

DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

QUESTION BOOKLET

SERIES III

Subjects : General English, General Knowledge & Aptitude, Mathematics

BOOKLET SERIAL NO.

151771

Marks : 350

Time : 2½ hours

Read the following instructions carefully before you
begin to answer the questions.

INSTRUCTIONS TO CANDIDATES

1. This booklet contains **175 questions** to be answered in a separate OMR Answer Sheet using Black Ball Pen in following three parts:
Part-A-General English : 50 questions, Part-B-General Knowledge & Aptitude : 75 questions, Part-C-Mathematics : 50 questions
2. All Questions are compulsory.
3. You will be supplied the Answer sheet separately by the invigilator. You must complete the details of particulars asked for.
4. Answers must be shown by completely blackening the corresponding circles in the Answer Sheet against the relevant question number by Black Ball Pen. OMR Answer Sheet without marking series/double series marking shall not be evaluated.

Example :

Supposing the following question is asked :-

The Capital of Meghalaya is-

- A. Guwahati
- B. Kohima
- C. Shillong
- D. Delhi

You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :-

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

In the above illustration, if your chosen response is alternative C i.e. Shillong, then the same should be marked on the Answer Sheet by blackening the relevant circle with a Black Ball Point Pen only as below :-

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

WHICH IS THE ONLY CORRECT METHOD OF ANSWERING

5. 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 one question.
6. There will NOT be any negative marking for wrong answers.
7. The Answer Sheet must be handed over to the invigilator before you leave the Examination Hall.
8. No rough work is to be done on the Answer Sheet. Space for rough work has been provided in the question booklet.

PART - A - GENERAL ENGLISH

Marks :100

Each question carries 2 marks :

Directions : In questions 1-10, fill in the blanks with the appropriate word(s) from the given alternatives :

1. The newspaper is _____ a competition to win a cash prize.

- a) focussing b) forecasting
- c) featuring d) forming

2. The _____ between the son and the father began a few years ago

- a) cause b) reason
- c) confuse d) conflict

3. Ramu _____ his mind after hearing the story about Sayed

- a) changed b) felt
- c) diverted d) involved

4. There were _____ people present when the award ceremony was held

- a) a lot b) very many
- c) several d) mostly

5. Tina _____ the cream on her skin to reduce the pain

- a) applied b) tried
- c) washed d) smothered

6. The students _____ themselves when the inspection team visited the school

- a) behave b) behaved
- c) watch d) watched

7. Somu was _____ red handed while he was trying to steal from Sony.

- a) catch b) seize
- c) caught d) seized

8. Jyoti writes newspaper _____ for the Hindu

- a) ideas b) news
- c) clips d) articles

9. There must have been a _____ reason for Jim to leave suddenly

- a) regular b) sure
- c) good d) great

10. The bus they were _____ in met with a tragic accident last night.

- a) travel b) riding
- c) sitting d) travelling

Directions : In questions 11-20, some parts of the sentences have errors and some have none. Find out which part of a sentence has an error and mark the corresponding letter (A,B,C). If there is no error, mark (D) as the answer.

11. Shyam must (A) / complete the project (B) / upto Monday (C) / No error (D).

- a) A b) B
- c) C d) D

12. Tina and John was (A) / working as usual (B) / even on a Sunday (C) / No error (D).

- a) A b) B
- c) C d) D

13. The table is so very heavy (A) / that Anwar (B) / could hardly carry it upstairs (C) / No error (D).

- a) A b) B
- c) C d) D

14. Jane cannot remember (A) / where she did leave (B) / her glasses (C) / No error (D).

- a) A b) B
- c) C d) D

15. The novel Pride and Prejudice (A) / are being written (B) / by Jane Austen (C) / No error (D).

- a) A b) B
- c) C d) D

16. The bill for the food (A) / is amounted (B) / to two thousand rupees (C) / No error (D).

- a) A b) B
- c) C d) D

17. It was an (A) / interesting proposal (B) / put forward by Amit (C) / No error (D).

- a) A b) B
- c) C d) D

18. The whole class (A) / decide to collect (B) / an emergency for the flood victims (C) / No error (D).

- a) A b) B
- c) C d) D

19. This company (A) / is one of the (B) / worlds trusted company (C) / No error (D).

- a) A b) B
- c) C d) D

20. The hotel room (A) / we visited (B) / were dinghy and gloomy (C) / No error (D).

- a) A b) B
- c) C d) D

Directions : In questions 21-30, there are four alternatives given for the idiom / phrase. Choose the alternative which best expresses the meaning of the given idiom / phrase.

