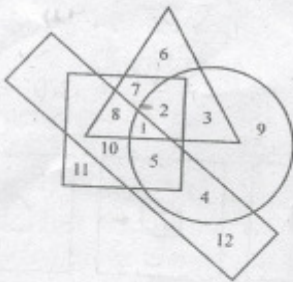
Question figure
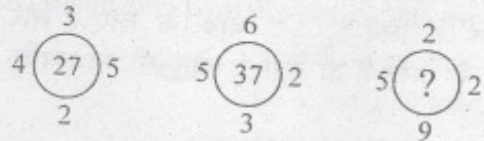

Answer figures

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

42.

In the above figure, the circle stands for employed, the square stands for social worker, the triangle stands for illiterate and the rectangle stands for truthful. Employed, truthful and illiterate social workers are indicated by which region ?
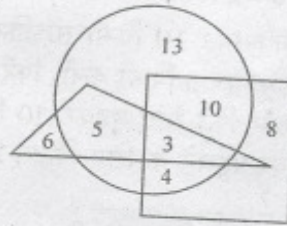
(A) 5   (B) 4   (C) 2   (D) 1

43. Find the missing number.

(A) 37   (B) 45   (C) 47   (D) 57

44.

In the above diagram, parallelogram represents women, triangle represent the sub-inspectors of police and circle represents the graduates. Which numbered area represents women graduate sub-inspectors of police ?

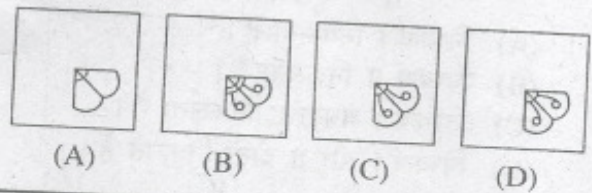(A) 5   (B) 3   (C) 8   (D) 13

Directions : In question nos. **45** and **46**, which answer figure will complete the pattern in the question figure ?

45. Question figure
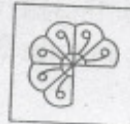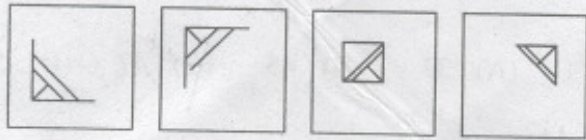

Answer figures

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

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46. Question figure
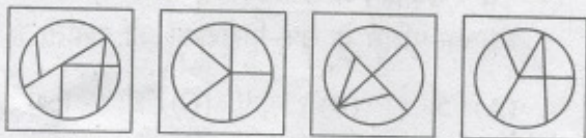

Answer figures

(A)　　(B)　　(C)　　(D)

47. From the given answer figures, select the one in which the question figure is hidden/ embedded.

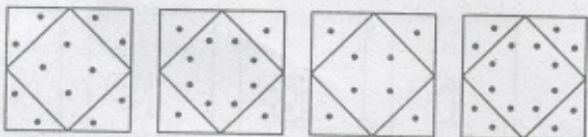Question figure

Answer figures

(A)　　(B)　　(C)　　(D)

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

Question figures

Answer figures

(A)　　(B)　　(C)　　(D)

49. Which of the answer figures is exactly the mirror image of the given pattern of numbers when the mirror is held at MN?

Question figure
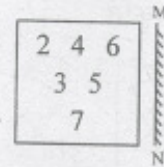
Answer figures
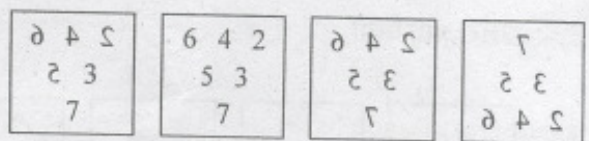
(A)　　(B)　　(C)　　(D)

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., 'B' can be represented by 01, 31 etc. and 'P' can be represented by 67, 75 etc. Similarly, you have to identify the set for the word 'CARD'.

MATRIX I

	0	1	2	3	4
0	A	B	C	D	E
1	D	C	B	A	E
2	B	A	D	C	E
3	D	B	C	A	E
4	C	D	A	E	B

MATRIX II

	5	6	7	8	9
5	P	Q	R	S	T
6	Q	S	P	R	T
7	P	T	R	S	Q
8	Q	S	P	R	T
9	T	P	S	Q	R

(A) 32, 00, 56, 10　　(B) 40, 21, 68, 44

(C) 11, 33, 57, 22　　(D) 02, 42, 77, 20

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FOR VISUALLY HANDICAPPED CANDIDATES ONLY

Directions : In question nos. **39** to **41**, select the related word/letters/number from the given alternatives.

39. Violet – Yellow; Blue – Red; Indigo – ?
   (A) White   (B) Black
   (C) Yellow   (D) Orange

40. If FIRE = DGPC, SHOT = ?
   (A) BCDF   (B) QFMR
   (C) QCMP   (D) HSQF

41. 940 : 5 :: 376 : ?
   (A) 3   (B) 2   (C) 6   (D) 5

Directions : In question nos. **42** to **44**, find the odd word/letters/number pair from the given alternatives.

