

Instructions to Candidates

This Booklet contains 200 questions in all comprising the following four parts :

Parts-A : general Intelligence & Reasoning (50 Questions)

Parts B : General Awareness (50 Questions)

Part C : Numerical Aptitude (50 Questions)

Part D : English Comprehension (50 Questions)

All questions are compulsory and carry equal marks.

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 immediately.

The paper carries negative marking. 0.25 marks will be deducted for each wrong answer.

You will be supplied the Answer-sheet separately by the invigilator. You must complete the details of Ticket Number, Roll number and Test Form Number on Side-I of the Answer-Sheet carefully before you actually start answering the questions. You must also put your signature on the Answer-Sheet at the prescribed place. Here instructions must be fully complied with, failing which, your Answer-Sheet will not be evaluated and you will be awarded 'ZERO' mark. (For V.H. candidates these details will be filled in by the scribe. However all V.H. candidates must put their left-hand thumb impression at the space provided in the Answer-Sheet. In addition, those V.H. candidates who can sign should also put their signatures in addition to thumb impression.)

Answer must be shown by completely blackening the corresponding rectangles on side-II of the Answer-Sheet against the relevant question number by HB pencil only. Answer which are not shown by HB pencil will not be awarded any mark.

A machine will read the coded information in the OMR Answer-Sheet. In case the information is incompletely/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 deemed 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.

In lieu of Questions No. 46 to 50 and 147 to 150 relating to figural and graph portions, alternate questions have been provided to be attempted by V.H. candidates only.

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.

PART A

GENERAL INTELLIGENCE & REASONING

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

1. Architect : Building :: Sculptor : ?

- (A) Museum
- (B) Stone
- (C) Chisel
- (D) Statue

2. MKQO : LNPR :: ? : XVTZ

- (A) YSUW
- (B) SVWY
- (C) VTWY
- (D) WYTS

3. CFIL : ORUX :: DGJM : ?

- (A) HJLN
- (B) NQST
- (C) PSVY
- (D) RTVX

4. BEHK : YVSP :: DGJM : ?

- (A) JGDA
- (B) ROLI
- (C) WTQN
- (D) ZWTQ

5. 24 : 60 :: 120 : ?

- (A) 160
- (B) 220
- (C) 300
- (D) 108

6. 392 : 28 :: 722 : ?

- (A) 18
- (B) 28
- (C) 38
- (D) 48

7. 123 : 36 :: 221 : ?

- (A) 52
- (B) 69
- (C) 72
- (D) 25

8. Timid : Ass :: Cunning : ?

- (A) Ant
- (B) Fox
- (C) Rabbit
- (D) Horse

9. Ecstasy : Gloom :: ?

- (A) Congratulations : Occasion
- (B) Diligent : Successful
- (C) Measure : Scale
- (D) Humiliation : Exaltation

Directions : In questions no. 10 to 15, find the odd number/letters/ word from the given alternatives.

- (A) Perception
- (B) Discernment
- (C) Penetration
- (D) Insinuation

11. (A) PQXZ
(B) BCQN
(C) ABDF
(D) MNPR

12. (A) ABYZ
(B) CDWX
(C) EFUV
(D) GHTV

13. (A) 626
(B) 841
(C) 962
(D) 1090

14. (A) 5720
(B) 6710
(C) 2640
(D) 4270

15. (A) Swimming
(B) Sailing
(C) Diving
(D) Driving

Directions : In questions no. 16 from among the given alternatives select the one in which the set of numbers is most like the set of numbers given in the questions.

Given Set : (4, 25, 81)

16. (A) (4, 36, 79)
(B) (9, 48, 81)
(C) (16, 64, 100)
(D) (9, 49, 143)

17. In the following questions, numbers of letter are skipped in between by a particular rule. Which of the following series observe the rule ?

- (A) BAFHTU
- (B) ACEGJL
- (C) ACFJOU
- (D) ADFHJL

Directions : In question no. 18, which one of the given responses would be a meaningful order of the following ?

18. 1. Ocean
2. Rivulet
3. Sea
4. Glacier
5. River

- (A) 5, 2, 3, 1, 4
- (B) 4, 2, 5, 3, 1
- (C) 5, 2, 3, 4, 1
- (D) 4, 2, 1, 3, 5

Directions : Arrange the following words as per order in the dictionary.

19. 1. Preposition
2. Preparatively
3. Preposterous
4. Preponderate
5. Prepossess

- (A) 2, 4, 1, 5, 3
- (B) 1, 5, 2, 4, 3
- (C) 5, 4, 2, 3, 1
- (D) 4, 2, 5, 1, 3

20. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

ac_cab_baca_aba_aca_

- (A) acbcc
- (B) aacbc
- (C) babbb
- (D) bcbba

Directions : In questions no. 21 to 24, a series is given, which one/two term(s) missing. Choose the correct alternative from the given ones that will complete the series.

21. 0, 4, 8, 24, 64, 176, ?

