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1000103

KP 2012

Test Form No.
टेस्ट फॉर्म सं.
766 RH 9

Time Allowed : 2 Hours

निर्धारित समय : 2 घंटे

Maximum Marks : 200

अधिकतम अंक : 200

Read the following instructions carefully before you begin to answer the questions. This booklet contains questions in English as well as in Hindi.

प्रश्नों के उत्तर देने से पहले निम्नलिखित अनुदेशों को ध्यान से पढ़ लें। इस पुस्तिका में प्रश्न अंग्रेजी तथा हिन्दी दोनों में दिये गये हैं।

INSTRUCTIONS TO CANDIDATES

- This Booklet contains 200 questions in all comprising the following four parts :
Part - A : General Intelligence & Reasoning (50 Questions)
Part - B : General Knowledge & General Awareness (50 Questions)
Part - C : Quantitative Aptitude (50 Questions)
Part - D : English Comprehension (50 Questions)
- In questions set bilingually in English and Hindi, in case of discrepancy, the English version will prevail.
- All questions are compulsory and carry equal marks.
- The paper carries negative marking. 0.25 marks will be deducted for each wrong answer.
- Before you start to answer the questions you must check up this Booklet and ensure that it contains all the pages (1-40) and see that no page is missing or repeated. If you find any defect in this Booklet, you must get it replaced immediately.
- You will be supplied the Answer-Sheet separately by the Invigilator. You must complete and code the details of Name, Roll Number, Ticket Number, Name of the Examination as mentioned in the Admission Certificate, Date of birth and Test Form Number on Side-I of the Answer-Sheet carefully. You must also put your signature and Left-Hand thumb impression on the Answer-Sheet at the prescribed place before you actually start answering the questions. These instructions must be fully complied with, failing which, your Answer-Sheet will not be evaluated and you will be awarded 'ZERO' mark.
- Answers must be shown by completely blackening the corresponding rectangles on Side-II of the Answer-Sheet against the relevant question number by Black/Blue Ball-point Pen only. Answers which are not shown by Black/Blue Ball-point Pen will not be awarded any mark.
- A machine will read the coded information in the OMR Answer-Sheet. In case the information is incomplete/different from the information given in the application form, the candidature of such candidate will be treated as cancelled.
- The Answer-Sheet must be handed over to the Invigilator before you leave the Examination Hall.
- Failure to comply with any of the above instructions will render a candidate liable to such action/penalty as may be decreed fit.
- The manner in which the different questions are to be answered has been explained at the back of this Booklet (Page No. 40), which you should read carefully before actually answering the questions.
- Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.
- No rough work is to be done on the Answer-Sheet. Space for rough work has been provided below the questions in Part A and Part C of this Booklet.
- "Mobile phones and wireless communication devices are completely banned in the examination halls/rooms. Candidates are advised not to keep mobile phones/any other wireless communication devices with them even switching it off, in their own interest. Failing to comply with this provision will be considered as using unfair means in the examination and action will be taken against them including cancellation of their candidature."

उम्मीदवारों के लिए अनुदेश

- इस पुस्तिका में कुल 200 प्रश्न हैं, जिनमें निम्नलिखित चार भाग शामिल हैं :
भाग - क : सामान्य बुद्धि एवं तर्कशक्ति (50 प्रश्न)
भाग - ख : सामान्य ज्ञान एवं सामान्य जानकारी (50 प्रश्न)
भाग - ग : मात्रात्मक अभिलक्ष्यता (50 प्रश्न)
भाग - घ : अंग्रेजी परिचय (50 प्रश्न)
- अंग्रेजी और हिन्दी भाषा में तैयार किए गए द्विभाषी प्रश्नों में कोई विसंगति होने की स्थिति में अंग्रेजी विकल्प मान्य होगा।
- सभी प्रश्न अनिवार्य हैं तथा सबके बराबर अंक हैं।
- प्रश्न पत्र में नकारात्मक अंकन होगा। हर गलत उत्तर के लिए 0.25 अंक कटाय जाएंगे।
- प्रश्नों के उत्तर देने से पहले आप इस पुस्तिका की जाँच करके देख लें कि इसमें पूरे पृष्ठ (1-40) हैं तथा कोई पृष्ठ कम या दुबारा तो नहीं आ गया है। यदि आप इस पुस्तिका में कोई त्रुटि पाएँ, तो तत्काल इसके बदले दूसरी पुस्तिका ले लें।
- निरीक्षक द्वारा आपको उत्तर-पत्रिका अलग से दी जाएगी। उत्तर-पत्रिका के Side-I में नियमावली के अनुसार ध्यानपूर्वक अपना नाम, रोल नम्बर, टिकट नम्बर, परीक्षा का नाम जैसे प्रवेश पत्र में दिखाया गया है, जन्म तिथि और टेस्ट फॉर्म संख्या अवश्य लिखें। प्रश्नों के उत्तर वास्तव में शुरू करने से पहले उत्तर-पत्रिका पर निर्धारित स्थान में आप अपने हस्ताक्षर एवं बाएँ हाथ के अंगूठे का निशान भी अवश्य लगाएँ। उपर्युक्त अनुदेशों का पूरी तरह अनुपालन किया जाए, अन्यथा आपको उत्तर-पत्रिका को जाँचा नहीं जाएगा और 'शून्य' अंक दिया जाएगा।
- उत्तर-पत्रिका में सभी उत्तर Side-II में प्रश्न संख्या के सामने दिये गये सम्बन्धित आयताकार खानों को केवल काला/नीला बॉल-पॉइंट पेन से पूरी तरह काला करके दिखाएँ। जो आयताकार खाने काला/नीला बॉल-पॉइंट पेन से नहीं भरे जायेंगे, उनके लिए कोई अंक नहीं दिया जाएगा।
- ओ.एम.आर. उत्तर-पत्रिका में भरी गई कूट सूचना को एक गश्तीन पढ़ेंगे। यदि सूचना अपूर्ण है अथवा आवेदन प्रपत्र में भरी गई सूचना से भिन्न है, तो ऐसे अभ्यर्थी की अभ्यर्थिता निरस्त समझी जाएगी।
- परीक्षा भवन छोड़ने से पहले परीक्षार्थी को उत्तर-पत्रिका निरीक्षक के हवाले कर देने चाहिए।
- ऊपर के अनुदेशों में से किसी एक को भी पालन न करने पर उम्मीदवार पर विवेकानुसार कार्यवाही की जा सकती है या इच्छा जा सकता है।
- विभिन्न प्रश्नों के उत्तर देने की विधि इस पुस्तिका के पीछे (पृष्ठ संख्या 40) में छोटे छोटे चित्रों में दे दी गई है, इसे आप प्रश्नों के उत्तर देने से पहले ध्यानपूर्वक पढ़ लें।
- प्रश्नों के उत्तर जितनी जल्दी हो सके तथा ध्यानपूर्वक दें। कुछ प्रश्न आसान तथा कुछ कठिन हैं। किसी एक प्रश्न पर बहुत अधिक समय न लगाएँ।
- कोई रफ कार्य उत्तर-पत्रिका पर नहीं करना है। रफ कार्य के लिए स्थान इसी पुस्तिका के भाग क तथा भाग ग के प्रश्नों के नीचे दिया गया है।
- "परीक्षा हॉल/कमरों में मोबाइल फोन तथा बेतार संचार साधन पूरी तरह निषिद्ध हैं। प्रत्याशियों को उनके अपने हित में सलाह दी जाती है कि मोबाइल फोन/किसी अन्य बेतार संचार साधन को रिच ऑफ करके भी अपने पास न रखें। इस प्रावधान का अनुपालन न करने को परीक्षा में अनुचित उपायों का प्रयोग माना जाएगा और उनके विरुद्ध कार्यवाही की जाएगी, उनकी अभ्यर्थिता रद्द कर देने सहित।"

