YEAR OF ADVT:2018   DATE OF EXAM: 06-APRIL-2024

Booklet Serial No.   50233

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

QUESTION BOOKLET   SERIES : I

Subjects : General English, General Knowledge & Aptitude, and Arithmetic

Full Marks : 300   Time Allowed : 2½ Hours

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

INSTRUCTIONS TO CANDIDATES

1. This Booklet contains 150 questions to be answered in a separate OMR Answer Sheet using Black Ballpoint Pen in the following three Parts :

Part—A : General English	:	**50 questions**
Part—B : General Knowledge & Aptitude	:	**50 questions**
Part—C : Arithmetic	:	**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. Answer must be shown by completely blackening the corresponding circle in the Answer Sheet against the relevant question number by Black Ballpoint Pen. OMR Answer Sheet without marking Series shall not be evaluated.

Example :

Suppose 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 Ballpoint Pen only as below :

(A) (B) ● (D)

The example shown above 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.

/12-I [F.R (Apr–18)]   1   [P.T.O.

PART—A : GENERAL ENGLISH

(*Marks* : 100)

Each question carries **2** marks :

Directions (Q. Nos. 1–5) : In these questions, out of the four alternatives given, choose the one which is opposite in meaning to the underlined word.

1. He felt no <u>animosity</u> towards his critics.
   - (A) hostility
   - (B) malignity
   - (C) enmity
   - (D) affinity

2. She was very <u>indignant</u> at the way he had been treated.
   - (A) resentful
   - (B) scornful
   - (C) wrathful
   - (D) blissful

3. He just <u>blatantly</u> lied about it.
   - (A) arrantly
   - (B) furtively
   - (C) glaringly
   - (D) overtly

4. The future looks <u>bleak</u> for the transport industry.
   - (A) dreary
   - (B) daunting
   - (C) dismal
   - (D) heartening

5. She put forward some <u>cogent</u> reasons for abandoning the plan.
   - (A) dissuasive
   - (B) compelling
   - (C) persuasive
   - (D) convincing

Directions (Q. Nos. 6–10) : In these questions, some of the sentences have errors and some have none. Find out which part of a sentence (A), (B), (C) has an error and select that part as the answer. If there is no error, then (D) is the answer.

6. <u>She promised to</u> / <u>accompany with me</u> /
       (A)   (B)
   <u>to the park</u> / <u>No error.</u>
     (C)   (D)

7. <u>They that hanker</u> /
      (A)
       <u>after fame and money</u> /
            (B)
       <u>are likely to be disappointed</u> /
           (C)
              <u>No error.</u>
             (D)

8. <u>You should make it a rule</u> /
        (A)
   <u>never to interfere</u> / <u>with other affair</u> /
      (B)   (C)
        <u>No error.</u>
         (D)

9. <u>The future is yet to come</u> /
        (A)
   <u>but you have a right</u> / <u>to shape it</u> /
       (B)   (C)
        <u>No error.</u>
         (D)

10. <u>It is said that</u> /
       (A)
        <u>elephant is vindictive by nature</u> /
             (B)
    <u>and never forgets his enemy</u> /
         (C)
          <u>No error.</u>
           (D)

Directions (Q. Nos. 11–20) : **In these questions, sentences are given with blanks to be filled in with appropriate and suitable words or phrases. Four alternatives are suggested for each question. Choose the correct alternative out of the four.**

11. Workers won their _____ to stop compulsory redundancies.

    (A) fight

    (B) campaign

    (C) drive

    (D) battle

12. The cupboard is easy to _____.

    (A) construct

    (B) assemble

    (C) erect

    (D) build

13. The sky was a _____ blue.

    (A) vivid

    (B) bright

    (C) brilliant

    (D) vibrant

14. A good diet is _____ to health.

    (A) beneficial

    (B) favourable

    (C) advantageous

    (D) beneficent

15. She would never wear _____ pearls.

    (A) false

    (B) synthetic

    (C) fake

    (D) imitation

16. Buses _____ on this road every hour.

    (A) run

    (B) runs

    (C) ran

    (D) keep running

17. She _____ me since 2000.

    (A) knew

    (B) knows

    (C) has known

    (D) know

18. We _____ the bell.

    (A) hear

    (B) are hearing

    (C) keep hearing

    (D) have been hearing

19. It _____ for two days now.

    (A) rained

    (B) rains

    (C) has been raining

    (D) will rain

20. Before you started you _____ your purse.

    (A) must have checked

    (B) check

    (C) had check

    (D) has to check

Directions (Q. Nos. 21–30) : **In these questions, fill in the blanks with the appropriate prepositions from the options given.**