21. To sit on the fence

- a) when one wants to make a decision
- b) when one wants to deny something
- c) when one wants to take sides
- d) when one does not want to choose or decide

22. To speak of the Devil

- a) to speak ill of someone
- b) to speak nicely of someone
- c) when the person you have been talking about suddenly leaves
- d) when the person you have been talking about suddenly arrives

23. Once in a blue moon

- a) happens very often
- b) happens very rarely
- c) a lunar eclipse
- d) a tragic occasion

24. Barking up the wrong tree.

- a) to climb up a tree
- b) to look for something or someone in the wrong place
- c) to be chased by dogs
- d) to run around in circles

25. Be glad to see the back of.

- a) to be happy when a person leaves
- b) to be happy when a person arrives
- c) to sit back and relax

d) to stand behind someone

26. The best of both worlds.

- a) to travel extensively
- b) to hear both sides of the story
- c) to enjoy all the advantages
- d) to witness important events

27. Every cloud has a silver lining

- a) to receive abundant rainfall
- b) to experience bad weather
- c) to be filled with sorrow
- d) to be optimistic

28. To hear it on the grapevine.

- a) to hear rumours
- b) to hear good news
- c) to hear bad news
- d) to hear news from someone else

29. To hit the nail on the head

- a) to do just the opposite thing
- b) to do the correct thing always
- c) to do something exactly right
- d) to do something inappropriate

30. To jump on the bandwagon

- a) to follow a popular trend or activity
- b) to move in different directions
- c) to suddenly come to a decision
- d) to make a sudden and forceful stop

Directions : In questions 31-40, choose the word which expresses the meaning of the given word.

31. DERIVE

- a) obtain b) deny
- c) reduce d) offer

32. SUSTAIN

- a) abandon b) preserve
- c) cheer d) chide

33. GRASP

- a) release b) withdraw
- c) clasp d) bunch

34. ORIGINATE

- a) create b) terminate
- c) end d) initiate

35. RUPTURE

- a) join
- c) mend

- b) beautify
- d) break

- c) attic

- d) space

36. RAZE

- a) construct
- c) destroy

- b) abandon
- d) disguise

37. GASH

- a) crown
- c) cover

- b) heal
- d) cut

38. PLUNGE

- a) deep
- c) stand

- b) fall
- d) loud

39. SCHEME

- a) plan
- c) label

- b) denote
- d) allow

40. MICROSCOPIC

- a) visible
- c) tiny

- b) tremendous
- d) unassisted

Directions : In questions 41-50, choose the word which expresses the opposite meaning of the given word.

41. ADULTERATION

- a) contamination
- c) purification

- b) pollution
- d) defilement

42. EMANCIPATE

- a) enslave
- c) freedom

- b) liberate
- d) release

43. AMALGAMATE

- a) merge
- c) unite

- b) combine
- d) isolate

44. COMPLACENCY

- a) satisfaction
- c) contented

- b) dissatisfaction
- d) pleased

45. ERRATIC

- a) consistent
- c) random

- b) unsteady
- d) eccentric

46. BANE

- a) benevolence
- c) misery

- b) affliction
- d) curse

47. CELLAR

- a) underground

- b) shelter

48. BOYCOTT

- a) abstain
- c) blacklist

- b) embargo
- d) patronize

49. AUTONOMOUS

- a) sovereign
- c) self-governing

- b) dependent
- d) independent

50. COGNIZANCE

- a) ignorance
- c) badge

- b) awareness
- d) emblem

PART - B-GENERAL KNOWLEDGE & APTITUDE

Marks : 150

Each question carries 2 marks :