PART - A : GENERAL INTELLIGENCE & REASONING

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

1. SKIT : TIKS :: ? : FLAP

- (A) PLFA (B) PFAL
(C) PLAF (D) PALF

2. 6 : 72 :: 8 : ?

- (A) 94 (B) 96
(C) 74 (D) 92

3. 6 : 36 :: 9 : ?

- (A) 81 (B) 98
(C) 42 (D) 56

4. 384 : ? :: 216 : 63

- (A) 128 (B) 124
(C) 113 (D) 192

5. Asthma : Lungs :: Conjunctivitis : ?

- (A) Bones (B) Teeth
(C) Eyes (D) Blood

6. Communicable disease : Malaria ::
Non-communicable disease : ?

- (A) Tuberculosis
(B) Hepatitis
(C) AIDS
(D) Cancer

7. Thermometer : Temperature :: Glucometer : ?

- (A) Body sugar (B) Body resistance
(C) Blood (D) Blood sugar

8. Dismay : Joy :: Tend : ?

- (A) Regret (B) Ignore
(C) Negligible (D) Spoil

9. DCBA : WXYZ :: ? : ZYXW

- (A) ABCD (B) ABDC
(C) CBAD (D) BCDA

Directions : In questions no. 10 to 14, find the odd word/number/letters from the given alternatives.

10. (A) 4249 (B) 7586
(C) 4623 (D) 9781

11. (A) ee gg ii kk (B) pp rr tt uu
(C) bb dd ff hh (D) kk mm oo qq

12. (A) X (B) P
(C) D (D) I

13. (A) Pen (B) Letter-head
(C) Paper (D) Envelope

14. (A) Reed (B) Pit
(C) Tab (D) Hold

SPACE FOR ROUGH WORK

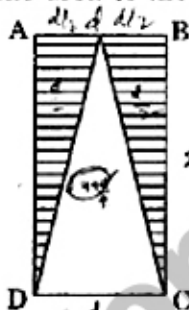
Directions : In questions no 15 to 23, a series are given, with one term missing. Choose the correct alternative from the given one that will complete the series.

15. CDF, DEG, EFH, ?
 (A) FHG (B) EFI
 (C) FGH (D) FGI
16. ZA, VC, RE, NG, ?, FK
 (A) OH (B) KI
 (C) IJ (D) JI
17. 4, 16, 36, ?, 100
 (A) 56 (B) 64
 (C) 48 (D) 52
18. 2, 3, 10, 15, 26, ?
 (A) 30 (B) 52
 (C) 35 (D) 24
19. 12, 23, 34, 45, ?, 67, 78, 89
 (A) 76 (B) 69
 (C) 56 (D) 54
20. EAB, GCD, MIJ, ?
 (A) ROP (B) QOP
 (C) OKL (D) FOP
21. ACE, BDF, GIK, ?
 (A) JHM (B) HJI
 (C) HJL (D) MJH
22. WBP, SGM, OLJ, ?
 (A) NPH (B) KQG
 (C) LPG (D) MQG
23. DEF, HIJ, MNO, ?
 (A) RTV (B) SRQ
 (C) RST (D) STU

$$\frac{20}{15} = \frac{64}{45}$$

24. If $20 + 15 = 24$ and $64 + 13 = 42$, then $11 + 28 = ?$
 (A) 33 (B) 36
 (C) 31 (D) 34

25. In the diagram alongside, $AD = 2 AB = d$. What is the area of the shaded portion?



- (A) $2d^2$ (B) $d/2$
 (C) $d^2/2$ (D) $d^2/4$
26. Find out the set among the four sets which is like the given set. : 12 ~~22~~
 Given set : (9, 27, 108)
 (A) (15, 45, 90) (B) (8, 32, 96)
 (C) (5, 15, 75) (D) (11, 33, 132)
27. Number of letters skipped in between adjacent letters in the series is two. Which one of the following alternatives observes this rule?
 (A) UROLIF (B) WTQNKJ
 (C) SPMLI (D) TSPNKH
28. Choose the synonym for the given word from the given options.
 'Exposition'
 (A) Examination (B) Expression
 (C) Elucidation (D) Revelation