- (A) 180
- (B) 480
- (C) 280
- (D) 300

22. WTPMIFB ??

- (A) ZV
- (B) XU
- (C) YU
- (D) YV

23. ?, DREQ, GUHT, JXKW

- (A) EFRS
- (B) TGSE
- (C) JWVI
- (D) AOBN

24. 56, 90, 132, 184, 248, ?

- (A) 368
- (B) 316
- (C) 362
- (D) 326

25. Naresh's age is 4 years less than twice the age of his brother. Which of the following represents the equation to find his age ?

- (A) $2x + 4$
- (B) $4x + 2$
- (C) $x - 4$
- (D) $2x - 4$

26. Suresh's sister is the wife of Ram. Ram is Rani's brother. Ram's father is Madhur. Sheetal is Ram's grandmother. Rema is Sheetal's daughter-in-law. Rohit is Rani's brother's son. Who is Rohit to Suresh ?

- (A) Brother-in-law
- (B) Son
- (C) Brother

(D) Nephew

27. In a survey, 70% of those surveyed owned a car and 75% of those surveyed owned a TV. If 55% owned both a car and a TV, what percent of those surveyed did not own either a car or a TV ?

- (A) 25%
- (B) 20%
- (C) 10%
- (D) 5%

28. Find the wrong number in the series.

6, 12, 21, 32, 45, 60

- (A) 6
- (B) 12
- (C) 21
- (D) 32

29. Ramesh ranks 13th in a class of students. There are 5 students below Suresh rankwise. How many students are there between Ramesh and Suresh ?

- (A) 12
- (B) 14
- (C) 15
- (D) 16

30. B is twice as old as A but twice younger than F. C is half the age of A but is twice older than D. Who is the second oldest ?

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

31. A two member committee comprising of one male and one female member is to be constituted out of five males and three females. Amongst the females, Ms. A refuses to be a member of the committee in which Mr. B is taken as the member. In how many different ways can the committee be constituted ?

- (A) 11
- (B) 12
- (C) 13
- (D) 14

32. Mrs. Susheela celebrated her wedding anniversary on Tuesday, 30th September 1997. When will she celebrate her next wedding anniversary on the same day ?

- (A) 30 September 2003
- (B) 30 September 2004
- (C) 30 September 2002
- (D) 30 October 2003

33. A colock gains five minutes every hour. What will be the angle traversed by the second hand in one minute ?

- (A) 3600
- (B) 360.50
- (C) 3900
- (D) 3800

34. Sudha travels 8 km to the South. Then she turns to the right and walks 4 km. Then again she turns to her right and moves 8 km forward. How many km away is she from the starting point ?

- (A) 7
- (B) 6
- (C) 4
- (D) 8

35. From the given alternative words, select the word which cannot be formed using the letters of the given word :

‘COMPREHENSION’

- (A) COMPRISE
- (B) PENSION
- (C) ONION
- (D) PREACH

36. From the given alternative words, select the word which can be formed using the letters of the given word :

‘MULTIPLICATION’

- (A) MUTUAL
- (B) LIMITATION
- (C) APPLICATION
- (D) NOTION

37. A man started walking West. He turned right, then right again and finally turned left. Towards which direction was he walking now ?

- (A) North
- (B) South
- (C) West
- (D) East

38. A statement is given followed by four alternative arguments. Select the alternative which is most appropriate.

Statement :

Is it necessary that education should be job oriented ?

Arguments :

Yes, the aim of education is to prepare persons for earning.

Yes, educated person should stand on his own feet after completion of education.

No, education should be for sake of knowledge only.

No, one may take up agriculture where education is not necessary.

Only I and II arguments are strong

Only III and IV arguments are strong

Only I arguments is strong

Only I and III arguments are strong

39. If DANCE is coded as GXQZH, then how will RIGHT be coded ?

- (A) UFJEW
- (B) SGKFX
- (C) UFJWE
- (D) UFWJE

40. If LOSE is coded as 1357 and GAIN is coded as 2468, what do the figures 84615 stand for ?

- (A) NAILS
- (B) SNAIL
- (C) LANES

(D) SLAIN

Direction : In question no. 41 and 42, select the missing number from the given responses.

41.

- (A) 127
- (B) 31
- (C) 217
- (D) 328

42.

- (A) 40
- (B) 48
- (C) 50
- (D) 36

43. If ‘ \div ’ stands for division , ‘ $-$ ’ stands for subtraction, ‘ \times ’ stands for multiplication, ‘ $+$ ’ stands for addition, then which one of the following equations is correct ?

- (A) $70 - 2 + 4 \div 5 \times 6 = 44$
- (B) $70 - 2 + 4 \div 5 \times 6 = 21$
- (C) $70 - 2 + 4 \div 5 \times 6 = 341$
- (D) $70 - 2 + 4 \div 5 \times 6 = 96$

44. The school result is increasing year after year. Forecast the result of 2012 from the following information.

Year	2006	2007	2008	2009	2010	2011	2012
Result	34.25%		36.75%		39.75%		43.25%
		51.75%		?			47.25%

- (A) 51.75%
- (B) 56.75%
- (C) 48.00%
- (D) 57.25%

45. Which diagram correctly the relationship between politicians, poets and women ?

46. How many triangles are there in the following figure ?

- (A) 29
- (B) 27
- (C) 23
- (D) 30

47. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

If $324 \times 289 = 35$, $441 \times 484 = 43$,

$625 \times 400 = 45$, find the value of 256×729 .