51. The philosophy of 'Laissez-faire' is associated with which of the following ?

- a) Gandhian State b) Socialist State
- c) Industrial State d) Welfare State

52. The author of the book 'Planned economy for India' is ?

- a) Jawaharlal Nehru
- b) Sardar Vallabhai Patel
- c) Dada Bhai Naoroji
- d) M Visvesvaraya

53. Economic Planning refers to ?

- a) The allocation of resources
- b) The planning of manpower
- c) Mobilisation of taxes
- d) Mobilisation of both taxes and manpower

54. The basic regulatory authority for mutual funds and stock markets lies with the

- a) SEBI b) RBI
- c) Government of India d) NITI Aayog

55. Crossed cheque implies that

- a) It cannot be cashed through another bank
- b) Payment can be credited to bank account only
- c) Payment has to be taken by the payee at the counter
- d) None of the above

56. Who has said that the industry is wearing textiles in the modern world ?

- a) Crowther b) Tescot
- c) Pigu d) Marshal

57. Unemployment which occurs when workers move from one job to another job is known as

- a) Cyclical unemployment
- b) Technological unemployment
- c) Seasonal unemployment
- d) Frictional unemployment

58. NAFED is connected with

- a) Animal husbandry
- b) Conservation of fuels
- c) Agricultural marketing

d) Agricultural implements

59. Who called Government of India Act 1935 a Charter of Slavery ?

- a) Mahatma Gandhi
- b) Subhash Chandra Bose
- c) Sardar Vallabh Bhai Patel
- d) Pt. Jawaharlal Nehru

60. Who was the first Asian to win a Nobel Prize?

- a) Hideki Yuka
- b) Har Gobind Khurana
- c) C.V. Raman
- d) Rabindranath Tagore

61. India-2020 is a book written by

- a) Montek Singh Ahluwalia
- b) A.P.J. Abdul Kalam
- c) G Ganeshan
- d) Indra Kumar Gujral

62. Which of the following is the world's largest lake?

- a) Caspian Sea b) Lake Victoria
- c) Lake Superior d) Lake Huron

63. Which month is named after the Roman god of war ?

- a) April b) March
- c) May d) August

64. In which of the following country is K2, the world's second highest mountain located ?

- a) India b) Pakistan
- c) Nepal d) Bhutan

65. Geyser refers to

- a) A hot water spring
- b) A bright star
- c) An animal which survives in the polar region
- d) A warm ocean current

66. Which of these is Asia's oldest stock exchange ?

- a) Patna b) Kanpur
- c) Mumbai d) Delhi

67. What is the sex ratio of India according to

the 2011 censuses ?

- a) 931 females for 1000 males
- b) 940 females for 1000 males
- c) 960 females for 1000 males
- d) 989 females for 1000 males

68. The NITI Aayog has come to replace the Planning Commission of India on the 1st of January, 2015. When was the first meeting of NITI Aayog held ?

- a) 1st January, 2015
- b) 1st February, 2015
- c) 8th January, 2015
- d) 8th February, 2015

69. Normally a country has to be a member of the four export control regime to be placed in the STA-1. India is yet to be a member of which multilateral export control regimes ?

- a) Missile Technology Control Regime (MTCR)
- b) Wassenaar Arrangement (W A)
- c) Australia Group (A G)
- d) Nuclear Suppliers Group (NSG)

70. The statue of Unity, declared to be the tallest in the world at 182m was launched by Narendra Modi on 31st October 2018. When was the construction of the statue started ?