21. That was by no means the end _____ the matter.
    (A) to
    (B) of
    (C) in
    (D) on

22. He was a man who exercised considerable influence _____ people.
    (A) on
    (B) upon
    (C) in
    (D) over

23. Bomb disposal experts exploded the device _____ controlled conditions.
    (A) at
    (B) in
    (C) under
    (D) with

24. The children fell _____ the food and ate it greedily.
    (A) over
    (B) among
    (C) after
    (D) on

25. The horse backed away, its nostrils flaring _____ fear.
    (A) in
    (B) on
    (C) with
    (D) after

26. She was caught _____ the harsh glare of the headlights.
    (A) by
    (B) in
    (C) between
    (D) against

27. He was imbued _____ a desire for social justice.
    (A) by
    (B) of
    (C) for
    (D) with

28. They insist _____ playing their music late at night.
    (A) upon
    (B) to
    (C) in
    (D) on

29. He inveighed himself _____ her affection.
    (A) to
    (B) into
    (C) for
    (D) on

30. Wages are not keeping _____ with inflation.
    (A) up
    (B) in
    (C) on
    (D) by

31. Full of the joys of spring

    (A) full of new ideas

    (B) being very cheerful

    (C) having plenty of water

    (D) full of birds singing

32. Labour the point

    (A) to continue to repeat something that has already been said

    (B) to make a point

    (C) to analyse something closely

    (D) to work on one thing only

33. Feather your own nest

    (A) to take care of your own family

    (B) to keep yourself warm

    (C) to accept responsibilities

    (D) to make yourself richer

34. Play with fire

    (A) playing with fire

    (B) to be criticized severely

    (C) take dangerous risks

    (D) to be delayed in taking action

35. Horror of horrors

    (A) fear or disgust

    (B) to emphasize how bad a situation is

    (C) a feeling of great shock

    (D) a child who behaves badly

36. Bring the house down

    (A) to destroy somebody

    (B) to expose something

    (C) to renovate a house

    (D) to make everyone laugh

37. The law of averages

    (A) the principle that things will happen if you keep trying

    (B) the principle that most men are ordinary

    (C) the principle that law caters to the needs of the common man

    (D) the principle that people are prepared to harm others in order to succeed

38. In perpetuity

    (A) forever

    (B) in confusion

    (C) limited period

    (D) seasonal

39. At random

    (A) specifically

    (B) deliberately

    (C) indiscriminately

    (D) methodically

40. Overstep the mark

    (A) to be highly noticeable

    (B) to carry something too far

    (C) overworking

    (D) to behave in an unacceptable manner

41. A tear moistened the eye of the phlegmatic gentleman.

   (A) zealous

   (B) stolid

   (C) fervid

   (D) impassioned

42. The attempt to expand the business was a catastrophe for the firm.

   (A) disaster

   (B) novelty

   (C) megahit

   (D) challenge

43. He made one mistake and his career came to an ignominious end.

   (A) agreeable

   (B) inglorious

   (C) estimable

   (D) illogical

44. His arguments were marked by incisive humour.

   (A) sharp

   (B) delightful

   (C) cordial

   (D) pleasant

45. They were incensed at the decision.

   (A) appeased

   (B) relieved

   (C) enraged

   (D) subdued

46. The closure of the factory dealt a lethal blow to the town.

   (A) total

   (B) fatal

   (C) fetal

   (D) final

47. Better to read little with thought than much with levity and quickness.

   (A) flightiness

   (B) earnestness

   (C) staidness

   (D) calmness

48. The country was mired in recession.

   (A) frozen

   (B) puzzled

   (C) baffled

   (D) stuck

49. It is easy to misconstrue confidence as arrogance.

   (A) translate

   (B) consider

   (C) clarify

   (D) misread

50. Soil erosion was mitigated by the planting of trees.

   (A) eradicated

   (B) allayed

   (C) affected

   (D) modified

PART—B : GENERAL KNOWLEDGE AND APTITUDE

(*Marks* : 100)

Each question carries **2** marks :

51. Which country announced to invest ₹ 7,200 crores in Uttar Pradesh?

    (A) China

    (B) Japan

    (C) Australia

    (D) Germany

52. What is India's rank in the 'World Press Freedom Index, 2023'?

    (A) 141

    (B) 151

    (C) 161

    (D) 171

53. Which among the following has open circulatory system?

    1. Cockroach

    2. Human

    3. Prawn

    Select the correct answer using the code given below.