42. (A) January   (B) July
   (C) August   (D) November

43. (A) OCKN   (B) WRIL
   (C) NPOS   (D) ORNK

44. (A) (28, 9)   (B) (31, 10)
   (C) (34, 11)   (D) (36, 12)

45. Which of the given responses would be a meaningful order of the following words in ascending order ?
   1. Infant   2. Adolescent   3. Foetus
   4. Child   5. Adult
   (A) 3, 1, 4, 5, 2   (B) 3, 4, 1, 5, 2
   (C) 3, 1, 4, 2, 5   (D) 3, 1, 2, 5, 4

46. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?
   b _ aacba _ bca _ cb _ a _ caa
   (A) c a b a b   (B) b a b c b
   (C) c a a a b   (D) c a b a c

47. Find the missing number of the series from the given responses.
   6, 12, 20, 30, ?
   (A) 40   (B) 42   (C) 49   (D) 38

48. From the given alternative words, select the word which *cannot* be formed using the letters of the given word :
   RECREATION
   (A) CREATE   (B) RATIO
   (C) RADIANT   (D) REACTION

49. Which of the following interchange of signs would make the given equation correct ?
   $16 - 8 \div 4 + 5 \times 2 = 8$
   (A) $\div$ and $\times$ (B) $-$ and $\div$
   (C) $\div$ and $+$ (D) $-$ and $\times$

50. One statement is given followed by two conclusions I and II. You have to consider the statement to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

   Statement : It is risky to get down from the running bus.

   Conclusions : I. All those who get down from the running bus take the risk of being hurt.

        II. Generally, people do not like to get hurt.

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

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PART – B : GENERAL AWARENESS

51. Solids which conduct electricity at higher temperature but *not* at lower temperature are called
    (A) super-conductor (B) metallic-conductor
    (C) semi-conductor (D) insulator

52. Which one of the following has greatest mass ?
    (A) electron (B) proton
    (C) neutron (D) hydrogen nucleus

53. A television channel is characterised by
    (A) frequency of transmitted signal
    (B) velocity of transmitted signal
    (C) physical dimension of television screen
    (D) size of picture tube

54. The first computer mouse was built by
    (A) Douglas Engelbart (B) William English
    (C) Oaniel Coogher (D) Robert Zawacki

55. An organization's profitability depends on
    (A) Quality of data processed
    (B) Quantity of data processed
    (C) Speed of processing the data
    (D) Both (A) and (C)

56. The density of water is 1 g/cc. This is strictly valid at
    (A) 0°C (B) 4°C
    (C) 25°C (D) 100°C

57. The process of photosynthesis involves conversion of
    (A) chemical energy into radiant energy
    (B) chemical energy into mechanical energy
    (C) solar energy into chemical energy
    (D) mechanical energy into solar energy

58. A colloidal system in which a liquid is dispersed in a liquid is called
    (A) gel (B) emulsion
    (C) sol (D) precipitate

59. The antiseptic compound present in dettol is
    (A) Iodine (B) Enloroxylenol
    (C) Biothional (D) Cresol

60. As per the TRIPS Agreement-1994, a good originating from a region with specific character/quality/reputation is covered/to be protected under the IPR as
    (A) Patent
    (B) Trademark
    (C) Trade secret
    (D) GI (Geographical Indicator)

61. Which of the following crop cultivation is banned by the Hon'ble Supreme Court of India ?
    (A) Lathyrus (Khesari)
    (B) Genetically modified brinjal
    (C) Bt cotton for export
    (D) Bt cotton for local use

62. Ice glacier's melting is a common phenomenon linked to the rise in seawater level. The glaciers are predominantly present in
    (A) Greenland (B) Antarctica
    (C) Himalayas (D) Arctic

63. Who is known for establishing the "Anand Van" ?
    (A) Jubilant Buddha (B) H. N. Bahuguna
    (C) Baba Amte (D) Motilal Nehru

64. The civilian Airport of highest altitude is in
    (A) Tibet (B) Nepal
    (C) India (D) China

65. Genomic (DNA) studies in camel have been completed recently by the scientists of
    (A) South Africa (B) India
    (C) China (D) Pakistan

66. International Simon Bolivar Prize was recently awarded to Aung San Suu Kyi by the government of
    (A) Mauritius (B) China
    (C) Venezuela (D) Cuba

67. BCCI conferred "Col. C. K. Naydu Lifetime Achievement Award" during 2012 to
    (A) Sachin Tendulkar (B) M. S. Dhoni
    (C) VVS Laxman (D) Sunil Gavaskar

68. Air quality depicting PM 2·5 is more hazardous to
    (A) Archaeological Monuments
    (B) National Parks
    (C) Botanical Gardens
    (D) Old Men and Women

69. Which of the following is not a fundamental right as per the Indian Constitution ?
    (A) Right to Education
    (B) Right to Information
    (C) Right to Speech
    (D) Right to Life

70. Who is custodian of the Indian Constitution ?
    (A) President of India
    (B) Chief Justice of India
    (C) Prime Minister of India
    (D) Chairman of Rajya Sabha