- a) 31st October, 2013
- b) 31st October, 2014
- c) 31st October, 2015
- d) 31st October, 2016

71. Where is the headquarter of Asian Development Bank situated ?

- a) Jakarta
- b) Manila
- c) Singapore
- d) Bangkok

72. Where will the 2020 Olympic Games be held as decided by the International Olympic Committee ?

- a) Amsterdam
- b) Paris
- c) Tokyo
- d) Warsaw

73. Who is the present Chief Justice of India ?

- a) Ranjan Gogoi
- b) Dipak Mishra
- c) Kurian Joseph
- d) M B Lokur

74. The judges of the Supreme Court of India hold office till they attain the age of

- a) 60 years
- b) 65 years
- c) 62 years
- d) None of the above

75. How many Judges are there in the International Court of Justice ?

- a) 8
- b) 12
- c) 15
- d) 16

76. Who was the first Indian to be the President of UN General Assembly ?

- a) Natwar Singh
- b) V K Krishna Menon
- c) Romesh Bhandari
- d) Smt. Vijay Laxmi Pandit

77. Direct Tax in India is

- a) Direct and proportional
- b) Indirect and proportional
- c) Indirect and progressive
- d) Direct and progressive

78. Invisible exports means exports of which item?

- a) Prohibited goods
- b) Restricted goods
- c) Services
- d) Goods as per OGL list

79. Name the first Finance Minister of India who presented the budget.

- a) Charan Singh
- b) Jawaharlal Nehru
- c) Morarji Desai
- d) R K Shanmukham Chetty

80. Estimates of national income in India are prepared by the

- a) Ministry of Finance
- b) Reserve Bank of India
- c) Central Statistical Organisation
- d) NITI Aayog

81. Rajiv Gandhi's death anniversary was commemorated recently on which day ?

- a) 20th May
- b) 21st May
- c) 22nd May
- d) 23rd May

82. The first general election in India was held in the year

- a) 1948
- b) 1954
- c) 1951
- d) 1956

83. Which one of the following Indus cities has houses with doors on the main streets ?

- a) Lothal
- b) Surkotada
- c) Chanhudaro
- d) Banawali

84. Which Article is for "Protection of interests of Minorities" ?

- a) Article 26 b) Article 29
- c) Article 30 d) Article 15

85. The plan to transfer of power to the Indians and partition of the country was laid down in the?

- a) Cabinet Mission Plan
- b) Simon Commission
- c) Cripps Mission
- d) The Mountbatten Plan

86. What is the minimum number of votes that a candidate need to get to reclaim his / her deposit ?

- a) One-tenth of valid votes polled
- b) One-third of valid votes polled
- c) One-sixth of valid votes polled
- d) None of the above

87. What share of seats does a party need to have to be eligible for the post of 'leader of opposition' ?

- a) One-tenth b) One-third
- c) Two-tenth d) None of the above

88. The highest number of candidates to contest for an Assembly seat was in Modakurichi in Tamil Nadu in 1996 Assembly election. How many candidates contested for the seat ?

- a) 456 b) 480
- c) 856 d) 1033

89. Who among the following was recently elected as the Vice President of the Badminton Asia Council ?

- a) Ajay Kumar Singhania
- b) Himanta Biswa Sarma
- c) Omar Rashid
- d) Devender Singh

90. World Bank classifies countries according to development based on which of the following?

- a) Agricultural income
- b) National income
- c) Per capita income
- d) Population

91. Gold rates are decided in which city ?

- a) Washington b) London
- c) New York d) Singapore

92. Sarojini Naidu was elected Congress President at

- a) Haripura, 1938
- b) Bombay, 1934
- c) Madras Session, 1927
- d) Kanpur Session, 1925

93. Cancer is caused by activation of genes

- a) Regulatory genes
- b) Oncogenes
- c) Structural genes
- d) Jumping genes

94. The instrument used for measuring blood pressure is called

- a) Barometer
- b) Sphygmomanometer
- c) Tonometer
- d) None of the above

95. Which of the following is essentially required to digest the food in the stomach ?

- a) Air b) Water
- c) Enzyme d) Mineral

96. The Rowlatt Act was passed in

- a) 1905 b) 1913
- c) 1919 d) 1925

97. Indian Air Force was established in the year

- a) 1857 b) 1932
- c) 1947 d) 1950

98. The granary discovered at Harappa was located

- a) Within the citadel at Mohenjodaro
- b) In the "Lower town"
- c) Near the river Ravi
- d) Beside the western gate of the city

99. Which is the secondary memory of the computer?

- a) RAM b) ROM
- c) Cache Memory d) Magnetic disks

100. Which one is not a Fundamental Right in the Constitution of India ?

- a) Right to Equality
- b) Right to Freedom
- c) Right against exploitation and forced labour
- d) Right to property

Each question carries 2 marks :

101. Six families A,B,C,D,E and F are living in houses in a row. B has F and D as neighbours, E has A and C as neighbours, A does not live next to D. Who are F's next door neighbours ?