SPACE FOR ROUGH WORK

29. Some equations are solved on the basis of a certain principle. On the same basis, find the correct answer from among the alternatives given.
- $27(18)3; 216(180)6; 729(?)9$
- (A) 810 (B) 700
(C) 81 (D) 648
30. Karan facing towards South moved straight 2 km and from there, turned to his right 90° and travelled 2 km. Then, he took a 45° turn to his left and travelled 1 km. Where would he be now with respect to the starting point ?
- (A) North West region
(B) South West region
(C) South region
(D) South East region
31. Reena walks 4 km East and then cycles 10 km North, turns to the left and covers 4 km and once again turns to the North and moves 2 km. How far is she from the starting point ?
- (A) 10 km (B) 14 km
(C) 8 km (D) 12 km
32. Laxmi started walking Southwards and after covering a distance of 30 m, she turned left. She walked 25 meters, and turned to the left and again walked 30 meters. How far is she from the starting point and in which direction ?
- (A) 20 m West (B) 25 m West
(C) 25 m East (D) 30 m East
33. In a certain code, 'CAPITAL' is written as 'CPATILA'. How is 'PERSONS' written in that code ?
- (A) PSONRES (B) PONSRES
(C) PESONRS (D) PREOSSN
34. If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you encode ACCEPT ?
- (A) 455978 (B) 735961
(C) 554978 (D) 547978
35. In the following problem :
- = stands for \div
 - + stands for $-$
 - \times stands for $=$
 - $-$ stands for $>$
 - $>$ stands for $+$
 - $<$ stands for \times
 - \div stands for $<$
- When these new symbols are substituted, only one will be correct. Identify the correct equation.
- (A) $24 = 4 > 5 \times 17 + 13$
(B) $24 > 4 + 5 \times 17 + 13$
(C) $24 = 4 > 5 \times 17 > 13$
(D) $24 + 4 = 5 \times 17 + 13$

SPACE FOR ROUGH WORK

Directions : In question no. 36, two statements are followed by two assumptions 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, definitely follows from the given statements.

36. **Statements :**

- Parental role in the education of their children is very significant.
- All parents must realise this.

Conclusions :

- Parentless children cannot develop to their maximum potential.
- Parents can help their children in their education.

(A) Neither conclusion I nor II follows

(B) Both conclusions I and II follow

(C) Only conclusion I follows

(D) Only conclusion II follows

37. Find out the number which does **not** belong to the group of ABCD.

- (A) $\begin{matrix} 8 \\ 3 \text{ } 48 \text{ } 4 \\ 5 \end{matrix}$ (B) $\begin{matrix} 8 \\ 5 \text{ } 24 \text{ } 2 \\ 3 \end{matrix}$
- (C) $\begin{matrix} 7 \\ 4 \text{ } 112 \text{ } 8 \\ 5 \end{matrix}$ (D) $\begin{matrix} 5 \\ 7 \text{ } 22 \text{ } 2 \\ 3 \end{matrix}$

Directions : In questions no. 38 to 40, select the missing number from the given responses.

38. $\begin{matrix} 5 & 7 & 4 & 39 \\ 6 & 9 & 5 & 59 \\ 7 & 11 & ? & 83 \end{matrix}$
- (A) 6 (B) 7
(C) 4 (D) 8

39. $\begin{matrix} 8 & 16 & 10 \\ 2 & 8 & 5 \\ 4 & ? & 9 \\ 8 & 5 & 11 \end{matrix}$
- (A) 2 (B) 5
(C) 4 (D) 3

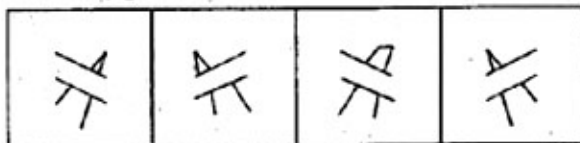
40. $\begin{matrix} 8 & (14) & 15 \\ 13 & (18) & 22 \\ 25 & (?) & 41 \end{matrix}$
- (A) 33 (B) 42
(C) 14 (D) 32

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

41. **Question figure :**



Answer figures :

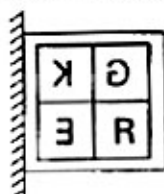


(A) (B) (C) (D)

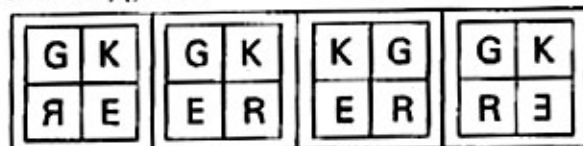
SPACE FOR ROUGH WORK

42. Which of the answer figures is exactly the mirror image of the given figure, when the mirror is held as shown?

Question figure :



Answer figures :



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

43. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in the 2 matrices given below. The columns and rows of matrix I are numbered from 0 to 4 and that of matrix II from 5 to 9. A letter from these matrices can be represented first by its row and next column number. e.g. 'F' can be represented by 14, 21, etc. 'S' can be represented by 58, 96, etc. Similarly, identify the word TRIP.

MATRIX I

	0	1	2	3	4
0	D	E	F	I	N
1	I	N	D	E	F
2	E	F	I	N	D
3	N	D	E	F	I
4	F	I	N	D	E

MATRIX II

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

- (A) 78, 76, 21, 76 (B) 59, 57, 41, 56
(C) 85, 88, 33, 89 (D) 66, 69, 40, 69

44. Select the answer figure in which the question figure is hidden.

Question figure :



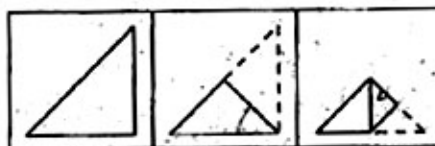
Answer figures :



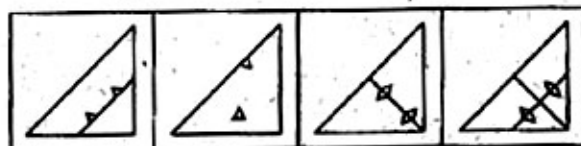
(A) (B) (C) (D)

45. A triangular sheet of paper has been folded and punched as shown in the figure. You have to figure out from amongst the four response figures, how it will appear when opened?

Question figures :



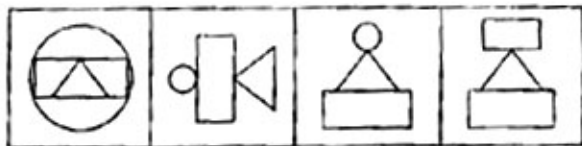
Answer figures :



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

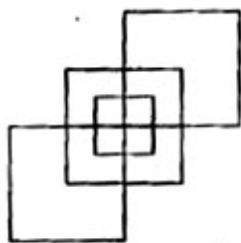
SPACE FOR ROUGH WORK

46. If a person has intelligence, character and position, which figure represents all of these ?



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

47. How many squares are there in a given figure ?



- (A) 12 (B) 13
(C) 10 (D) 11

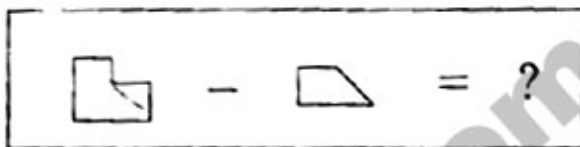
48. Which figure represents the relationship among Hockey players, Rubber balls, Poets ?