    (A) 1 and 2

    (B) 1 and 3

    (C) 2 and 3

    (D) 3 only

54. Pung Cholom is a folk dance of which State?

    (A) Kerala

    (B) Manipur

    (C) Madhya Pradesh

    (D) Karnataka

55. Padma Vibhushan is the ____ civilian award of India.

    (A) highest

    (B) fourth highest

    (C) third highest

    (D) second highest

56. The 2023 edition of the SAFF Championship, South Asia's most prestigious international football tournament, was held in

    (A) Bengaluru

    (B) Mumbai

    (C) Kolkata

    (D) Chennai

57. The Wailing Wall is associated with

    (A) Bahais

    (B) Shias

    (C) Catholics

    (D) Jews

58. ____ is a type of good for which demand increases as its price rises.

    (A) Giffen good

    (B) Capital good

    (C) Consumer good

    (D) None of the above

59. India launched the 'NET Zero' Innovation Virtual Centre with which country?

(A) USA

(B) UK

(C) Australia

(D) South Korea

60. Who is the first Indian to have won the Pulitzer Prize?

(A) Gobind Behari Lal

(B) Sanghamitra Kalita

(C) Jhumpa Lahiri

(D) Geeta Anand

61. 'Ekatha Harbour' is the biggest Indian grant-in-aid project in which country?

(A) Bangladesh

(B) Maldives

(C) Nepal

(D) Myanmar

62. Which tales are related with the painting and sculptures of the Ajanta caves?

(A) *Hitopadesha* tales

(B) *Panchatantra* tales

(C) *Jataka* tales

(D) *Pentamerone* tales

63. For economists, ____ refers to the amount of a product or service that people are both willing and able to buy.

(A) supply

(B) price

(C) demand

(D) income

64. What does 'T' stand for in ATM?

(A) Teller

(B) Trunk

(C) Translation

(D) Transfer

65. The Prevention of Money Laundering Act (PMLA) was enacted in which year?

(A) 1992

(B) 2002

(C) 2012

(D) 2022

66. Which of the following was a port city of the Indus Valley Civilization?

(A) Kalibangan

(B) Rakhigarhi

(C) Lothal

(D) Dholavira

67. Which of the following techniques can be used to separate cream from milk?

(A) Filtration

(B) Distillation

(C) Centrifugation

(D) Chromatography

68. Which country has unveiled plans to buy up to five US nuclear-powered submarines?

(A) France

(B) India

(C) Australia

(D) Ukraine

69. Which of the following is the largest brackish water lagoon in Asia?

(A) Chilika Lake

(B) Loktak Lake

(C) Wular Lake

(D) Nal Sarovar

70. Which of the following Schedules of the Wildlife Protection Act, 1972 includes the animals which may be hunted?

(A) Schedule III

(B) Schedule IV

(C) Schedule V

(D) Schedule VI

71. The G7 Summit, 2023 was hosted by

(A) Canada

(B) France

(C) UK

(D) Japan

72. The Hanging Gardens of Babylon is associated with which of the following ancient cultures?

(A) Egyptian

(B) Mesopotamian

(C) Chinese

(D) Harappan

73. The 'Machines Can See 2023' Summit was launched by

(A) USA

(B) UAE

(C) UK

(D) Russia

74. What is the product of the mass of a body and its velocity called as?

(A) Force

(B) Linear momentum

(C) Energy

(D) Power

75. What effect will a decrease in demand and an increase in supply have on equilibrium price?

(A) Equilibrium price will rise

(B) Equilibrium price will be constant

(C) Equilibrium price will fall

(D) Sometimes price will rise and sometimes it will fall

76. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

(A) HGF

(B) RQP

(C) UVW

(D) LKJ

77. A man took a loan from a bank at the rate of 12% per annum at simple interest. After 3 years he had to pay ₹ 5,400 as interest only for the period. The principal amount borrowed by him was

(A) ₹ 2,000

(B) ₹ 10,000

(C) ₹ 20,000

(D) ₹ 15,000

78. Peter is in the East of Tom and Tom is in the North of John. Mike is in the South of John then in which direction of Peter is Mike?