- a) B and E b) B and D
c) B and C d) Only B

102. Five boys John, Joe, Jovie, Jordan and Justin are sitting in a circle. Jordan is to the right of Justin. Joe is sitting in between John and Jordan. If Justin is sitting between Jovie and Jordan, who is seated to Jovie's left ?

- a) John b) Joe
c) Jordan d) Justin

103. A woman walking with a boy meets another woman and on being asked about her relationship with the boy, she says, "my maternal uncle and his maternal uncle's maternal uncle are brothers." What is the relationship between the woman and the boy ?

- a) Mother and son
b) Aunt and nephew
c) Grandmother and grandson
d) None of these

Directions : (Q. No. 104 to 106) Choose the correct alternative to complete the series :

104. XXXXXO, XXXXOX, XXXOXX, XXOXXX, XOXXXX, ?

- a) OXXXXX b) OXXXXO
c) OXXXXO d) XXXXXX

105. BEH : KNQ :: FIL : ?

- a) ONM b) NLJ
c) ORU d) OMK

106. 6 : -3 :: -18 : ?

- a) 3 b) -9
c) 9 d) -6

107. John's birthday is on Sunday 28th May. On what day of the week will be Sarah's birthday in the same year if Sarah was born on 19th October ?

- a) Saturday b) Thursday
c) Wednesday d) Sunday

108. The weights of 4 boxes are 20, 30, 60

and 70 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes and in a combination a box can be used only once ?

- a) 120 b) 150
c) 170 d) 180

109. If PONDERS is coded as ONMCDQR, then how will MAT be coded as ?

- a) LZS b) OLI
c) AEG d) LDZ

110. If the word GRASP is coded as INOPQ, and BROWN is coded as RNSTU, then how will the word SPARROW be coded as ?

- a) PQONNST b) POQNNSU
c) PQONMOT d) PQONNSU

111. If TOUR is coded as 1234, and CLEAR is coded as 56784 and SPARE is coded as 90847 then how will the word SCULPTURE be coded as ?

- a) 953601347 b) 567903417
c) 935601437 d) None of the above

112. In a certain code language, '+' represents 'x', '-' represents '+', 'x' represents '÷' and '÷' represents '-'. What is the answer to the following question ?

$$80 \times 16 \div 4 + 2 - 8 = ?$$

- a) 5 b) 11
c) 30 d) 64

113. Select the missing number from the given response :

111	314	205
34	39	102
?	275	103

- a) 75 b) 77
c) 170 d) 172

114. X and Y both starts from the same point, X walks 17 m West, then turns to his right and walks 13 m. At the same time, Y walks 9 m North, then turns East and walks 7 m, then turns to his left and walks 4 m. Where is Y now with respect to the position of X ?

- a) 24 m West b) 10 m East
c) 14 m West d) 24 m East

115. If A's father is B's father's son and B does

not have any brother or son, what is the relationship between B and A ?