- (A) 1 (B) 4
(C) 2 (D) 5

49. In the question, one part of the problem figure is subtracted. Select the option that shows the correct shape after subtraction.

Question figure :



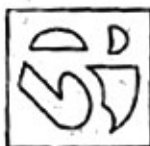
Answer figures :



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

50. Identify the answer figure from which the pieces given in question figure have been cut.

Question figure :



Answer figures :



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

SPACE FOR ROUGH WORK

PART - B : GENERAL KNOWLEDGE & GENERAL AWARENESS

51. There is no selling cost under
- (A) Oligopoly
 - (B) Duopoly
 - (C) Perfect competition
 - (D) Monopolistic competition
52. Which of the following is *not* a function of the Exim Bank of India ?
- (A) Financing of joint ventures in foreign countries
 - (B) Loans to Indian parties for contributing to share capital of joint ventures abroad
 - (C) Financing of export and import of goods and services
 - (D) Inspection of exported goods for quality assurance
53. Which of the following systems in independent India goes against the very basis of democracy ?
- (A) Party system
 - (B) Parliamentary system
 - (C) Caste system
 - (D) Economic system
54. According to Karl Marx, the change in economic system results in inevitable changes in
- (A) the entire systems
 - (B) religious system only
 - (C) political system only
 - (D) social system only
55. Which one of the following statements is correct ?
- (A) The value of a commodity depends upon its price.
 - (B) The value of a commodity is entirely dependent upon the substitutes.
 - (C) A commodity will have value if it is wanted by somebody.
 - (D) A commodity will have value only if it is scarce relative to demand.
56. Which of the following formulae could be used for calculating the per capita income of a country ?
- (A) $\frac{\text{Total income of various industries}}{\text{Total number of industrial workers}}$
 - (B) $\frac{\text{Total Government Revenue}}{\text{Total population}}$
 - (C) $\frac{\text{Total family income}}{\text{Number of family members}}$
 - (D) $\frac{\text{National income}}{\text{Total population}}$
57. For controlling inflation, the central bank should
- (A) purchase Government securities in the open market
 - (B) lower the reserve ratio of the banks
 - (C) sell Government securities in the open market
 - (D) lower the bank rate

58. Match the medieval travellers with their countries :

- | | |
|-----------------------|------------|
| a. Marco Polo | 1. Spain |
| b. Ibn Battuta | 2. Balkh |
| c. Antonio Monserrate | 3. Italy |
| d. Mahmud Wali Balkhi | 4. Morocco |

	a	b	c	d
--	---	---	---	---

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

59. Rana Kumbha constructed the Tower of Victory at Chittor to mark his victory over

- (A) The Khan of Nagaur
 (B) Rao Jodha of Marwar
 (C) Ahmad Shah of Gujarat
 (D) Mahmud Khalji of Malwa

60. Match the following :

- | | |
|--------------------------|-----------------------------|
| a. Sarojini Naidu | 1. Muslim League |
| b. M.A. Jinnah | 2. Indian National Congress |
| c. Sir Tej Bahadur Sapru | 3. Hindu Mahasabha |
| d. V.D. Savarkar | 4. Liberal Party |

	a	b	c	d
--	---	---	---	---

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

61. The Social Forestry Scheme was introduced during

- (A) Second Five Year Plan
 (B) Sixth Five Year Plan
 (C) Fourth Five Year Plan
 (D) Eighth Five Year Plan

62. The model code of conduct for political parties and candidates to be followed during the elections is

- (A) enjoined by the Supreme Court
 (B) agreed through a voluntary agreement among the recognised political parties
 (C) laid down in the Constitution of India
 (D) specified in The Representation of the People Act, 1951

63. A citizen can directly move the Supreme Court for any violation of Fundamental Rights under

- (A) Article 33 (B) Article 34
 (C) Article 31 (D) Article 32

64. Which one of the following sitting Vice-Presidents of India contested for the post of President and lost the election ?

- (A) S. Radhakrishnan
 (B) V.V. Giri
 (C) Bhairon Singh Shekhawat
 (D) Both (B) and (C)

65. The French challenge to British in India came to an end with

- (A) Battle of Plassey
 (B) Battle of Buxar
 (C) Battle of Wandiwash
 (D) Battle of Srirangapattinam

66. Identify the medical trio of ancient India from the following names.

- (A) Charaka, Susruta and Bharata
 (B) Charaka, Susruta and Patanjali
 (C) Charaka, Susruta and Vagbhata
 (D) Charaka, Vatsyayana and Vagbhata

67. Vegetation is effective in absorbing
- High frequency sound
 - Pollutant metals
 - Pollutant gases
 - Polluted water
68. When a person cries, there is a watery discharge from the nose due to activation of
- Thyroid gland
 - Endocrine gland
 - Salivary gland
 - Lachrymal gland
69. The fundamental role of root hairs in plants is
- to absorb water and mineral salts from the soil
 - to bind soil particles to the root for firm fixation of the plant
 - to protect the young root from damage by coarse soil particles
 - to protect the root from soil microbes
70. Catch crops are
- crops to be cut and fed green to the cattle
 - substitute crops planted after the regular crop has failed
 - crops planted to attract certain insect pests to be destroyed
 - crops planted to attract certain useful insects to be used for biological control of pests
71. Which one of the following acts as a mediator between the user's program and the hardware ?
- Operating System
 - Browser
 - Compiler
 - Editor
72. The project similar to T.V.A (Tennessee Valley Authority) of U.S.A. in India is
- Ramganga Multipurpose Project
 - Idukki Project
 - Damodar Valley Project
 - Mahanadi Delta Project
73. Petrology is the study of
- earth
 - minerals
 - rocks
 - soils
74. Match the following :
- | | |
|-----------------|----------------------|
| a. Rosewood | 1. Mangrove forests |
| b. Bushes | 2. Alpine forests |
| c. Birch | 3. Deciduous forests |
| d. Sundari tree | 4. Dry forests |
- | | | | |
|-------|---|---|---|
| a | b | c | d |
| (A) 1 | 2 | 3 | 4 |
| (B) 2 | 3 | 4 | 1 |
| (C) 4 | 3 | 2 | 1 |
| (D) 3 | 4 | 2 | 1 |
75. During the period of South-West monsoon, Tamil Nadu remains dry because
- it lies in the rain-shadow area
 - the temperature is too high to let the winds cool down
 - the winds do not reach this area
 - there are no mountains in this area
76. The red colour of ripe tomatoes is due to the presence of
- Chlorophyll
 - Carotenoids
 - Hormones
 - Vitamins
77. Anticoagulants are *not* present in
- Leech
 - Wasp
 - Mosquito
 - Bed bug