71. Piped Natural Gas (PNG) is used for
    (A) Mining (B) Welding
    (C) Anaesthesia (D) Cooking

72. Greenpark Stadium is in
    (A) Bengaluru (B) Dehradun
    (C) Chandigarh (D) Kanpur

73. Rowlatt Act 1919 was enacted during the period of
    (A) Lord Chelmsford (B) Lord William
    (C) Lord Minto (D) Lord Bentinck

74. Panchayati Raj System was implemented first in the pair of states
(A) Andhra Pradesh and Rajasthan
(B) Assam and Bihar
(C) Arunachal Pradesh and Uttar Pradesh
(D) Punjab and Chandigarh

75. Human Environment Conference - 1972 was held at
(A) Stockholm   (B) Paris
(C) Geneva   (D) Australia

76. 'Gold' is mainly related to
(A) Local market
(B) National market
(C) International market   (D) Regional market

77. Bilateral monopoly refers to the market situation of
(A) two sellers, two buyers
(B) one seller and two buyers
(C) two sellers and one buyer
(D) one seller and one buyer

78. The economist who believed that unemployment is impossible and that market mechanism has a built in regulatory system to meet any ups and downs
(A) J. M. Keynes   (B) Ohlin
(C) J. B. Say   (D) Galbraith

79. Constituent Assembly of India was formulated on the recommendation of
(A) Wavel Plan   (B) Cripps Mission
(C) August Offer   (D) Cabinet Mission

80. Which of the following is an essential element of the state ?
(A) Sovereignty   (B) Government
(C) Territory   (D) All these

81. Which has become a legal right under 44th Amendment ?
(A) Right to Education
(B) Right to Property
(C) Right to Judicial Remedies
(D) Right to Work

82. By which Constitution Amendment Act, Right to Property ceased to remain a fundamental right ?
(A) 44th   (B) 42nd
(C) 43rd   (D) 45th

83. Who said "Truth is the ultimate reality and it is God" ?
(A) Swamy Vivekananda
(B) Rabindra Nath Tagore
(C) M. K. Gandhi
(D) Radhakrishnan

84. Which of the following tribes is associated with the "Tana Bhagat" movement ?
(A) Uraon   (B) Munda
(C) Santhal   (D) Konda dora

85. Who founded the Naujawan Bharat Sabha ?
(A) B. C. Pal
(B) G. Subramania Iyer
(C) Sardar Bagat Singh
(D) Rukmani Lakshmipath

86. The Narendra Mandal or Chamber of Princes was inaugurated in 1921 by
(A) Lord Curzon   (B) Lord Wellesley
(C) Duke of Cannaught (D) Duke of Wellingdon

87. Buddha, Dhamma and Sangha together are known as
(A) Triratna   (B) Trivarga
(C) Trisarga   (D) Trimurti

88. Who was called Lichchavi Dauhitra ?
(A) Chandragupta I   (B) Skandagupta
(C) Kumaragupta   (D) Samudragupta

89. Which hill station is called as the 'Queen of the Satpuras'
(A) Pachmarhi   (B) Nilgiri
(C) Mahenderagiri (D) Cardamom

90. Which national highway connects Delhi and Kolkata via Mathura and Varanasi ?
(A) NH 4   (B) NH 2
(C) NH 10   (D) NH 6

91. The country where drip irrigation is more efficiently used is
(A) India   (B) Israel
(C) Sri Lanka   (D) England

92. Which of the following is an endangered species ?
(A) Black buck   (B) Blue sheep
(C) Gangetic dolphin (D) Mithun

93. Of the following man-made disasters, which is socially induced ?
(A) Debris Avalanche
(B) Salt Water Intrusion
(C) Arson
(D) Ozone depletion

94. Which one of the following endocrine gland is situated in the neck ?
(A) Pancreas   (B) Thyroid
(C) Pituitary   (D) Adrenals

95. The seat of intelligence is situated in the
(A) cerebrum   (B) cerebellum
(C) medulla   (D) thalamus

96. What is the Normal Blood Volume in human adult ?
(A) One litre   (B) Three litres
(C) Five litres   (D) Seven litres

97. The fasting blood glucose level in adults in mg/100 ml is
(A) 200   (B) 160
(C) 100   (D) 60

98. Entomology is the study of
(A) Birds   (B) Insects
(C) Fossils   (D) Fungi

99. Exobiology is a science that deals with
(A) extinct forms
(B) life in other planets
(C) life in the outer space
(D) life in marine habitat

100. In radio-communication, the signals emitted by transmitting antenna are reflected on
(A) stratosphere   (B) ozonosphere
(C) ionosphere   (D) troposphere

PART – C : QUANTITATIVE APTITUDE

101. ABCD is a cyclic trapezium with $AB \parallel DC$ and AB diameter of the circle. If $\angle CAB = 30°$ then $\angle ADC$ is

(A) 60° (B) 120°

(C) 150° (D) 30°

102. ABC is a triangle. The bisectors of the internal angle $\angle B$ and external angle $\angle C$ intersect at D. If $\angle BDC = 50°$, then $\angle A$ is

(A) 100° (B) 90°

(C) 120° (D) 60°

103. AB is the chord of a circle with centre O and DOC is a line segment originating from a point D on the circle and intersecting AB produced at C such that $BC = OD$. If $\angle BCD = 20°$, then $\angle AOD = ?$