- a) Mother - daughter
- b) Father - son
- c) Cousins
- d) Father - daughter

Directions : (Q.No.116 to 119) Choose the correct alternative combination of two words that have the same relationship as the two words given at the beginning :

116. Sapling : Tree :: ?

- a) Horse : Mare
- b) Student : Teacher
- c) Bud : Flower
- d) Tree : Furniture

117. Supervisor : Worker :: ?

- a) Junior : Senior
- b) Superior : Inferior
- c) Elder : Younger
- d) Officer : Clerk

118. Paisa : Rupee :: ?

- a) Kilogram : Quintal
- b) Coin : Money
- c) Meter : Centimeter
- d) Weight : Ton

119. Malaria : Mosquito :: ?

- a) Poison : Delhi
- b) Epidemic : Bacteria
- c) Rat : Plague
- d) Cholera : Water

120. If conclusion is drawn from the two given statements, which of the given conclusions is correct ?

Statements : I : few circles are figures

II : few circles are squares

Conclusions :

- a) All the circles are either figures or squares
- b) Few figures are squares
- c) All the figures are squares
- d) Few circles are neither figures nor squares

121. A can finish a work in 7 days, B can finish the same work in 9 days. The days required to finish the work by both of them together is ?

- a) $1\frac{15}{16}$
- b) $2\frac{15}{16}$

c) $3\frac{15}{16}$

d) $4\frac{15}{16}$

122. The ratio of number of boys and girls in a school of 720 students is 7 : 5. How many more girls should be admitted to make the ratio 1 : 1 ?

- a) 90
- b) 120
- c) 220
- d) 240

123. A basket contains 250 mangoes. 100 mangoes were distributed among some students. Find the percentage of mangoes left in the basket.

- a) 55%
- b) 60%
- c) 65%
- d) 70%

124. If the successive discounts be 20%, 10% and 5%, then the single equivalent rate of discount is

- a) 31%
- b) 31.4%
- c) 31.5%
- d) 31.6%

125. The selling price of 6 bananas is equal to the cost price of 8 bananas. Then the percentage of profit is

- a) 20
- b) 25
- c) 30
- d) $33\frac{1}{3}$

PART - C - MATHEMATICS

Marks :100

Each question carries 2 marks :

126. Raman's salary was decreased by 50% and subsequently increased by 50%. How much percent he lose ?

a) $12\frac{1}{2}\%$ b) 25%

c) $20\frac{1}{2}\%$ d) 30%

127. In a hotel, 60% had vegetarian lunch while 30% had non-vegetarian lunch and 15% had both types of lunch. If 96 people were present, how many did not eat either type of lunch ?

a) 28 b) 20
c) 26 d) 24

128. If selling price of an article is $\frac{4}{3}$ of its cost price, the profit in the transaction is

a) $20\frac{1}{3}\%$ b) $25\frac{1}{2}\%$
c) $33\frac{1}{3}\%$ d) None of the above

129. Which of the following fractions is greater than $\frac{3}{4}$ and less than $\frac{5}{6}$?

a) $\frac{2}{3}$ b) $\frac{4}{5}$
c) $\frac{1}{2}$ d) $\frac{9}{10}$

130. Which of the following numbers is divisible by the H.C.F. of 153 and 108 ?

a) 375 b) 4056
c) 5301 d) 6270

131. How many numbers between 1 and 200 are divisible by 7 ?

a) 28 b) 26
c) 25 d) 30

132. A man spends $\frac{1}{7}$ of his salary on food,

$\frac{1}{2}$ of the remaining on clothing and $\frac{1}{3}$ of the remaining on entertainment. He is left with Rs.6000 ; his salary is

a) Rs.25500 b) Rs.21000
c) Rs.22500 d) Rs.25000

133. If $\frac{1}{3.718} = 0.2689$, then the value of

$\frac{1}{0.0003718}$ is

a) 2689 b) 2.689
c) 26890 d) 0.2689

134. If $a : b : c = 3 : 4 : 7$, the value of $\frac{a+b+c}{c}$ is

a) $\frac{1}{2}$ b) 3
c) 2 d) $\frac{1}{7}$

135. $\left(11 \div 2\frac{1}{5}\right) \div \frac{11}{5}$ of $2\frac{1}{2} + \frac{1}{11} = ?$

a) 1 b) $2\frac{1}{11}$
c) 11 d) $5\frac{2}{19}$

136. To win an election, a candidate needs $\frac{3}{4}$ of

the votes cast. If after $\frac{2}{3}$ of the votes have been

counted, a candidate has $\frac{5}{6}$ of what he needs,

then what part of the remaining votes does he still need ?

a) $\frac{1}{8}$ b) $\frac{5}{8}$
c) $\frac{1}{10}$ d) $\frac{3}{8}$

137. If $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a+b\sqrt{3}$, then $a+b$ is equal to

- a) 4 b) 5
c) 6 d) 7

138. The average of runs of a cricket player of 10 innings was 32. How many runs must he make in his next inning so as to increase his average of runs by 4?