78. To eliminate the glare of headlights in motor cars,
- (A) thin films are used
 - (B) filters are used
 - (C) polaroids are used
 - (D) glass prisms are used
79. The substances which have infinite electrical resistance are called
- (A) conductors (B) resistors
 - (C) insulators (D) condensers
80. The headquarters of International Atomic Energy Agency is located at
- (A) Vienna (B) Sydney
 - (C) Geneva (D) Washington
81. If you use a font that is **not** supported by a browser, then the text
- (A) will be displayed using 'ARIAL' font only.
 - (B) will be displayed with a particular background
 - (C) will be displayed in the default font
 - (D) will not be displayed
82. The pigment that protects plants from UV damage is
- (A) Phycocyanin
 - (B) Carotenoids
 - (C) Chlorophyll
 - (D) Xanthophyll.
83. United Nations Conference on Environment and Development is called
- (A) Air Summit
 - (B) Resource Summit
 - (C) Earth Summit
 - (D) Water Summit
84. A bioenergy source obtained by fermentation to supplement fossil fuel petrol is
- (A) Diesel (B) Methane
 - (C) Kerosene (D) Ethanol
85. The substance that causes the worst air pollution is
- (A) Carbon dioxide
 - (B) Carbon monoxide
 - (C) Smoke
 - (D) Sulphur dioxide
86. A liquid is said to boil when its
- (A) vapour pressure is greater than the surrounding pressure
 - (B) vapour pressure is less than the surrounding pressure
 - (C) vapour pressure equals the surrounding pressure
 - (D) vapour pressure vanishes to zero
87. Which is **not** correct regarding covalent compounds ?
- (A) Compounds are usually liquids and gases
 - (B) Boiling points and melting points are low
 - (C) The reaction is slow
 - (D) The reaction is fast
88. Choose the correct statement.
- (A) Mixtures are homogeneous
 - (B) In a mixture the components are present in a fixed ratio
 - (C) The components of a mixture cannot be separated
 - (D) The properties of a mixture are the same as those of its components
89. PVC is obtained by the polymerisation of
- (A) Styrene (B) Acetylene
 - (C) Propene (D) Vinyl chloride

90. What is the name of the first research station established by India in the Antarctica ?
(A) Agnihotri
(B) Aryabhatta
(C) Dakshin Gangotri
(D) Maitri
91. Who among the following was awarded Padma Vibhushan in 2011 for his exceptional and distinguished service in the field of trade and industry ?
(A) S. Gopalakrishnan
(B) Mecca Rafeeqe Ahmed
(C) Azim Premji
(D) Ratan Tata
92. The five permanent members of the U.N. Security Council are
(A) China, Germany, Russia, U.K. and U.S.A.
(B) China, Germany, U.S.A. U.K. and Canada
(C) China, France, Russia, U.K. and U.S.A.
(D) China, Canada, France, U.S.A. and Germany
93. Which of the following is *not* correctly paired ?
(A) Harbhajan Singh — Kabaddi
(B) Saina Nehwal — Badminton
(C) Jwala Gutta — Tennis
(D) Virat Kohli — Cricket
94. Which of the following States has the largest gap in male and female literacy as per 2011 Census (provisional data) ?
(A) Rajasthan
(B) Kerala
(C) Uttar Pradesh
(D) Madhya Pradesh
95. Stainless steel is an alloy of
(A) iron, carbon and zinc
(B) iron, zinc and manganese
(C) iron, chromium and nickel
(D) iron, chromium and carbon
96. Enriched uranium used in a nuclear reactor is
(A) uranium alloyed with aluminium
(B) uranium with a high percentage of a particular isotope
(C) uranium free of all impurities
(D) uranium treated with radiation
97. In a refrigerator, cooling is produced by
(A) the sudden expansion of a compressed gas
(B) the evaporation of a volatile liquid
(C) the ice which deposits in the freezer
(D) None of these
98. The first woman to conquer Mount Everest twice is
(A) Santosh Yadav
(B) Suma Shirur
(C) Surja Lata Devi
(D) Jyoti Randhawa
99. Which one of the following iron and steel works in India is *not* under public sector ?
(A) Bhilai (B) Durgapur
(C) Bokaro (D) Jamshedpur
100. Which Indian hockey player has a road named after him in Germany ?
(A) Roop Singh (B) Dhanraj Pillai
(C) Dhyan Chand (D) Zafar Iqbal

PART - C : QUANTITATIVE APTITUDE

101. In a fort, there was sufficient food for 200 soldiers for 31 days. After 27 days, 120 soldiers left the fort. For how many extra days will the rest of the food last for the remaining soldiers ?
 (A) 4 days (B) 12 days
 (C) 10 days (D) 6 days
102. Equal amounts of water were poured into two empty jars of different capacities, which made one jar $\frac{1}{4}$ full and the other jar $\frac{1}{3}$ full. If the water in the jar with lesser capacity is then poured into the jar with greater capacity, then the part of the larger jar filled with water is
 (A) $\frac{1}{4}$ (B) $\frac{1}{3}$
 (C) $\frac{1}{2}$ (D) $\frac{7}{12}$
103. A bookseller makes 8% profit after selling the book at 10% discount. The ratio of the cost price to the marked price is
 (A) 5 : 6 (B) 6 : 5
 (C) 4 : 5 (D) 5 : 4
104. A certain sum of money is distributed to A and B in the ratio 2 : 5. If A received ₹ 100, then the money received by B is
 (A) ₹ 250 (B) ₹ 300
 (C) ₹ 200 (D) ₹ 150
105. Last year my age was a perfect square number. Next year it will be a cubic number. What is my present age ?
 (A) 26 years (B) 24 years
 (C) 25 years (D) 27 years
106. What is the value of $(2 \cdot 1)^2 \times \sqrt{0.0441}$?
 (A) 92.51 (B) 0.9251
 (C) 0.9261 (D) 92.61
107. The greatest number that can divide 140, 176, 264 leaving remainders of 4, 6 and 9 respectively is
 (A) 17 (B) 2
 (C) 85 (D) 34
108. There are 4 terms in an A.P. such that the sum of two means is 110 and product of their extremes is 2125. The 3rd term is
 (A) 55 (B) 45
 (C) 65 (D) 75
109. The value of $\sqrt[3]{1372} \times \sqrt[3]{1458}$ is
 (A) 106 (B) 136
 (C) 116 (D) 126
1010. If 10 men or 18 boys can do a work in 15 days, then the number of days required by 15 men and 33 boys to do twice the work is
 (A) 9 (B) 36
 (C) $4\frac{1}{2}$ (D) 8