(A) 20° (B) 30°

(C) 40° (D) 60°

104. In a circle of radius 17 cm, two parallel chords of lengths 30 cm and 16 cm are drawn. If both the chords are on the same side of the centre, then the distance between the chords is

(A) 9 cm (B) 7 cm

(C) 23 cm (D) 11 cm

105. If $\sin(A - B) = \frac{1}{2}$ and $\cos(A + B) = \frac{1}{2}$ where $A > B > 0$ and $A + B$ is an acute angle, then the value B is

(A) $\frac{\pi}{6}$ (B) $\frac{\pi}{12}$

(C) $\frac{\pi}{4}$ (D) $\frac{\pi}{2}$

106. The fifth term of the sequence for which $t_1 = 1$, $t_2 = 2$ and $t_{n+2} = t_n + t_{n+1}$, is

(A) 5 (B) 10 (C) 6 (D) 8

107. If $(x + 7954 \times 7956)$ be a square number, then the value of 'x' is

(A) 1 (B) 16 (C) 9 (D) 4

108. A can do a piece of work in 12 days while B alone can do it in 15 days. With the help of C they can finish it in 5 days. If they are paid ₹ 960 for the whole work how much money A gets ?

(A) ₹ 480 (B) ₹ 240

(C) ₹ 320 (D) ₹ 400

109. Ronald and Elan are working on an Assignment. Ronald takes 6 hours to type 32 pages on a computer, while Elan takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages ?

(A) 7 hrs. 30 min. (B) 8 hrs.

(C) 8 hrs. 15 min. (D) 8 hrs. 25 min.

110. One man, 3 women and 4 boys can do a piece of work in 96 hours, 2 men and 8 boys can do it in 80 hours, 2 men and 3 women can do it in 120 hours. 5 men and 12 boys can do it in

(A) $39\frac{1}{11}$ hours (B) $42\frac{7}{11}$ hours

(C) $43\frac{7}{11}$ hours (D) 44 hours

111. ABC is a right angled triangle, B being the right angle. Mid-points of BC and AC are respectively B' and A'. The ratio of the area of the quadrilateral AA' B'B to the area of the triangle ABC is

(A) 1 : 2 (B) 2 : 3

(C) 3 : 4 (D) None of the above

SPACE FOR ROUGH WORK

112. A square *ABCD* is inscribed in a circle of unit radius. Semicircles are described on each side as a diameter. The area of the region bounded by the four semicircles and the circle is
   (A) 1 sq. unit
   (B) 2 sq. unit
   (C) 1·5 sq. unit
   (D) 2·5 sq. unit

113. If the perimeters of a rectangle and a square are equal and the ratio of two adjacent sides of the rectangle is 1 : 2 then the ratio of area of the rectangle and that of the square is
   (A) 1 : 1
   (B) 1 : 2
   (C) 2 : 3
   (D) 8 : 9

114. The interest on a certain sum of money is ₹ 22 and the discount on the same sum for the same time and at the same rate is ₹ 20, find the sum.
   (A) ₹ 220
   (B) ₹ 200
   (C) ₹ 210
   (D) ₹ 212

115. A retailer purchased radiosets at the rate of ₹ 400 each from a wholesaler. He raised the price by 30% and then allowed a discount of 8% on each set. His profit will be
   (A) 19%
   (B) 78·4%
   (C) 22%
   (D) 19·6%

116. A reduction in the price of apples enables a person to purchase 3 apples for ₹ 1 instead of ₹ 1·25. What is the % of reduction in price (approximately) ?
   (A) 20
   (B) 25
   (C) 30
   (D) $33\frac{1}{3}$

117. ₹ 700 is divided among *A*, *B*, *C* in such a way that the ratio of the amounts of *A* and *B* is 2 : 3 and that of *B* and *C* is 4 : 5. Find the amounts in ₹ each received, in the order *A*, *B*, *C*.
   (A) 150, 250, 300
   (B) 160, 240, 300
   (C) 150, 250, 290
   (D) 150, 240, 310

118. The ratio of monthly incomes of *A*, *B* is 6 : 5 and their monthly expenditures are in the ratio 4 : 3. If each of them saves ₹ 400 per month, find the sum of their monthly incomes.
   (A) 2300
   (B) 2400
   (C) 2200
   (D) 2500

119. *A* and *B* have together three times what *B* and *C* have, while *A*, *B*, *C* together have thirty rupees more than that of *A*. If *B* has 5 times that of *C*, then *A* has
   (A) ₹ 60
   (B) ₹ 65
   (C) ₹ 75
   (D) ₹ 45

120. A cricket player after playing 10 tests scored 100 runs in the 11th test. As a result, the average of his runs is increased by 5. The present average of runs is
   (A) 45
   (B) 40
   (C) 50
   (D) 55

121. A fruit seller buys some oranges at the rate of 4 for ₹ 10 and an equal number more at 5 for ₹ 10. He sells the whole lot at 9 for ₹ 20. What is his loss or gain per cent ?
   (A) Loss per cent $1\frac{19}{81}$ %
   (B) Gain per cent $1\frac{19}{81}$ %
   (C) No loss or no profit
   (D) Loss per cent 2%

122. 15 litres of a mixture contains alcohol and water in the ratio 1 : 4. If 3 litres of water is mixed in it, the percentage of alcohol in the new mixture will be
   (A) 15
   (B) $16\frac{2}{3}$
   (C) 17
   (D) $18\frac{1}{2}$

123. A man rides at the rate of 18 km/hr, but stops for 6 mins. to change horses at the end of every 7th km. The time that he will take to cover a distance of 90 km is
   (A) 6 hrs.
   (B) 6 hrs. 12 min.
   (C) 6 hrs. 18 min.
   (D) 6 hrs. 24 min.