(A) South-East

(B) South-West

(C) South

(D) North-East

79. In a bag there are coins of 25 paisa, 50 paisa and 1 rupee in the ratio of 3 : 4 : 5. If there are in all ₹ 31, then how many 1 rupee coins are there in the bag?

(A) 12

(B) 16

(C) 24

(D) 20

80. The average of Sohan's marks in six subjects is 74. If his average in five subjects excluding science is 70, then how many marks he obtained in science?

(A) 94

(B) 92

(C) 90

(D) 80

81. Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster :

GAVE : AGEV :: KEPT : EKTP :: ACID : ?

(A) CIAD

(B) CAID

(C) ACDI

(D) CADI

82. A train 400 m long passes a pole in 20 seconds. What is the speed of the train?

(A) 70 km/h

(B) 68 km/h

(C) 72 km/h

(D) 64 km/h

83. Pointing to a photograph, a man said, "I have no brother, and that man's father is my father's son." Whose photograph was it?

(A) His son

(B) His own

(C) His father

(D) His nephew

84. Find the missing letters :

RQP, ONM, _____, IHG, FED

(A) CDE

(B) LKI

(C) LKJ

(D) BAC

85. Consider the given statements and select which of the following answer choices correctly depicts the relationship between these two statements :

Statement I :

All the colleges in the city had to keep closed for three days a week.

Statement II :

Many students have left the local colleges.

(A) Statement II is the cause and statement I is its effect

(B) Statement I is the cause and statement II is its effect

(C) Both the statements are effects of independent causes

(D) Both the statements are effects of some common cause

86. Which number should come next in the following series?

48, 24, 12, _____

(A) 8

(B) 6

(C) 4

(D) 2

87. An informal gathering occurs when a group of people get together in a casual, relaxed manner. Which situation below is the best example of an informal gathering?

(A) The Book Club meets on the first Thursday evening of every month.

(B) After finding out about his promotion, Jeremy and a few coworkers decide to go out for a quick drink after work.

(C) Mary sends out 25 invitations for the bridal shower she is giving for her sister.

(D) Whenever she eats at the Mexican restaurant, Clara seems to run into Peter.

88. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

(A) 144

(B) 150

(C) 168

(D) 180

89. Consider the given statements :

Statement I :

Pooja is older than Mukesh.

Statement II :

Suresh is older than Pooja.

Statement III :

Mukesh is older than Suresh.

If the first two statements are true, then the third statement is

(A) false

(B) true

(C) uncertain

(D) None of the above

90. In how many different ways can the letters of the word 'DESIGN' be arranged so that the vowels are at the two ends?

(A) 48

(B) 72

(C) 36

(D) 24

91. Statements :

1. All heroes are villains.

2. All villains are zeros.

3. Some heroes are jokers.

Conclusions :

I. Some jokers are heroes

II. Some villains are jokers

III. Some zeros are villains

(A) Only I, II follow

(B) I, II, III follow

(C) Only I, III follow

(D) None of the above

92. If you are a fitness walker, you do not need to go to a health gym. You also do not need any fitness equipment for workout. All you need is a pair of comfortable athletic shoes.

This paragraph supports which of the following statements?

(A) Fitness walking is better than weight lifting.

(B) Walking outdoors provides more health benefits than walking indoors.

(C) Fitness walking is an effective and convenient form of exercise.

(D) Poorly designed shoes can cause foot injuries.