SPACE FOR ROUGH WORK 120

111. A man walks a certain distance and rides back taking a total time of 37 minutes. He could walk both ways in 55 minutes. How long would he take to ride both ways ?
 (A) 19 minutes (B) 20 minutes
 (C) 9.5 minutes (D) 18 minutes
112. Mahesh starts work as a sales representative on an annual salary of ₹ 1,60,000. If he receives a 15% pay-rise each year, the number of years he has worked for the company, when his annual salary became ₹ 2,79,841 is
 (A) 4 (B) 5
 (C) 2 (D) 3
113. The base of a triangle is 2 cm more than twice its altitude. If the area is 12 sq. cm, its altitude will be
 (A) 4 cm (B) 3 cm
 (C) 6 cm (D) 5 cm
114. A man leaves ₹ 12,600 to be divided among 7 sons, 3 daughters and 5 nephews. If each daughter receives three times as much as each nephew and each son seven times as much as each nephew, then each daughter's share is
 (A) ₹ 600 (B) ₹ 750
 (C) ₹ 700 (D) ₹ 650
115. The average of three numbers 70, *7 and 5* is 57. If * represents the same digit, then it must be
 (A) 4 (B) 7
 (C) 3 (D) 6
116. Three years ago, the average age of a family of 8 members was 30 years. If one child is also included in the family, the present average age of the family remained the same. Then the present age of the child is
 (A) 6 years (B) 1 year
 (C) 3 years (D) 4 years
117. By selling an article for ₹ 21,000, a man gains 5%. To get a profit of 15%, he has to sell it for
 (A) ₹ 23,000 (B) ₹ 25,000
 (C) ₹ 19,800 (D) ₹ 20,700
118. Rahul bought two cycles for a total sum of ₹ 1,500. He sold one cycle at 20% loss and the other cycle at 20% gain. If the selling price of both the cycles is the same, find the cost price of the two cycles.
 (A) ₹ 750 each (B) ₹ 550, ₹ 950
 (C) ₹ 500, ₹ 1,000 (D) ₹ 600, ₹ 900
119. The salary of an employee increases every year in the month of July by 10%. If his salary in May 2000 was ₹ 15,000, his salary in October 2001 was
 (A) ₹ 18,150 (B) ₹ 19,965
 (C) ₹ 16,500 (D) ₹ 18,000
120. 72% of the students of a certain class took Biology and 44% took Mathematics. If each student took Biology or Mathematics and 40 took both, the total number of students in the class was
 (A) 250 (B) 320
 (C) 200 (D) 230

SPACE FOR ROUGH WORK

121. If the volume and the surface area of a sphere are numerically equal, then the numerical value of the radius of the sphere is
 (A) 3 (B) 4
 (C) 1 (D) 2
122. If $\frac{5x-3}{x} + \frac{5y-3}{y} + \frac{5z-3}{z} = 0$, then the value of $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$ is
 (A) 5 (B) 10
 (C) 15 (D) 3
123. Minimum value of $x^2 + \frac{1}{x^2+1} - 3$ is
 (A) 0 (B) -1
 (C) -3 (D) -2
124. If $a + b = 5$, $a^2 + b^2 = 13$, the value of $a - b$ (where $a > b$) is
 (A) 1 (B) -2
 (C) 2 (D) -1
125. If $(3x - y) : (x + 5y) = 5 : 7$, then the value of $(x + y) : (x - y)$ is
 (A) 2 : 3 (B) 3 : 2
 (C) 3 : 1 (D) 1 : 3
126. The line passing through the points $(-2, 8)$ and $(5, 7)$
 (A) cuts y-axis only
 (B) cuts both the axes
 (C) does not cut any axes
 (D) cuts x-axis only
127. In ΔABC , $\angle B = 60^\circ$, $\angle C = 40^\circ$. If AD bisects $\angle BAC$ and $AE \perp BC$, then $\angle EAD$ is
 (A) 10° (B) 20°
 (C) 40° (D) 80°
128. ABCD is a quadrilateral in which diagonal $BD = 64$ cm, $AL \perp BD$ and $CM \perp BD$, such that $AL = 13.2$ cm and $CM = 16.8$ cm. The area of the quadrilateral ABCD in square centimetres is
 (A) 422.4 (B) 690.0
 (C) 537.6 (D) 960.0
129. The area of a semi-circular field is 308 sq. m; then taking $\pi = \frac{22}{7}$, the length of the railing to surround it has to be
 (A) 88 m (B) 80 m
 (C) 44 m (D) 72 m
130. Volume of a right circular cone is numerically equal to its slant surface area. Then value of $\left(\frac{1}{h^2} + \frac{1}{r^2}\right)$, where h and r are height and radius of the cone respectively, is
 (A) 4 units (B) $\frac{1}{4}$ unit
 (C) 9 units (D) $\frac{1}{9}$ unit
131. If the numerical value of the volume of a right circular cylinder and its curved surface area are equal, then its radius is
 (A) 3 units (B) 6 units
 (C) 2 units (D) 4 units
132. ABCDEF is a regular hexagon of side 2 feet. The area, in square feet, of the rectangle BCEF is
 (A) 8 (B) $4 + 4\sqrt{3}$
 (C) 4 (D) $4\sqrt{3}$

SPACE FOR ROUGH WORK

133. If in ΔABC , $\angle A = 90^\circ$, $BC = a$, $AC = b$ and $AB = c$, then the value of $\tan B + \tan C$ is

- (A) $\frac{c^2}{ab}$ (B) $\frac{a^2 + c^2}{b}$
 (C) $\frac{b^2}{ac}$ (D) $\frac{a^2}{bc}$

134. A ladder is resting against a wall at a height of 10 m. If the ladder is inclined with the ground at an angle of 30° , then the distance of the foot of the ladder from the wall is

- (A) $10/\sqrt{3}$ m (B) $20/\sqrt{3}$ m
 (C) $10\sqrt{3}$ m (D) $20\sqrt{3}$ m

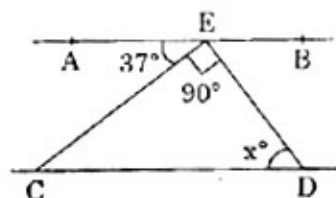
135. $\tan 7^\circ \tan 23^\circ \tan 60^\circ \tan 67^\circ \tan 83^\circ$ is equal to