SPACE FOR ROUGH WORK

124. A man rows down a river 15 km in 3 hrs. with the stream and returns in $7\frac{1}{2}$ hrs. The rate at which he rows in still water is
    (A) 2·5 km/hr   (B) 1·5 km/hr
    (C) 3·5 km/hr   (D) 4·5 km/hr

125. There is 100% increase to an amount in 8 years, at simple interest. Find the compound interest of ₹ 8000 after 2 years at the same rate of interest.
    (A) ₹ 2500   (B) ₹ 2000
    (C) ₹ 2250   (D) ₹ 2125

126. If the number p is 5 more than q and the sum of the squares of p and q is 55, then the product of p and q is
    (A) 10   (B) −10
    (C) 15   (D) −15

127. If $a + \dfrac{1}{a-2} = 4$, then the value of
    $(a-2)^2 + \left(\dfrac{1}{a-2}\right)^2$ is
    (A) 0   (B) 2   (C) −2   (D) 4

128. If $a + b + c = 2s$, then
    $\dfrac{(s-a)^2 + (s-b)^2 + (s-c)^2 + s^2}{a^2 + b^2 + c^2}$ is equal to
    (A) $a^2 + b^2 + c^2$ (B) 0
    (C) 1   (D) 2

129. If $xy\,(x+y) = 1$ then the value of
    $\dfrac{1}{x^3 y^3} - x^3 - y^3$ is
    (A) 3   (B) −3   (C) 1   (D) −1

130. If $a^3 - b^3 - c^3 = 0$ then the value of $a^9 - b^9 - c^9 - 3a^3 b^3 c^3$ is
    (A) 1   (B) 2   (C) 0   (D) −1

131. The minimum value of $(x-2)(x-9)$ is
    (A) $-\dfrac{11}{4}$ (B) $\dfrac{49}{4}$
    (C) 0   (D) $-\dfrac{49}{4}$

132. If $x + y + z = 6$ and $x^2 + y^2 + z^2 = 20$ then the value of $x^3 + y^3 + z^3 - 3xyz$ is
    (A) 64   (B) 70   (C) 72   (D) 76

133. The third proportional to
    $\left(\dfrac{x}{y} + \dfrac{y}{x}\right)$ and $\sqrt{x^2 + y^2}$ is
    (A) xy (B) $\sqrt{xy}$
    (C) $\sqrt[3]{xy}$ (D) $\sqrt[4]{xy}$

134. In a triangle ABC, the side BC is extended up to D. Such that $CD = AC$, if $\angle BAD = 109°$ and $\angle ACB = 72°$ then the value of $\angle ABC$ is
    (A) 35°   (B) 60°
    (C) 40°   (D) 45°

135. Two circles touch each other internally. Their radii are 2 cm and 3 cm. The biggest chord of the greater circle which is outside the inner circle is of length
    (A) $2\sqrt{2}$ cm   (B) $3\sqrt{2}$ cm
    (C) $2\sqrt{3}$ cm   (D) $4\sqrt{2}$ cm

136. $ABCD$ is a cyclic quadrilateral. AB and DC are produced to meet at P. If $\angle ADC = 70°$ and $\angle DAB = 60°$, then the $\angle PBC + \angle PCB$ is
    (A) 130°   (B) 150°
    (C) 155°   (D) 180°

137. From a point P which is at a distance of 13 cm from centre O of a circle of radius 5 cm, in the same plane, a pair of tangents PQ and PR are drawn to the circle. Area of quadrilateral $PQOR$ is
    (A) 65 cm^2 (B) 60 cm^2
    (C) 30 cm^2 (D) 90 cm^2

SPACE FOR ROUGH WORK

138. A horse is tied to a post by a rope. If the horse moves along a circular path always keeping the rope stretched and describes 88 metres when it has traced out 72° at the centre the length of the rope is $\left(\text{Take } \pi = \frac{22}{7}\right)$

(A) 70 m   (B) 75 m

(C) 80 m   (D) 65 m

139. Maximum value of $(2\sin\theta + 3\cos\theta)$ is

(A) 2   (B) $\sqrt{13}$ (C) $\sqrt{15}$ (D) 1

140. The value of
$152 (\sin 30° + 2\cos^2 45° + 3\sin 30° + 4\cos^2 45° + ... + 17\sin 30° + 18\cos^2 45°)$ is

(A) an integer but not a perfect square

(B) a rational number but not an integer

(C) a perfect square of an integer

(D) irrational

141. If $(1 + \sin\alpha)(1 + \sin\beta)(1 + \sin\gamma) = (1 - \sin\alpha)(1 - \sin\beta)(1 - \sin\gamma)$, then each side is equal to