- a) 28 b) 54
c) 60 d) 76

139. Three numbers are in the ratio 4 : 5 : 6 and their average is 25. The largest number is

- a) 42 b) 36
c) 30 d) 26

140. Rajan got married 8 years ago. His present age is $\frac{6}{5}$ times his age at the time of his marriage. Rajan's sister was 10 years younger to him at the time of his marriage. The age of Rajan's sister is

- a) 38 years b) 36 years
c) 40 years d) 32 years

141. A can finish a piece of work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

- a) 8 b) 6
c) 5 d) None of the above

142. The sum of two numbers is rational, then
a) at least one of the numbers must be rational
b) both the numbers must be rational
c) one of the numbers is rational and the other is an irrational
d) None of the above

143. If R be the radius of the circum-circle of a square, and r that of its inscribed circle, then R : r is (assume that all the figures have a common centre)

- a) $\sqrt{2}:1$ b) $2:\sqrt{3}$
c) 2 : 1 d) 3 : 2

144. A thief is noticed by a policeman from a distance of 200m. The thief starts running and the policeman chases him. The thief and the po-

liceman run at the rate of 10km and 11km per hour respectively. The policeman will catch the thief after

- a) 6 minutes b) 10 minutes
c) 12 minutes d) 15 minutes

145. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?

- a) $\frac{5}{7}$ b) $\frac{1}{7}$
c) $\frac{2}{5}$ d) None of the above

146. Which of the following cannot be the square of a natural number?

- a) 48643 b) 81225
c) 20164 d) 32761

147. A tradesman marks his goods 30% above the cost price. If he allows a discount of 6.25%, then his gain percent is

- a) $21\frac{7}{8}$ b) 22%
c) $23\frac{3}{4}\%$ d) None of the above

148. The ratio of the incomes of A and B is 5 : 4 and the ratio of their expenditures is 3 : 2. If at the end of the year, each saves Rs.1600, then the income of A is

- a) Rs.3600 b) Rs.4000
c) Rs.4500 d) Rs.5000

149. A, B, C hired a car for Rs.520 and used it for 7, 8 and 11 hours respectively. Hire charges paid by B were

- a) Rs.140 b) Rs.220
c) Rs.180 d) Rs.160

150. A and B can do a piece of work in 72 days; B and C can do it in 120 days; A and C can do it in 90 days. In what time can A alone do it?

- a) 80 days b) 100 days
c) 120 days d) 150 days

151. Pipe A can fill a tank in 5 hours, pipe B in 10 hours and pipe C in 30 hours. If all the pipes are open, in how many hours will the tank be filled?

- a) 3 b) 2.5

c) 3.5

d) 2

152. A person has to cover a distance 6 km in 45 minutes. If he covers one-half of the distance in two-thirds of the total time ; to cover the remaining distance in the remaining time, his speed (in km/hr) must be

a) 8

b) 12

c) 15

d) 18

153. Two trains are moving in opposite directions @ 60 km/hr and 90 km/hr. Their lengths are 1.10 km and 0.9 km respectively. The time taken by the slower train to cross the faster train in seconds is

a) 36

b) 45

c) 48

d) 50

154. The speed of a boat in still water is 9 km/hr and the speed of the stream is 1.5 km/hr. A man rows to a place at a distance and comes back to the starting point. The total time taken by him is

a) 16 hours

b) 18 hours

c) 20 hours

d) 24 hours

155. In what time will a sum of money double itself at 12% per annum ?

a) 8 years 4 months

b) 8 years 3 months

c) 7 years 6 months

d) 6 years 9 months

156. The difference between the simple and compound interest on Rs.1200 for one year at 10% per annum reckoned half-yearly is