- (A) 0 (B) $\sqrt{3}$
 (C) $\frac{1}{\sqrt{3}}$ (D) 1

136. The value of $(\sec \theta - \cos \theta)(\operatorname{cosec} \theta - \sin \theta)(\tan \theta + \cot \theta)$ is

- (A) 1 (B) $\frac{3}{2}$
 (C) 2 (D) 0

137. In the figure below, if $AB \parallel CD$ and $CE \perp ED$, then the value of x is



- (A) 53 (B) 63
 (C) 37 (D) 45

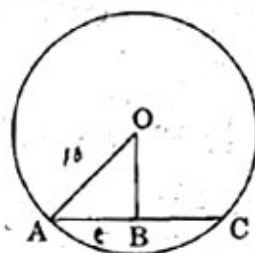
138. PA and PB are two tangents drawn from an external point P to a circle with centre O where the points A and B are the points of contact. The quadrilateral OAPB must be

- (A) a rectangle (B) a rhombus
 (C) a square (D) concyclic

139. G is the centroid of ΔABC . If $AG = BC$, then $\angle BGC$ is

- (A) 90° (B) 30°
 (C) 60° (D) 120°

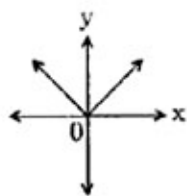
140. In the following figure, if $OA = 10$ and $AC = 16$, then OB must be



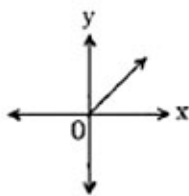
- (A) 5 (B) 6
 (C) 3 (D) 4

SPACE FOR ROUGH WORK

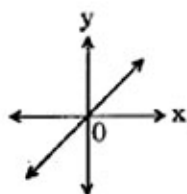
141. The graph of $y = x + |x|$ is given by



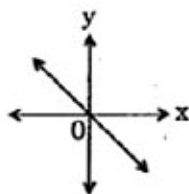
(1)



(2)



(3)



(4)

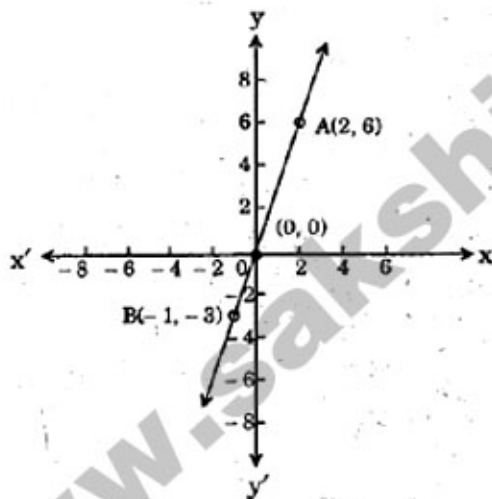
(A) 3

(B) 4

(C) 1

(D) 2

142. The equation of this graph is



(A) $y = x$

(B) $y = 3x$

(C) $y = -x$

(D) $y = -3x$

143. If $\tan(\theta_1 + \theta_2) = \sqrt{3}$, and $\sec(\theta_1 - \theta_2) = \frac{2}{\sqrt{3}}$,

then the value of $\sin 2\theta_1 + \tan 3\theta_2$ is equal to

(assume that $0 < \theta_1 - \theta_2 < \theta_1 + \theta_2 < 90^\circ$)

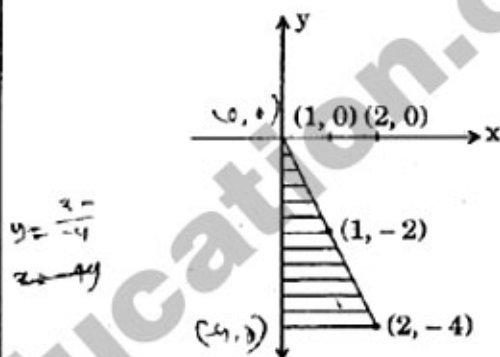
(A) 0

(B) 3

(C) 1

(D) 2

144. The area of the shaded region in the following graph is



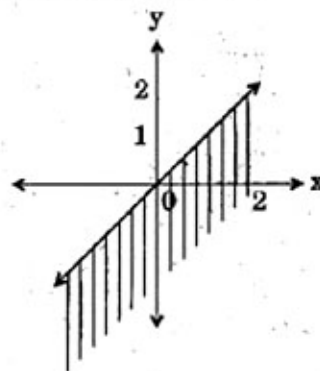
(A) 6 units

(B) 8 units

(C) 2 units

(D) 4 units

145. The shaded region represents



(A) $y \geq x$

(B) $y \leq -x$

(C) $y \leq x$

(D) $y \geq -x$

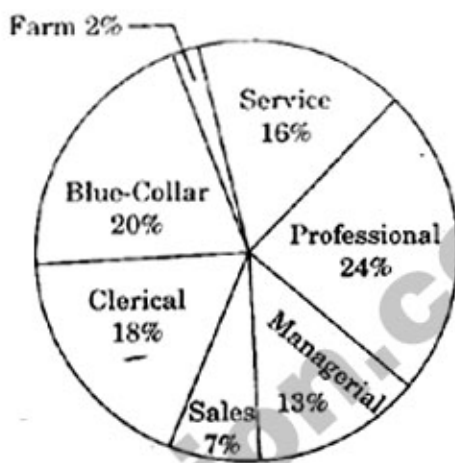
SPACE FOR ROUGH WORK

Directions : The pie-chart given below shows the distribution of workforce by occupational category for country X in 1981 and 1995. Study the chart and answer the questions no. 146 to 150.



1981

Total workforce
150 million



1995

Total workforce
175 million

146. The increase in the number of Clerical workers in the workforce of country X from 1981 to 1995 (in millions) is
- (A) 0.5 (B) 1.25
(C) 0.75 (D) 1.5
147. The percentage decrease in the number of Blue-Collar workers in the workforce of country X from 1981 to 1995 is
- (A) 20 (B) $16\frac{2}{3}$
(C) $42\frac{1}{2}$ (D) 35
148. In 1981, the number of Service workers in the workforce, in millions, was
- (A) 22.5 (B) 28.0
(C) 15.0 (D) 20.5
149. In 1981, the number of categories which comprised of more than 25 million workers each, is
- (A) four (B) five
(C) two (D) three
150. The ratio of the number of workers in the Professional category in 1981 to the number of such workers in 1995 is
- (A) 9 : 14 (B) 14 : 9
(C) 4 : 9 (D) 5 : 14

SPACE FOR ROUGH WORK

PART - D : ENGLISH COMPREHENSION

Directions : In questions no. 151 to 155, some parts of the sentences have errors and some have none. Find out which part of a sentence has an error and blacken the rectangle [■] corresponding to the appropriate letter (A, B, C). If there is no error, blacken the rectangle [■] corresponding to (D) in the Answer Sheet.