(A) $\pm\cos\alpha\cos\beta\cos\gamma$ (B) $\pm\sin\alpha\sin\beta\sin\gamma$

(C) $\pm\sin\alpha\cos\beta\cos\gamma$ (D) $\pm\sin\alpha\sin\beta\cos\gamma$

142. One of the four angles of a rhombus is 60°. If the length of each side of the rhombus is, 8 cm, then the length of the longer diagonal is

(A) $8\sqrt{3}$ cm   (B) 8 cm

(C) $4\sqrt{3}$ cm   (D) $\frac{8}{\sqrt{3}}$ cm

143. If the arcs of square length in two circles subtend angles of 60° and 75° at their centres the ratio of their radii is

(A) 3 : 4   (B) 4 : 5

(C) 5 : 4   (D) 3 : 5

144.
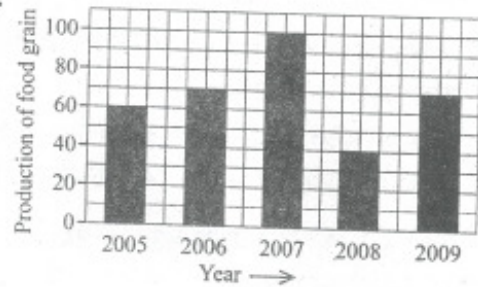
Study the above bar graph showing the production of food grains (in million tons).

What is the ratio between the maximum production and the minimum production during the given period ?

(A) 1 : 2   (B) 2 : 3

(C) 3 : 4   (D) 5 : 2

Study the following Histogram and answer following question nos. 145 to 149.
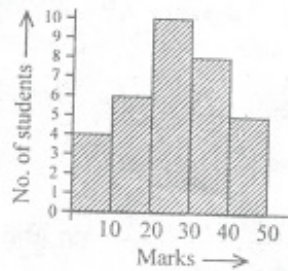
145. The total number of students involved in the data is

(A) 33   (B) 32   (C) 43   (D) 42

146. The maximum number of students got the marks in the interval of

(A) 10 – 20   (B) 20 – 30

(C) 30 – 40   (D) 40 – 50

147. The least number of students got the marks in the interval

(A) 40 – 50   (B) 20 – 30

(C) 10 – 20   (D) 0 – 10

SPACE FOR ROUGH WORK

148. The ratio of the students obtaining marks in the first and the last interval is
    (A) 5 : 4
    (B) 6 : 5
    (C) 4 : 5
    (D) 3 : 4

149. The difference in the amount estimated by the family on interior decoration and architect's fees is
    (A) ₹ 10000
    (B) ₹ 9500
    (C) ₹ 7200
    (D) ₹ 9600

150.

In a certain country, allocations to various sectors of the yearly budget per ₹ 1000 crores are represented by this pie-diagram. The expenditure (in ₹) on Agriculture is
    (A) 250 crores
    (B) 150 crores
    (C) 300 crores
    (D) 200 crores

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

144. A trader sells two computers at the same price. On one he makes a profit of 15% and on the other he suffers a loss of 15%. Find his gain or loss per cent.
    (A) Loss 2·25%
    (B) Gain 2%
    (C) No loss no gain
    (D) Loss 2%

145. Two trains of equal length running in opposite directions, pass a student standing by the side of railway line in 18 sec and 12 sec respectively. The time that the two trains will take to cross each other, is
    (A) 7·2 sec
    (B) 9·6 sec
    (C) 10·8 sec
    (D) 14·4 sec

146. A father's age was five times his son's age five years ago and will be three times the son's age after two years. The ratio of the present age of the father to that of the son is
    (A) 33 : 5
    (B) 11 : 5
    (C) 3 : 1
    (D) 10 : 3

147. A retailer buys a sewing machine at a discount of 15% and sells it for ₹ 1955. Thus he makes a profit of 15%. The discount is
    (A) ₹ 270
    (B) ₹ 290
    (C) ₹ 300
    (D) ₹ 330

148. A number N is divisible by 6 but not divisible by 4. Which of the following will not be an integer ?
    (A) $\dfrac{N}{3}$
    (B) $\dfrac{N}{2}$
    (C) $\dfrac{N}{6}$
    (D) $\dfrac{N}{12}$

149. In a football tournament there are 50 teams. Each team plays with every other team exactly once. How many matches will have to be organised ?
    (A) 1025
    (B) 1225
    (C) 1026
    (D) 1226

150. A leak can empty a full tank in 12 minutes. If the leak is absent, two pipes A and B can fill the tank separately in 15 minutes and 20 minutes respectively. If the leak is active and both the pipes are open, then the tank will be filled in
    (A) 30 minutes
    (B) 60 minutes
    (C) 23 minutes
    (D) 35 minutes

SPACE FOR ROUGH WORK

PART – D : ENGLISH COMPREHENSION

Directions : In question nos. **151** and **152**, there are four different words out of which one is correctly spelt. Find the correctly spelt word and indicate it by blackening the appropriate oval [●] in the Answer Sheet.

151. (A) humorous   (B) humourous
     (C) humorus   (D) humourus

152. (A) narcisism   (B) narcissism
     (C) narcisim   (D) narsisism

Directions : In question nos. **153** to **162**, you have two brief passages with 5 questions in each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives and mark it by blackening the appropriate oval [●] in the Answer Sheet.