- (A) 33
- (B) 35
- (C) 43
- (D) 34

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

48. Question figure :

Answer figure :

Directions : If a mirror is placed on the line MN, then which of the answer figures is the correct image of the given question figure ?

49. Question figure :

Answer figure :

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

50. Figure

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

46. There are 50 children in a class. 4% of them have no uniform. In the remaining 96%, $\frac{1}{3}$ rd children are wearing only one part of the uniform. Remaining children have full uniform. How many are wearing full uniform ?

- (A) 26
- (B) 32
- (C) 34
- (D) 30

47. Five poles are standing in a row. M is on the left of N, O is on the right of P which is on the right of N. If L is on the left of M, which pole is in the centre ?

- (A) L
- (B) M
- (C) N
- (D) O

48. Five books are lying in a pile. E is lying on A and C is lying under C. Which book is lying at the bottom ?

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

49. I have a few fruits to be distributed. If I keep 6 in each pack, I am left with five fruits. If I keep three in each pack I am left with two. If I keep 5 in each I am left with none. What is the minimum number of fruits I have, to pack and distribute ?

- (A) 30
- (B) 35
- (C) 25
- (D) 32

50. Select the letters that complete the first word and begin the second from the given alternatives.

TRA (?) IRT

- (A) IL
- (B) SH
- (C) P
- (D) IN

PART B

GENERAL AWARENESS

51. In India, the concept of single citizenship is adopted from

- (A) England
- (B) U.S.A.
- (C) Canada
- (D) France

52. Who had proposed partyless democracy in India ?

- (A) Jaya Prakash Narayan
- (B) Mahatma Gandhi
- (C) Vinoba Bhave
- (D) S.A. Dange

53. Disinvestment in Public Sector is called

- (A) Liberalisation
- (B) Globalisation
- (C) Industrialisation
- (D) Privatisation

54. 'Drawin finches' refers to a group of

- (A) Fishes
- (B) Lizards
- (C) Birds
- (D) Amphibians

55. An individual's actual standard of living can be assessed by

- (A) Gross National Income
- (B) Net National Income
- (C) Per Capita Income
- (D) Disposable Personal Income

56. An announced by the Finance Minister in his Budget speech on 28th February 2011, with a view to assist States in modernizing their stamp and registration administration, E-stamping is expected to be rolled out in all the districts of different States in a period of

- (A) one year
- (B) two year
- (C) three year

(D) five year

57. In the budget for 2011-12, the fiscal deficit (% of GDP) for 2011-12 has been projected at

- (A) 5.1
- (B) 5.0
- (C) 4.6
- (D) 3.4

58. Which was described by Dr. B.R. Ambedkar as the 'heart and soul' of the Constitution ?

- (A) Right to Equality
- (B) Right against Exploitation
- (C) Right to Constitutional Remedies
- (D) Right to Freedom of Religion

59. Which is not the concern of the local government ?

- (A) Public Health
- (B) Sanitation
- (C) Law and Order
- (D) Public Utility Services

60. The Civil Disobedience Movement was launched by Mahatma Gandhi in

- (A) 1928
- (B) 1930
- (C) 1931
- (D) 1922

61. What is the maximum strength prescribed for State Legislative Assemblies ?

- (A) 350
- (B) 600
- (C) 500
- (D) 750

62. At which place in Bengal was the East India Company given permission to trade build a factory by the Mughals in 1651 ?

- (A) Calcutta
- (B) Cassim Bazar
- (C) Singur
- (D) Burdwan

64. Which Sikh Guru called himself the 'Sachcha Badshah' ?

- (A) Guru Gobind Singh
- (B) Guru Hargovind
- (C) Guru Tegh Bahadur
- (D) Guru Arjan Dev

65. The oldest International airline is

- (A) Dutch KLM
- (B) Air Canada
- (C) Qantas Airways
- (D) Air Sahara

66. Diu is an island off

- (A) Daman
- (B) Goa
- (C) Gujarat
- (D) Maharashtra

67. Which from the following is a land-locked sea ?

- (A) Red Sea
- (B) Timor Sea
- (C) North Sea
- (D) Aral Sea

68. Shivasamudram Falls is found in the courses of river

- (A) Krishna
- (B) Godavari
- (C) Cauvery
- (D) Mahanadi

69. Who gave the slogan "Inquilab Zindabad" ?

- (A) Chandrashekhar Azad
- (B) Subhash Chandra Bose
- (C) Bhagat Singh
- (D) Iqbal