93. If the simple interest for 6 years is equal to 30% of the principal, then it will be equal to the principal after

(A) 20 years

(B) 30 years

(C) 10 years

(D) 22 years

94. At present P is three times Q's age. After 5 years, P will be twice Q's age. Then what will P's age after 10 years?

(A) 20 years

(B) 25 years

(C) 22 years

(D) 30 years

95. Find the missing letters :

SCD, TEF, UGH, _____, WKL

(A) CMN

(B) UJI

(C) VIJ

(D) IJT

96. If in a certain language, NOIDA is coded as OPJEB, how is DELHI coded in that language?
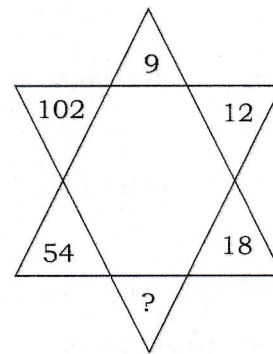
(A) CDKGH

(B) EFMIJ

(C) FGNJK

(D) IHLED

97. Alfred buys an old scooter for ₹ 4,700 and spends ₹ 800 on its repairs. If he sells the scooter for ₹ 5,800, his gain percent is

(A) $4\frac{4}{7}\%$

(B) $5\frac{5}{11}\%$

(C) 10%

(D) 12%

98. A 60-liter mixture of milk and water contains 10% water. How much water must be added to make water 20% in the mixture?
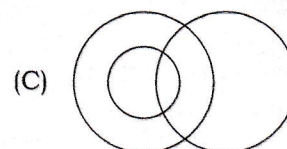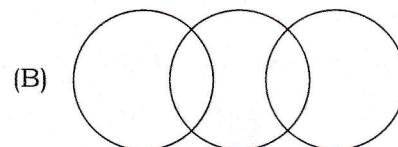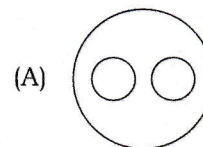
(A) 8 liters

(B) 7·5 liters

(C) 7 liters

(D) 6·5 liters

99. Find the missing number :

9, 102, 12, 54, 18, ?

(A) 30

(B) 24

(C) 40

(D) 48

100. Which of the following diagrams correctly represents lions, elephants and animals?

(A)

(B)

(C)

(D)
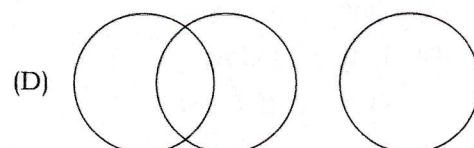
PART—C : ARITHMETIC

(*Marks* : 100)

Each question carries **2** marks :

101. If $5^{x-3} \cdot 3^{2x-8} = 225$, then x is equal to

(A) 15

(B) 10

(C) 5

(D) 2

102. If $P:Q = 6:5$ and $Q:R = 4:1$, then $P:Q:R$ is equal to

(A) 24 : 20 : 5

(B) 5 : 24 : 20

(C) 20 : 24 : 5

(D) 20 : 24 : 10

103. A takes 10 days less than the time taken by B to finish a piece of work. If both A and B together can finish the work in 12 days, the time taken by B alone to finish the work is

(A) 2 days

(B) 20 days

(C) 22 days

(D) 30 days

104. If $\tan\theta + \dfrac{1}{\tan\theta} = 2$, then the value of $\tan^2\theta + \dfrac{1}{\tan^2\theta}$ is

(A) 2

(B) 1

(C) 3

(D) 4

105. Triangles ABC and DEF are similar. If $ar(\Delta ABC) = 9\,cm^2$, $ar(\Delta DEF) = 64\,cm^2$ and $DE = 16\,cm$, the length of AB is

(A) 4 cm

(B) 5 cm

(C) 6 cm

(D) 8 cm

106. The value of

$$\frac{\sin 50°}{\cos 40°} + \frac{\text{cosec } 40°}{\sec 50°} + 4\cos 50° \text{ cosec } 40°$$

is

(A) 1

(B) 2

(C) 4

(D) 6

107. Divide 16 into two parts such that twice the square of the larger part exceeds the square of the smaller part by 164, then the larger part is

(A) 12

(B) 10

(C) 9

(D) 13

108. A man goes 12 m due South and then 35 m due West. How far is he now from the starting point?

(A) 47 m

(B) 37 m

(C) 27 m

(D) 23 m

109. An angle of elevation of a ladder leaning against a wall is 60° and the foot of the ladder is 9·5 m away from the wall. The length of the ladder is