PASSAGE I

(Question Nos. 153 to 157)

Pidgins are languages that are not, acquired as mother tongues and that are used for a restricted set of communicative functions. They are formed from a mixture of languages and have a limited vocabulary and a simplified grammar. Pidgins serve as a means of communication between speakers of mutually unintelligible languages and may become essential, in multilingual areas. A creole develops from a pidgin when the pidgin becomes the mother tongue of the community. To cope with the consequent expansion of communicative functions the vocabulary is increased and the grammar becomes more complex. Where a creole and the standard variety of English coexist, as in the Carribbean, there is a continuum from the most extreme form of creole to the form that is closest to the standard language. Linguists mark off the relative positions on the creole continuum as the 'basilect' (the furthest from the standard language), the 'mesolect', and the 'acrolet'. In such situations, most creole speakers can vary their speech along the continuum and many are also competent in the standard English of their country.

153. A pidgin develops in a situation when
    (A) Different and mutually unintelligible languages exist side by side
    (B) A creole becomes the mother tongue of a linguistic community
    (C) A language with restricted vocabulary undergoes an expansion in grammar and vocabulary
    (D) Two similar languages are mixed to create a new language

154. According to the given passage a pidgin becomes a creole when
    (A) It ceases to be a means of communication
    (B) It becomes the mother tongue for a new generation of speakers
    (C) Its vocabulary undergoes some kind of change
    (D) Two or more languages are mixed with an existing pidgin

155. According to the passage, a creole continuum is
    (A) A linguistic term for the mixture of more than two languages
    (B) A scale which measures the linguistic competence of the speaker
    (C) A scale in which the proximity of the creole to the standard language is measured
    (D) A record of the continuous history of a creole

156. According to the passage 'basilect' means
    (A) An impure form of a creole
    (B) A form of creole which is furthest from the standard language
    (C) A form of creole which has an extended vocabulary
    (D) A form of creole which is very close to the standard language

157. Find out a word in the passage which is opposite in meaning to the word – 'Simplified'
    (A) Complex   (B) Expansion
    (C) Restricted   (D) Consequent

PASSAGE II

(Question Nos. 158 to 162)

There were four of us – George, and William Samuel Harris, and myself, and Montmorency. We were sitting in my room, smoking and talking about how bad we were – bad from a medical point of view I mean, of course.

We were all feeling seedy, and we were getting quite nervous about it. Harris said he felt such extraordinary fits of giddiness come over him at times, that he hardly knew what he was doing; and then George said that he had fits of giddiness too, and hardly knew what he was doing. With me, it was my liver that was out of order. I knew it was my liver that was out of order, because I had just been reading a patent liver-pill circular, in which were detailed the various symptoms by which a man could tell when his liver was out of order. I had them all.

It is a most extraordinary thing, but I never read a patent medicine advertisement without being impelled to the conclusion that I am suffering from the particular disease therein dealt with in its most virulent form. The diagnosis seems in every case to correspond exactly with all the sensations that I have ever felt.

158. The four felt down and out because

(A) the room was too smoky

(B) they could never read a patent medicine advertisement

(C) they thought they were ill

(D) they had experienced a most extraordinary thing

159. Whenever the speaker read a liver pill circular

(A) he suffered from an extraordinary surge of giddiness

(B) he felt sure that he had a liver disorder

(C) he felt the urge to smoke

(D) All of the above

160. The author of the above passage seems to be suffering from

(A) fits of morbid depression without real cause

(B) an abnormal anxiety about his health

(C) melancholia

(D) an unnecessarily dark, gloomy and pessimistic attitude to life

161. Harris was troubled by

(A) a symptom of vertigo

(B) garrulity

(C) tribulation

(D) frailty

162. The word which is closest in meaning to virulent is

(A) fantastic

(B) vital

(C) viral

(D) hostile

Directions : In question nos. 163 to 167, some parts of the sentences have errors and some have none. Find out which part of a sentence has an error and blacken the oval [●] corresponding to the appropriate letter (A, B, C). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet.

163. I whistled thrice
(A)
with full might and raise my arms
(B)
towards the sky.   No error.
(C)   (D)

164. Science and religion
(A)
are both necessary for man and for their
(B)
outer and inner self respectively.   No error.
(C)   (D)

165. At certain seasons,   some areas on Mars
(A)   (B)
is subject to strong winds.   No error.
(C)   (D)

166. As an artist   Raju is as good,
(A)   (B)
if not better than Ramesh.   No error.
(C)   (D)

167. The scientists   could not hardly
(A)   (B)
complete all the experiments.   No error.
(C)   (D)

Directions : In question nos. 168 to 172, 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 oval [●] in the Answer Sheet.

168. Google is one of the most popular search engines, it is _____ by the internet users.

(A) utilized

(B) effected

(C) examined

(D) flabbergasted

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[P.T.O.