70. The position of Indian Railways network in the world is

- (A) second

- (B) third
- (C) fourth
- (D) fifth

71. DNA fingerprinting is used to identify the

- (A) Parents
- (B) Rapist
- (C) Thieves
- (D) All the above

72. The normal cholesterol level in human blood is

- (A) 80-120 mg%
- (B) 120-140 mg%
- (C) 140-180 mg%
- (D) 180-200 mg%

73. Which of the following are warm-blooded animals ?

- (A) Whales
- (B) Whale sharks
- (C) Alytes
- (D) Draco

74. Syrinx is the voice box in

- (A) Amphibians
- (B) Reptiles
- (C) Birds
- (D) Mammals

75. The dried flower buds are used as a spice in

- (A) Cardamom
- (B) Cinnamon
- (C) Cloves
- (D) Saffron

76. The tissue in man where no cell division occurs after birth is

- (A) skeletal
- (B) nerves
- (C) connective
- (D) germinal

77. Troposphere is the hottest part of the atmosphere because

- (A) it is closest to the Sun
- (B) there are charged particles in it
- (C) it is heated by the Earth's surface
- (D) heat is generated in it

78. The outermost layer of the Sun is called

- (A) Chromosphere
- (B) Photosphere
- (C) Corona
- (D) Lithosphere

79. Where was India's first computer installed ?

- (A) Indian Institute of Technology, Delhi
- (B) Indian Institute of Science, Bangalore
- (C) Indian Iron & Steel Co. Ltd., Burnpur
- (D) Indian Statistical Institute, Calcutta

80. Which of the following can be used to absorb neutrons to control the chain reaction during nuclear fission ?

- (A) Boron
- (B) Heavy water
- (C) Uranium
- (D) Plutonium

81. Hydrogen bomb is based on the principle of

- (A) controlled fission reaction
- (B) uncontrolled fission reaction
- (C) controlled fusion reaction
- (D) uncontrolled fusion reaction

82. As per Railway Budget for 2011-12, the senior citizen concession for men has been increased from

- (A) 25% to 30%
- (B) 30% to 40%
- (C) 40% to 50%
- (D) 30% to 50%

83. The monster earthquake-cum-tsunami which hit Japan on March 11, 2011 has moved the country's main island, Honshu, by about

- (A) two feet
- (B) three feet
- (C) five feet
- (D) eight feet

84. What is the commonly used for measuring the speed of data transmission ?

- (A) Mega Hertz
- (B) Characters per second
- (C) Bits per second
- (D) Nano seconds

85. Which type of reaction produces the most harmful radiation ?

- (A) Fusion reaction
- (B) Fission reaction
- (C) Chemical reaction
- (D) Photo-Chemical reaction

86. Which type of glass is used for making glass reinforced plastic ?

- (A) Pyrex glass
- (B) Flint glass
- (C) Quartz glass
- (D) Fibre glass

87. Which of the following metals causes Itai-itai disease ?

- (A) Cadmium
- (B) Chromium
- (C) Cobalt
- (D) Copper

88. Glycol is added to aviation gasoline because it

- (A) reduces evaporation of petrol
- (B) increases efficiency of petrol
- (C) prevents freezing of petrol
- (D) reduces consumption of petrol

89. The largest ecosystem of the Earth is

- (A) Biome
- (B) Hydrosphere
- (C) Lithosphere

(D) Biosphere

90. In a food chain, the solar energy utilized by plants is only

- (A) 10 percent
- (B) 1 percent
- (C) 0.1 percent
- (D) 0.01 percent

91. Supersonic jet causes pollution by thinning of

- (A) O₃ layer
- (B) O₂ layer
- (C) SO₂ layer
- (D) CO₂ layer

92. OTEC stands for

- (A) Ocean Thermal Energy Conservation
- (B) Oil and Thermal Energy Conservation
- (C) Oil and Thermal Energy Convention
- (D) Ocean Thermal Energy Conversion

93. Which of the following folk dances is associated with Rajasthan ?

- (A) Rauf
- (B) Jhora
- (C) Veedhi
- (D) Suisini

94. Which troubled model recalled recently by the Indian automobile giant Maruti Suzuki for replacement of faulty fuel pump gasket ?

- (A) Maruti 800
- (B) Maruti A-Star
- (C) Wagon R
- (D) Baleno

95. As a part of Human Resource Development Ministry's 'brain gain' policy to attract global talent, 14 world class universities to attract global talents are proposed to be set up in various states. Name the state from the following where no university of the aforesaid type is proposed to be located.