(A) 20 m

(B) 25 m

(C) 19 m

(D) 30 m

110. O is the centre of the circle of radius 8 cm. The tangent at a point A on the circle cuts a line through O at B such that $AB = 15$ cm. Then OB is

(A) 17 cm

(B) 7 cm

(C) 23 cm

(D) 120 cm

111. If on selling a cell phone for ₹ 8,200, a gain of ₹ 540 is made. Then the cost price of the cell phone is

(A) ₹ 7,660

(B) ₹ 7,650

(C) ₹ 6,750

(D) ₹ 7,560

112. The largest positive integer which divides 615 and 963 leaving remainder 6 in each case, is

(A) 348

(B) 354

(C) 87

(D) 78

113. The HCF of two numbers is 113 and their LCM is 56952. If one of the numbers is 904, the other number is

(A) 9117

(B) 7119

(C) 1179

(D) 1197

114. If $x = 1$ is a zero of

$$f(x) = x^3 - 2x^2 + 4x + k$$

then the value of k is

(A) 7

(B) −7

(C) 3

(D) −3

115. If $x + y = 3$ and $4x - 3y = 26$, then the value of $2x + y$ is equal to

(A) 1

(B) 4

(C) 6

(D) 8

116. The sum of two numbers is 35 and their difference is 13. Then the two numbers are

(A) 12 and 23

(B) 11 and 24

(C) 17 and 18

(D) 15 and 20

117. The value of $(0 \cdot 2)^3 - (0 \cdot 3)^3 + (0 \cdot 1)^3$ is

(A) 0

(B) 0·01

(C) 0·011

(D) −0·018

118. If $a - \dfrac{1}{a} = 3$ then the value of $a^2 + \dfrac{1}{a^2}$ is equal to

(A) 6

(B) 9

(C) 11

(D) 18

119. The lengths of the diagonals of a rhombus are 24 cm and 18 cm respectively. The length of each side of the rhombus is

(A) 6 cm

(B) 42 cm

(C) 15 cm

(D) 12 cm

120. A chord of length 16 cm is drawn in a circle of radius 10 cm. The distance of the chord from the centre of the circle is

(A) 2 cm

(B) 6 cm

(C) 8 cm

(D) 12 cm

121. The length of the longest rod that can be placed in a room 12 m long, 9 m broad and 8 m high, is

(A) 29 cm

(B) 17 cm

(C) 21 cm

(D) 20 cm

122. The mean of first 8 observations is 18 and last 8 observations is 20. If the mean of all 15 observations is 19, then the 8th observation is

(A) 18

(B) 19

(C) 20

(D) 21

123. The median of the data 18, 26, 59, 48, 35, 31, 30, 32, 52 is

(A) 26

(B) 30

(C) 32

(D) 48

124. A two-digit number is 4 times the sum of its digits and twice the product of the digits. The number is

(A) 36

(B) 63

(C) 56

(D) 65

125. The roots of the equation $x^2 - 3x - 10 = 0$ are

(A) 2 and 5

(B) –2 and –5

(C) –2 and 5

(D) 2 and –5

126. The sum of the series

$$72 + 70 + 68 + \ldots + 40$$

is equal to

(A) 935

(B) 942

(C) 950

(D) 952

127. In $\triangle ABC$, D and E are the points on the sides AB and AC respectively such that $DE \parallel BC$. If $AD = 2$ cm, $AB = 6$ cm and $AE = 3$ cm, then AC is equal to

(A) 4 cm

(B) 1 cm

(C) 9 cm

(D) 12 cm

128. The distance of the pair of points $(-6, 7)$ and $(-1, -5)$ is

(A) 5 units

(B) 13 units

(C) 6 units

(D) 19 units

129. The value of

$$4(\cos^4 60° + \cos^4 30°) - 3(\tan^2 60° - \tan^2 45°) + 5\cos^2 45°$$

is

(A) 1

(B) −1

(C) 2

(D) −2

130. The area of a circle whose circumference is 39·6 cm, is

(A) 64·64 cm^2

(B) 42·64 cm^2

(C) 64·42 cm^2

(D) 124·74 cm^2

131. An arc of length 20π cm subtends an angle of 144° at the centre of a circle. The radius of the circle is

(A) 7·2 cm

(B) 14 cm

(C) 21 cm

(D) 25 cm

132. A box contains cards numbered

$$3, 5, 7, 9, \ldots, 35, 37$$

A card is drawn at random from the box. The probability that the number on the drawn card is a prime number, is