169. Raj was tired of Puja's _____ approach, so he asked her to make her final decision by that evening.
    (A) silly-willy   (B) dilly-dally
    (C) wasting   (D) dilly-nally

170. Ria is _____ at speaking languages. It is difficult to _____ only one puppy for animal shelter.
    (A) adept, adapt   (B) adapt, adapt
    (C) adept, adopt   (D) adapt, adopt

171. School days are considered to be the best years of your life. When my _____ year in school began, I began to think of those past enjoyable days and of my future also.
    (A) penultimate   (B) absolute
    (C) integral   (D) termination

172. Being _____, the judge gave a favourable verdict.
    (A) sagacious   (B) pugnacious
    (C) malicious   (D) tenacious

Directions : In question nos. **173** to **175**, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.

173. Garrulous
    (A) talkative   (B) sedative
    (C) vocative   (D) positive

174. Tinsel
    (A) tinkle   (B) decoration
    (C) tin   (D) colourful

175. Labyrinth
    (A) meandering   (B) rotating
    (C) pacing   (D) wriggling

Directions : In question nos. **176** to **178**, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.

176. Cordial
    (A) fast   (B) heartfelt
    (C) friendly   (D) hostile

177. Instinctive
    (A) innate   (B) rational
    (C) inherent   (D) inborn

178. Venial
    (A) minor   (B) pardonable
    (C) unpardonable   (D) clean

Directions : In question nos. **179** to **183**, four alternatives are given for the Idiom/Phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

179. Hard work pays in the long run.
    (A) always
    (B) over a period of time
    (C) indefinitely
    (D) never

180. I felt a fish out of water among the lawyers.
    (A) special   (B) happy
    (C) uncomfortable   (D) proud

181. The Cauvery water issue led to apple of discord between the two Governments.
    (A) cause of anger
    (B) cause of hatred
    (C) cause of quarrel
    (D) cause of animosity

182. The construction remains unfinished and the workers have let the grass grow under their feet.
    (A) grown grass all over the lawn
    (B) gone on a luxury tour
    (C) delayed doing the work
    (D) demanded more benefits

183. The police smelt the rat behind the death of the girl.
    (A) got very much confused
    (B) identified the cause of death
    (C) suspected that something is fishy
    (D) jumped to the conclusion

Directions : In question nos. **184** to **193**, a sentence/part of the sentence is underlined. Below are given alternatives to the underlined sentence/part of the sentence at (A), (B) and (C) which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (D).

184. The disparity of the GDP between the rich and the poor has broadened in the last some decades.
    (A) have widened in the last some decades
    (B) has widened in the last few decades
    (C) have broadened in the last few decades
    (D) No improvement

185. How, is beyond my understanding, the boy could fall into the ditch.
    (A) How the boy could fall into the ditch is beyond my understanding
    (B) Beyond my understanding is how the boy could fall into the ditch
    (C) How could the boy fall into the ditch is beyond my understanding
    (D) No improvement

186. The pioneer spacecraft went beyond Pluto.
    (A) made its way past
    (B) went across
    (C) went after
    (D) No improvement

187. The firm buys frozen seafood in bulk, packs it into smaller pouches and then they sell them to the local grocery stores.
    (A) it sells them
    (B) sell them
    (C) they sell the pouches
    (D) No improvement

188. The learners are intended to read the sources at home.
    (A) are meant   (B) are suggested
    (C) are expected   (D) No improvement

189. Fuji's invention of supercomputer will be enable to make Japan supercede America in computer technology.
    (A) will make Japan
    (B) will enable Japan
    (C) can make Japan
    (D) No improvement

190. I could never repay the debt I owe to my place of study.
    (A) Alma Mater   (B) Motherland
    (C) Place of worship (D) No improvement

191. She cries all the time.
    (A) mostly everytime
    (B) Day in and day out
    (C) pretty frequently
    (D) No improvement

192. For a week last month, the team's 20 players were stranded because the Government-issued passport is not up to international standards.
    (A) Government-issued passports were not up to international standards
    (B) Government-issued passports are not up to international standards
    (C) The passports issued by the government were not up to international standards
    (D) No improvement

193. Since July 2008, our customers will be able to use the ATM network of BBY Bank, the bank that was acquired by us during that year.
    (A) have been able to use
    (B) were using
    (C) will have been able to use
    (D) No improvement

Directions : In question nos. **194** to **200**, out of the four alternatives, choose the one which can be substituted for the given words/sentence and indicate it by blackening the appropriate oval [●] in the Answer Sheet.

194. One who is unaffected or indifferent to joy, pain, pleasure or grief
    (A) Tolerant   (B) Resigned
    (C) Passive   (D) Stoic

195. A person who is greatly respected because of wisdom
    (A) veracious   (B) vulnerable
    (C) venerable   (D) verger

196. An excessively morbid desire to steal
    (A) stealomania   (B) kleptomania
    (C) cleftomania   (D) keptomania

197. Prohibited by law or treaty from being imported or exported
    (A) contraband   (B) smuggled
    (C) counterfeit   (D) forged

198. Intentional destruction of racial groups
    (A) regicide   (B) genocide
    (C) homicide   (D) fratricide

199. A person in a vehicle or on horseback escorting another vehicle
    (A) Navigator   (B) Escort
    (C) Outrider   (D) Security

200. A person specially interested in the study of coins and medals.
    (A) medallist   (B) coinist
    (C) numismatist   (D) numerist