- (A) Punjab
- (B) Bihar
- (C) Rajasthan

(D) Uttaranchal

96. Who discovered South Pole ?

- (A) Robert Peary
- (B) Amundsen
- (C) John Cabot
- (D) Tasman

97. Who invented penicillin ?

- (A) Alexander Fleming
- (B) Louis Pasteur
- (C) Dreser
- (D) Edward Jenner

98. 2018 FIFA World Cup would be held in

- (A) Russia
- (B) Qatar
- (C) France
- (D) Netherlands

99. Who of the following was not the recipient of Nobel Prize in Economics 2010 ?

- (A) Peter A. Diamond
- (B) Christopher Pissarides
- (C) Lui Xiaobo
- (D) Dale Mortensen

100. Which of the following books is authored by V.S. Naipaul ?

- (A) The Rediscovery of India
- (B) A House for Mr. Biswas
- (C) Witness the Night
- (D) Tender Hooks

PART C

NUMERICAL APTITUDE

101. If $a*b = 2a + 3b - ab$, then the value of $(3*5 + 5*3)$ is

- (A) 10
- (B) 6
- (C) 4

(D) 2

102. Simplify :

$$(0.0347 \times 0.0347 \times 0.0347 + (0.9653)^3) / ((0.0347)^2 - (0.0347)(0.9653) + (0.9653)^2)$$

(A) 0.9306

(B) 1.0009

(C) 1.0050

(D) 1

103. if $p = 124 \sqrt[3]{p^2 + 3p + 3} + 1$

(A) 5

(B) 7

(C) 123

(D) 125

104. If $(1 - \sqrt[3]{x}) / 100 = \sqrt[3]{5}$ then x equals

(A) 2

(B) 4

(C) 16

(D) $(136)^{1/3}$

105. I multiplied a natural number by 18 and another by 21 and added the products. Which one of the following could be the sum ?

(A) 2007

(B) 2008

(C) 2006

(D) 2002

106. The product of two numbers is 45 and their difference is 4. The sum of squares of the two numbers is

(A) 135

(B) 240

(C) 73

(D) 106

107.

(A) 4

- (B) 6
- (C) 8
- (D) 10

108. The square root of $14+6\sqrt{5}$ is

- (A) $2+\sqrt{5}$
- (B) $3+\sqrt{5}$
- (C) $5+\sqrt{3}$
- (D) $3+2\sqrt{5}$

109. When 231 is divided by 5 the remainder is

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

110. The value of _____ is

- (A) $21/13$
- (B) $17/3$
- (C) $34/21$
- (D) $8/5$

111. The unit digit in the product $(122)_{173}$ is

- (A) 2
- (B) 4
- (C) 6
- (D) 8

112. The value of

$2+\sqrt{3}/2-\sqrt{3}+2-\sqrt{3}/2+\sqrt{3}+\sqrt{3}+1/\sqrt{3}-1$ is

- (A) $16+\sqrt{3}$
- (B) $4-\sqrt{3}$
- (C) $2-\sqrt{3}$
- (D) $2+\sqrt{3}$

113. A and B together can do a work in 12 days. B and C together do it in 15 days. If A's efficiency is twice that of C, then the days required for B alone to finish the work is

- (A) 60
- (B) 30
- (C) 20
- (D) 15

114. The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is

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

115. Two equal vessels are filled with the mixtures of water and milk in the ratio of 3 : 4 and 5 : 3 respectively. If the mixtures are poured into a third vessel, the ratio of water and milk in the third vessel will be

- (A) 15 : 12
- (B) 53 : 59
- (C) 20 : 9
- (D) 59 : 53

116. I am three times as old as my son. 15 years hence, I will be twice as old as my son. The sum of our ages is

- (A) 48 years
- (B) 60 years
- (C) 64 years
- (D) 72 years

117. Three bells ring simultaneously at 11 a.m. They ring at regular intervals of 20 minutes, 30 minutes, 40 minutes respectively. The time when all the three ring together next is

- (A) 2 p.m.
- (B) 1 p.m.
- (C) 1.15 p.m.
- (D) 1.30 p.m.

118. A copper wire is bent in the form of an equilateral triangle and has area $121\sqrt{3}$ cm². If the same wire is bent into the form of a circle, the area (in cm²) enclosed by the wire is (Take $\pi = 22/7$)

- (A) 364.5
- (B) 693.5
- (C) 346.5

(D) 639.5

119. A child reshapes a cone made up of clay of height 24 cm and radius 6cm into a sphere. The radius (in cm) of the sphere is

- (A) 6
- (B) 12
- (C) 24
- (D) 48

120. Water flows into a tank which is 200m long and 150 m wide, through a pipe of cross-section 0.3 m x 0.2 m at 20 km/hour. Then the time (in hour) for the water level in the tank to reach 8 m is

- (A) 50
- (B) 120
- (C) 150
- (D) 200

121. A and B can do a work in 12 days, B and C can do the same work in 15 days, C and A can do the same work in 20 days. The time taken by A, B and C to do the same work is

- (A) 5 days
- (B) 10 days
- (C) 15 days
- (D) 20 days

122. A is 50% as efficient as B.C does half of the work does the work in 20 days, then A, B and C together can do the work in

- (A) $5 \frac{2}{3}$ days
- (B) $6 \frac{2}{3}$ days
- (C) 6 days
- (D) 7 days

123. A man bought an article listed at Rs. 1,500 with a discount of 20% offered on the list price. What additional discount must be offered to the man to bring the net price to Rs. 1,104 ?