151. The concentration of human and material resources at a few centres / have resulted in /
 (A) (B)
 large scale migration of rural population to urban areas. / No error.
 (C) (D)
152. Who wouldn't be triumphant / in their success / at the examination ? / No error.
 (A) (B) (C) (D)
153. I dared / Mohan fights / a duel. / No error.
 (A) (B) (C) (D)
154. All of you except Sheena / have done the homework / properly. / No error.
 (A) (B) (C) (D)
155. The summit began / on a much voiced / optimism note. / 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.

156. Many modern methods of agriculture _____ thousands of years ago.
 (A) sprang (B) started
 (C) began (D) originated
157. He is utterly _____ at the end of the day.
 (A) worn away (B) worn on
 (C) worn through (D) worn out
158. People should refrain _____ evil deeds.
 (A) from doing (B) doing
 (C) to do (D) in doing
159. A rare audio tape released by the court at the end of the hearing showed many judges asking _____ they should intervene at all.
 (A) if only (B) only if
 (C) weather (D) whether
160. Rita _____ her home work yet.
 (A) has not done (B) will not do
 (C) does not do (D) did not do

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.

161. Clandestinely
 (A) secretly (B) openly
 (C) financially (D) systematically
162. Periphery
 (A) circle (B) boundary
 (C) edge (D) terminus
163. Exonerate
 (A) absolve (B) execute
 (C) negate (D) charge
164. Exquisite
 (A) exact (B) wonderful
 (C) quizzical (D) exciting
165. Comprehensive
 (A) adhesive (B) expensive
 (C) alternative (D) inclusive

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. Precedence
 (A) subordination (B) seclusion
 (C) succession (D) supersession
167. Misdemeanour
 (A) adventure (B) cowardice
 (C) humility (D) courtesy
168. Nibble
 (A) swallow (B) munch
 (C) devour (D) consume
169. Jeopardy
 (A) pleasure (B) stability
 (C) safety (D) comfort
170. Hindrance
 (A) assistance (B) authorization
 (C) approval (D) approbation

Directions : In questions no. 171 to 175, 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.

171. Suman held court with the studio audience.
 (A) tried to please to gain support
 (B) entertained with interesting funny stories
 (C) took to the court of law
 (D) had a formal discussion with
172. Ravi wants to blaze a trail in his activities.
 (A) be supported
 (B) be the centre of attraction
 (C) initiate work and be a pioneer
 (D) blow the trumpet
173. Their friendship lasted without a cloud to the end of his life.
 (A) without concealment
 (B) without stigma
 (C) without trouble
 (D) without romance
174. She took a wrong decision by not marrying this gentleman. She doesn't know that beauty is only skin deep.
 (A) physical charm is important
 (B) internal beauty is not important
 (C) physical touch is not important
 (D) physical beauty is not important
175. The officials played ducks and drakes with the public money.
 (A) spent (B) preserved
 (C) collected (D) squandered

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. He won't hear you provided you shout.
 (A) in case (B) as long as
 (C) unless (D) No improvement
177. The ship is at the anchor and the sailors are now at ease.
 (A) at an anchor (B) at its anchor
 (C) at anchor (D) No improvement
178. They objected to the plan on the grounds that it was too expensive.
 (A) declined (B) disagreed
 (C) refused (D) No improvement
179. Very little rice was found in the pot after all the guests had eaten.
 (A) remained (B) was cooked
 (C) stored (D) No improvement
180. The policeman captured the first car that approached and ordered the driver to take the injured child to the hospital.
 (A) commandeered (B) interrupted
 (C) caught (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. A study of words and the way words develop
 (A) Phraseology (B) Phonography
 (C) Philology (D) Phonology
182. Something which is not in harmony
 (A) Cacophonous (B) Noisy
 (C) Smooth (D) Quiet
183. A list of books
 (A) Catalogue (B) Index
 (C) Anthology (D) Glossary
184. Man with womanly habits and manners
 (A) Effeminate (B) Gay
 (C) Bovine (D) Suave
185. Something unusual or strange, having peculiar notions
 (A) Whimsical (B) Aggressive
 (C) Dramatic (D) Reasonable

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

186. (A) flabbergast (B) flabbergust
 (C) flabergast (D) flabergust
187. (A) holocost (B) halocaust
 (C) holocaust (D) holocast
188. (A) revarential (B) reverentiel
 (C) reverantial (D) reverential
189. (A) metikyulus (B) meticulus
 (C) meteculous (D) meticulous
190. (A) suvenir (B) souviener
 (C) souvenir (D) suvenire

Directions : (Questions no. 191 to 200). In the following passage, some of the words have been left out. First read the passage over and try to understand what it is about. Then fill in the blanks with the help of the alternatives given. Blacken the appropriate rectangle in the Answer Sheet.

The League of Nations was 191 in 1919. It became ineffective and the UNO began to 192 from October 24th, 1945. The Second World War 193 in 1939. It caused great 194 to human lives and property. As a 195 of use of atom bombs, many people were 196 and many others became 197. The world leaders feared that another world war would 198 the entire world. It was a question of the 199 of mankind. To ensure peace and 200 the world leaders established a world organisation, the UNO.

191. (A) made (B) opened
(C) created (D) ~~formed~~
192. (A) function (B) commence
(C) start (D) operate
193. (A) broke into (B) ~~broke up~~
(C) broke in (D) broke out
194. ~~(A) loss~~ (B) disturbance
(C) wastage (D) calamity
195. (A) reason (B) matter
~~(C) result~~ (D) cause

196. (A) mutilated (B) disabled
(C) destroyed (D) killed
197. (A) unfit (B) handicapped
(C) disabled (D) disadvantaged
198. (A) jeopardize (B) destroy
(C) perish (D) demolish
199. (A) presence (B) existence
(C) continuity (D) survival
200. (A) safety (B) order
(C) tranquility (D) security