a) Rs.2.50

b) Rs.3

c) Rs.3.75

d) Rs.4

157. There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest of Rs.12000 after 3 years at the same rate ?

a) Rs.2160

b) Rs.3120

c) Rs.3972

d) Rs.6240

158. The radius of a circle is decreased by 50%; the percentage decrease in its area is

a) 25%

b) 45%

c) 60%

d) 75%

159. 80% of a number is equal to 64. The number is

a) 56

b) 64

c) 75

d) 80

160. One natural number is drawn at random from the first 100 natural numbers. What is the probability that the number is a prime ?

a) $\frac{1}{25}$ b) $\frac{1}{5}$ c) $\frac{1}{4}$ d) $\frac{4}{25}$

161. The price of wheat falls by 16%. By what percentage a person can increase the consumption of wheat so that his overall budget does not change ?

a) 16%

b) 17.2%

c) 18.02%

d) 19.04%

162. The perimeter of a right-angled triangle is 60 cm. Its hypotenuse is 26 cm. The area of the triangle is

a) 120 cm²b) 240 cm²c) 360 cm²

d) None of the above

163. A tank 4 m long, 2.5 m wide and 1.5 m deep is dug in field 31 m long and 10 m wide. If the earth dug out is evenly spread out over the field, the rise in level of the field is

a) 3.1 cm

b) 4.8 cm

c) 5 cm

d) 6 cm

164. A box contains 10 black and white balls. The probability of drawing two balls of the same colour is

a) $\frac{10}{19}$ b) $\frac{5}{19}$ c) $\frac{9}{38}$ d) $\frac{9}{19}$

165. If -4 is a root of the quadratic equation $x^2 + px + 4 = 0$ and the quadratic equation $x^2 + px + k = 0$ has equal roots. The value of k is

a) $\frac{5}{4}$ b) $\frac{25}{4}$ c) $\frac{3}{8}$ d) $\frac{3}{4}$

166. The wrong number in the series : 3, 8, 15, 24, 34, 48, 63 is

a) 15

b) 24

c) 34

d) 48

167. ABCD is a rectangle. If $DC = 12$ cm, $\angle ADE = 30^\circ$ and $AD = 20$ cm, then the value of $DE + AE$ is

- a) $20\sqrt{3}$ cm b) $\frac{20}{\sqrt{3}}$ cm
c) $\frac{40}{\sqrt{3}}$ d) $40\sqrt{3}$ cm

168. $\frac{(0.6)^4 - (0.5)^4}{(0.6)^2 + (0.5)^2}$ is equal to

- a) 0.1 b) 0.11
c) 1.1 d) 11

169. A trader marked the price of his commodity so as to include a profit of 25%. He allowed discount of 16% on the marked price. His actual profit was

- a) 5% b) 9%
c) 16% d) 25%

170. Reena and Shaloo are partners in a business. Reena invests Rs.35,000 for 8 months and Shaloo invests Rs.42,000 for 10 months. Out of a profit of Rs.31,570, Reena's share is

- a) Rs.9471 b) Rs.12628
c) Rs.18040 d) None of the above

171. The mean of the first ten odd natural numbers is

- a) 10 b) 12
c) 15 d) None of the above

172. The sum of the first 100 natural numbers is

- a) 9090 b) 8090
c) 5050 d) 4990

173. When 0.232323..... is converted into a fraction, then the result is

- a) $\frac{2}{9}$ b) $\frac{23}{100}$
c) $\frac{22}{99}$ d) $\frac{23}{99}$

174. The H.C.F. of two numbers is 8. Which of the following can never be their L.C.M. ?

- a) 60 b) 56
c) 48 d) 24

175. What percent of a day is 3 hours ?

- a) $18\frac{2}{3}\%$ b) $16\frac{2}{3}\%$
c) $12\frac{1}{2}\%$ d) $22\frac{1}{2}\%$