- (A) 8%
- (B) 10%
- (C) 12%
- (D) 15%

124. If $a/b = c/d = e/f = 3$, then

$$2a^2 + 3c^2 + 4e^2 / 2b^2 + 3d^2 + 4f^2 = ?$$

- (A) 2
- (B) 3
- (C) 4
- (D) 9

125. The diameter of a wheel is 98 cm. The number of revolutions in which it will have to cover a distance of 1540 m is

- (A) 500
- (B) 600
- (C) 700
- (D) 800

126. In an equilateral triangle ABC of side 10 cm, the side BC is trisected at D. Then the length (in cm) of AD is

- (A) $3\sqrt{7}$
- (B) $7\sqrt{3}$
- (C) $10\sqrt{7/3}$
- (D) $7\sqrt{10/3}$

127. The cost price of an article is Rs. 800. After allowing a discount of 10%, a gain of 12.5% was made. Then the marked price of the article is

- (A) Rs. 1,000
- (B) Rs. 1,100
- (C) Rs. 1,200
- (D) Rs. 1,300

128. The ratio of the income to the expenditure of a family is 10 : 7. If the family's expenses are Rs. 10,500, then saving of the family is

- (A) Rs. 4,500
- (B) Rs. 10,000
- (C) Rs. 4,000
- (D) Rs. 5,000

129. The average mathematics marks of two Section A and B of Class IX in the annual examination is 74. The average marks of Section A is 77.5 and that of Section B is 70. The ratio of the number of students of Section A and B is

- (A) 7 : 8
- (B) 7 : 5

- (C) 8 : 7
- (D) 8 : 5

130. The average weight of a group of 20 boys was calculated to be 89.4 kg and it was later discovered that one weight was misread as 78 kg instead of 87 kg. The correct average weight is

- (A) 88.95 kg
- (B) 89.25 kg
- (C) 89.55 kg
- (D) 89.85 kg

131. The ratio of the volumes of water and glycerine in 240 cc a mixture is 1 : 3. The quantity of water (in cc) that should be added to the mixture so that the new ratio of the volumes of water and glycerine becomes 2 : 3 is

- (A) 55
- (B) 60
- (C) 62.5
- (D) 64

132. At present, the ratio of the ages of Maya and Chaya is 6 : 5 and fifteen from now, the ratio will get changed to 9 : 8. Maya's present age is

- (A) 21 years
- (B) 24 years
- (C) 30 years
- (D) 40 years

133. A man sold 20 apples for Rs. 100 and gained 20%. How many apples did he buy for Rs. 100 ?

- (A) 20
- (B) 22
- (C) 24
- (D) 25

134. A rectangular sheet of metal is 40 cm by 15 cm. Equal squares of side 4 cm are cut off at the corners and the remainder is folded up to form an open rectangular box. The volume of the box is

- (A) 896 cm³
- (B) 986 cm³
- (C) 600 cm³

(D) 916 cm³

135. If 78 is divided into three parts which are in the ratio $1 : 1/3 : 1/6$, the middle part is

- (A) $9 \frac{1}{3}$
- (B) 13
- (C) $17 \frac{1}{3}$
- (D) $18 \frac{1}{3}$

136. The selling price of 10 oranges is the cost price of 13 oranges. Then the profit percentage is

- (A) 30%
- (B) 10%
- (C) 13%
- (D) 3%

137. The marked price of a radio is Rs. 480. The shopkeeper allows a discount of 10% and gains 8%. If no discount is allowed, his gain percent would be

- (A) 18%
- (B) 18.5%
- (C) 20.5%
- (D) 20%

138. The price of sugar goes up by 20%. If a housewife wants the expenses on sugar to remain the same, she should reduce the consumption by

- (A) $15 \frac{1}{5} \%$
- (B) $16 \frac{2}{3} \%$
- (C) 20%
- (D) 25%

139. In a factory 60% of the workers are above 30 years and of these 75% are males and the rest are females. If there are 1350 male workers above 30 years, the total number of workers in the factory is

- (A) 3000
- (B) 2000
- (C) 1800
- (D) 1500

140. Walking at $\frac{3}{4}$ of his usual speed, a man is $1 \frac{1}{2}$ hours late. His usual time to cover the same distance, in hours, is

- (A) $4 \frac{1}{2}$

- (B) 4
- (C) $5 \frac{1}{2}$
- (D) 5

141. The floor of a room is of size 4 m x 3 m and its height is 3 m. The walls and ceiling of the room require painting. The area to be Painted is

- (A) 66 m²
- (B) 54 m²
- (C) 43 m²
- (D) 33 m²

142. When the price of an article was reduced by 20% its sale increased by 80%. What was the net effect on the sale ?

- (A) 44% increase
- (B) 44% decrease
- (C) 66% increase
- (D) 75% increase

143. A sum of money becomes eight times in 3 years, if the rate is compounded annually. In how much time will the same amount at the same compound rate become sixteen times ?