(A) $\dfrac{18}{37}$

(B) $\dfrac{11}{18}$

(C) $\dfrac{17}{37}$

(D) $\dfrac{37}{17}$

133. A sheet of paper is in the form of a rectangle *ABCD* in which *AB* = 40 cm and *AD* = 28 cm. A semi-circular portion with *BC* as the diameter is cut off. The area of the remaining paper is

(A) 812 cm^2

(B) 81·2 cm^2

(C) 8·12 cm^2

(D) 8120 cm^2

134. A pole, 6 m high, casts a shadow $2\sqrt{3}$ m long on the ground. The sun's elevation is

(A) 60°

(B) 45°

(C) 30°

(D) 90°

135. In what time will ₹ 64,000 amount to ₹ 68,921 at 5% per annum, compounded half-yearly?

(A) 1 year

(B) 1·5 years

(C) 2 years

(D) 2·5 years

136. A train travels 288 km at certain speed. If the speed had been 4 km/h more, it would have taken 1 hour less for the same journey. The speed of the train is

(A) 28 km/h

(B) 30 km/h

(C) 32 km/h

(D) 36 km/h

137. How many three-digit natural numbers are there which are divisible by 9?

(A) 100

(B) 500

(C) 900

(D) 1000

138. The value of

$$\frac{15^3 + 5^3 + 3(15)(5)(15 + 5)}{(15 + 5)(15 + 5)}$$

is equal to

(A) 15

(B) 20

(C) 25

(D) 30

139. The value of $(0 \cdot \overline{2} + 0 \cdot \overline{3} + 0 \cdot \overline{4})$ is

(A) 3

(B) 2

(C) 1

(D) 0

140. The greatest number of 6 digits exactly divisible by 24, 15 and 36 is

(A) 999360

(B) 999000

(C) 998640

(D) 999720

141. John gets 20% raise in his salary. If his new salary is ₹ 96,000, then his salary before increment was

(A) ₹ 60,000

(B) ₹ 70,000

(C) ₹ 80,000

(D) ₹ 90,000

142. 5 books and 7 pens together cost ₹ 79, whereas 7 books and 5 pens together cost ₹ 77. The total cost of 1 book and 2 pens is

(A) ₹ 12

(B) ₹ 16

(C) ₹ 18

(D) ₹ 20

143. A solid metal cone with radius of base 12 cm and height 24 cm is melted to form solid spherical balls of diameter 6 cm each. The number of balls formed is

(A) 12

(B) 48

(C) 3

(D) 32

144. If the mode of the data is 30 and the mean is 33, then the median is

(A) 32

(B) 34

(C) 35

(D) 33

145. A bag contains 6 red balls and some blue balls. If the probability of drawing blue balls is twice that of the red balls, then the number of blue balls is

(A) 10

(B) 12

(C) 14

(D) 15

146. In $\triangle ABC$, AD is the bisector of $\angle A$, intersecting the side BC at D. If $AB = 6$ cm, $AC = 4 \cdot 2$ cm and $DC = 2 \cdot 1$ cm, then the length of BD is

(A) 1 cm

(B) 2 cm

(C) 3 cm

(D) 4 cm

147. Meena went to the bank to withdraw ₹ 2,000. She asked the cashier to give her ₹ 50 and ₹ 100 notes only. Meena got 25 notes in all. How many notes of ₹ 100 she received?

(A) 8

(B) 10

(C) 13

(D) 15

148. The measure of an angle which is 36° less than its complement is

(A) 63°

(B) 54°

(C) 27°

(D) 72°

149. Five years hence, the age of Jacob will be three times that of his son. Five years ago, Jacob's age was seven times that of his son. The present age of Jacob is

(A) 30 years

(B) 40 years

(C) 45 years

(D) 50 years

150. A horse is placed for grazing inside a rectangular field 40 m by 36 m and tethered to one corner by a rope 14 m long. Over how much area can it graze?

(A) 154 m^2

(B) 136 m^2

(C) 134 m^2

(D) 90 m^2