- (A) 6 years
- (B) 4 years
- (C) 8 years
- (D) 5 years

144. The simple interest on a sum of money is $\frac{1}{9}$ of the principle and the number of years is equal to rate percent per annum, The rate per annum is

- (A) 3%
- (B) $\frac{1}{3}\%$
- (C) $3 \frac{1}{3}\%$
- (D) $\frac{3}{10}\%$

145. The different between simple interest and compound interest of a certain sum of money at 20% per annum for 2 years is Rs. 48. Then the sum is

- (A) Rs. 1,000
- (B) Rs. 1,200
- (C) Rs. 1,500
- (D) Rs. 2,000

146. Shri X goes to his office by scooter at a speed of 30 km/h and reaches 6 minutes earlier. If he goes at a speed of 24 km/h, he reaches 5 minutes late. The distance to his office is

- (A) 20 km
- (B) 21 km
- (C) 22 km
- (D) 24 km

Directions : (Questions No. 147 to 150). The pie chart given below shows the spending of a family on various heads during a month. Study the graph and answer questions 147 to 150.

147. Expenditure on Rent is what percent of expenditure on fuel ?

- (A) 135%
- (B) 156%
- (C) 167%
- (D) 172%

148. Which three expenditures together have a central angle of 1080 ?

- (A) Fuel, Clothing and Others
- (B) Fuel, Education and Others
- (C) Clothing, Rent and Others
- (D) Education, Rent and Others

149. If the total income of the family is Rs. 25,000, then the amount spent on Rent and Food together is

- (A) Rs. 17,250
- (B) Rs. 14,750
- (C) Rs. 11,250
- (D) Rs. 8,500

150. What is the ratio of the expenses on Education to the expenses on Food ?

- (A) 1 : 3
- (B) 3 : 1
- (C) 3 : 5
- (D) 5 : 3

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

147. The volumes of two cylinders are in the ratio 3 : 8 and their heights are in the ratio 2 : 3. Then the ratio of their diameters is

- (A) 3 : 8
- (B) 4 : 3
- (C) 3 : 4
- (D) 2 : 3

148. A and B are partners in a business sharing profits in the ratio 4 : 5. They admit C into their business and they decide to share the profits in the ratio 2 : 3 : 1. To accommodate C, by what ratio do A and B have to give up their share of profit ?

- (A) 3 : 1
- (B) 2 : 1
- (C) 1 : 2
- (D) 1 : 3

149. A train covers 50% of the journey at 30 km/h, 25% of the journey at 25 km/h and the remaining at 20 km/h. The average speed (in km/h) of the train during entire journey is

- (A) $25 \frac{25}{47}$
- (B) $25 \frac{47}{25}$
- (C) $25 \frac{52}{74}$
- (D) $25 \frac{27}{74}$

150. the L.C.M. of two numbers is 4284 and their H.C.F. is 34. If one of the numbers is 204, the other number is

- (A) 714
- (B) 814
- (C) 914
- (D) 614

PART D

ENGLISH COMPREHENSION

Directions : In questions no. 151 to 155, some of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the rectangle []

corresponding to the appropriate letter (A, B, C). If a sentence is free from errors, blacken the rectangle corresponding to (D) in the Answer sheet.

151.

Childrens enjoy listening to ghost stories especially on Halloween night No error.

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

152.

I have many works to do. No error.

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

153.

There are so many filths all around the place. No error.

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

154.

A senior doctor expressed concern about physicians recommended the vaccine.

(A) (B) (C)

No error.

(D)

155.

We have discussing all the known mechanisms of physical growth. 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. 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. There is something wonderful _____ him.

(A) of
(B) about
(C) for
(D) inside

157. The song in the play cannot be deleted as it is _____ to the story.

(A) Intervened
(B) Innate
(C) Exacting
(D) integral

158. She remained a _____ all her life.

- (A) spinster
- (B) bachelor
- (C) unmarried
- (D) single

159. Do not stay in the grasslands after dark, as some animals become _____ when they see humans.

- (A) provoked
- (B) alerted
- (C) aggressive
- (D) threatened

160. The building is not safe and must be _____ down.

- (A) pull
- (B) pulling
- (C) pulled
- (D) pulls

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. APPRAISE

- (A) Accuse
- (B) Praise
- (C) Appreciate
- (D) Judge

162. DELUGE

- (A) Confusion
- (B) Deception
- (C) Flood
- (D) Weapon

163. PREPONDERANCE

- (A) Pre-eminence
- (B) Dominance
- (C) Domineering
- (D) Preoccupation

164. LUCIDITY

- (A) Fluidity
- (B) Politeness
- (C) Clarity
- (D) Fluency

165. INDICT

- (A) Implicate
- (B) Elude
- (C) Charge
- (D) Manifest

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

166. DIVULGE

- (A) Conceal
- (B) Disguise
- (C) Oppress
- (D) Reveal

167. DISCORD

- (A) Harmony
- (B) Serenity
- (C) Acceptance
- (D) Placidity

168. MAMMOTH

- (A) Quiet
- (B) Significant
- (C) Huge
- (D) Small

169. INVINCIBLE

- (A) Small
- (B) Invisible
- (C) Vulnerable
- (D) Reachable

170. INOFFENSIVE

- (A) Sensitive
- (B) Organic
- (C) Sensible
- (D) Rude

Directions : In questions no. 171 to 175, four alternatives are given for the meaning of the given idiom/phrase. choose the alternative which best expresses the meaning of the idiom/phrase and mark it in the Answer Sheet.

171. To call it a day

- (A) to conclude proceeding
- (B) to initiate proceeding
- (C) to work through the day
- (D) None of the above

172. To put up with

- (A) to accommodate
- (B) to adjust
- (C) to understand
- (D) to tolerate

173. To face the music

- (A) to enjoy a musical recital
- (B) to bear the consequences
- (C) to live in a pleasant atmosphere
- (D) to have a difficult time

174. To take to heart

- (A) to be encouraged
- (B) to grieve over
- (C) to like
- (D) to hate

175. Yeoman's service

- (A) medical help
- (B) excellent work
- (C) social work
- (D) hard work

Directions : In questions no. 176 to 180, a sentence or underlined part thereof is given which may need improvement. Alternatives are given at (A), (B) and (C) below, which may be a better option. In case no improvement is needed, your answer is (D). Blacken the appropriate rectangle [] in the Answer Sheet.

176. Riding upon his horse, the tiger jumped at him.

- (A) Riding upon the tiger, the horse jumped at him.
- (B) the tiger jumped at him while he was riding upon his horse.
- (C) the tiger rode at him while he was jumping upon his horse.
- (D) No improvement

177. I in black and white must have your terms down.

- (A) I must have in black and white your terms down.
- (B) I must have your terms in black and white down.
- (C) I must have your terms down in black and white.
- (D) No improvement

178. When we came out of the restaurant it was half past eleven.

- (A) When we had come out of the restaurant
- (B) After we came out of the restaurant
- (C) When we have come out of the restaurant
- (D) No improvement

179. The man whom I thought was thoroughly honest proved to be a swindler.

- (A) The man whom I thought was thoroughly honest proved a swindler.
- (B) The man who I thought was thoroughly honest proved to be a swindler.
- (C) The man to whom I thought was thoroughly honest proved to be a swindler.
- (D) No improvement

180. No sooner had the dividend been declared, the notices were sent out.

- (A) The company had hardly declared the dividend till the notices were sent for mailing.
- (B) They had no sooner declared the dividend then the notices were sent out
- (C) Hardly had the dividend been declared than the notices were sent out.
- (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 and indicate it by blackening the appropriate rectangle [] in the Answer Sheet.

181. Not to be moved by entreaty

- (A) Rigorous
- (B) Negligent
- (C) Inexorable
- (D) Despotic

182. An object or portion serving as a sample

- (A) Specification
- (B) Spectre
- (C) Spectacle
- (D) Specimen

183. The practice of submitting a proposal popular vote

- (A) Elction
- (B) Reference
- (C) Popularity
- (D) Referendum

184. Code of diplomatic etiquette and precedence

- (A) Statesmanship
- (B) Diplomacy
- (C) Hierarchy
- (D) Protocol

185. To renounce a high position of authority or control

- (A) Abduct
- (B) Abandon
- (C) Abort
- (D) Abdicate

Directions : In question no. 186 to 190 group of four words are given. In each group, one word is correctly spelt. Find the correctly spelt word and mark your answer in the answer in the Answer Sheet.

186. (A) diolouge
(B) giraffe
(C) scissors
(D) humourous

187. (A) assiduous
(B) nefarious
(C) macabre
(D) Ioqacious

188. (A) cortege
(B) damage
(C) mileage
(D) plumege
189. (A) mandatory
(B) circulatory
(C) temporary
(D) regulatory
190. (A) convenience
(B) initiative
(C) concessional
(D) exaggerate

Directions : In the following passage (question no. 191 to 200), 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. Mark your answer in the Answer Sheet.

PASSAGE (Q. Nos. 191-200)

Science means knowledge is science. I know from my own eyesight that our dog Chippy likes papaya; I know from a book that Akbar was the 191 of Babar, and 192 in 1605; and I know 193 the radio that India did not do well in the 194 test matches. We can call these 195 of knowledge 196 , but they are not science.

Science 197 with facts, but not with facts which have 198 to do with each other, like the facts about our dog, cricket and the Moghul ruler; those facts are not related 199 , and so have nothing 200 with science. Science starts with observation.

191. (A) grandson
(B) grandfather
(C) grand nephew
(D) son
192. (A) gone
(B) died
(C) disappeared
(D) absented
193. (A) on
(B) in

- (C) since
- (D) from

194. (A) old
(B) ordinary
(C) latest
(D) outdated

195. (A) pieces
(B) peace
(C) whole
(D) block

196. (A) lies
(B) charges
(C) facts
(D) blame

197. (A) starts
(B) stops
(C) passes
(D) drives

198. (A) no
(B) neither
(C) nor
(D) nothing

199. (A) by that way
(B) in any way
(C) from the side
(D) in addition to

200. (A) to lie
(B) to speak
(C) to sleep
(D) to do