Year of Advt: 2023   Date of Exam: 24-Feb-2024

305551

Booklet Serial No.

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 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 and 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 :

   Ⓐ Ⓑ Ⓒ Ⓓ

   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 :

   Ⓐ Ⓑ ● Ⓓ

   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 be 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 (Q. Nos. 1–3) : In the following questions, out of the four alternatives given, choose the one which is the antonym of the given word(s).

1. To contend
   - (A) to comply
   - (B) to oppugn
   - (C) to grapple
   - (D) to vie

2. To rake
   - (A) to harrow
   - (B) to scatter
   - (C) to scour
   - (D) to enfilade

3. Reprieve
   - (A) cessation
   - (B) clemency
   - (C) continuation
   - (D) commutation

Directions (Q. Nos. 4 and 5) : In the following questions, out of the four alternatives given, choose the one which is the synonym of the given word.

4. Civil
   - (A) sophisticated
   - (B) social
   - (C) formal
   - (D) polite

5. Prognosis
   - (A) identification
   - (B) preface
   - (C) forecast
   - (D) scheme

Directions (Q. Nos. 6–10) : In each of the following sentences, there is a blank space. Below each sentence there are four options with one word each. Fill in the blank with the word that makes the sentence grammatically and contextually correct.

6. The country's economic growth was adversely _____ by political instability.
   - (A) infected
   - (B) effected
   - (C) affected
   - (D) reflected

7. Today as citizens of free India, we _____ both our democracy and our secularism.
   - (A) promote
   - (B) cherish
   - (C) establish
   - (D) declare

8. His ill health could not dampen his spirits as he was found quite _____ at the ceremony.
   - (A) spiritual
   - (B) serious
   - (C) enervated
   - (D) effervescent

9. Both taciturn and _____, Daniel seldom spoke and never spent money.
   - (A) careful
   - (B) judicious
   - (C) miserly
   - (D) extravagant

10. The dress Ariel wore _____ with small, glassy beads, creating a shimmering effect.
    - (A) scintillated
    - (B) titillated
    - (C) striated
    - (D) tenebrous

Directions (Q. Nos. 11–15) : For each of the following phrases, choose one word that can substitute it.

11. One who has a strong sixth sense
    (A) psychic
    (B) psychotic
    (C) hylic
    (D) presbyopic

12. To strengthen or support a claim
    (A) assuage
    (B) corroborate
    (C) vilify
    (D) enervate

13. Sad and gloomy to a great extent
    (A) lugubrious
    (B) nefarious
    (C) loquacious
    (D) panegyric

14. To struggle helplessly
    (A) fumble
    (B) fiddle
    (C) fickle
    (D) flounder

15. A state of great suffering
    (A) renegade
    (B) boisterous
    (C) cannily
    (D) tribulation

Directions (Q. Nos. 16–18) : In each of the following questions, a sentence has been given in Active/Passive voice. Out of the four alternatives, select the one which best expresses the same meaning of the sentence in Passive/Active voice.

16. You don't need to wind this watch.
    (A) This watch need not be wound.
    (B) This watch does not wind.
    (C) This watch need not be wounded.
    (D) This watch need not be winded up.

17. We have already done the exercise.
    (A) Already the exercise has been done by us.
    (B) The exercise has already been done by us.
    (C) The exercise was already done by us.
    (D) Already the exercise was done by us.

18. One should not give unsolicited advice.
    (A) Unsolicited advice is not to be given.
    (B) Unsolicited advice cannot be given.
    (C) Unsolicited advice may not be given.
    (D) Unsolicited advice should not be given.

Directions (Q. Nos. 19 and 20) : From the given options, choose the correctly spelt word.

19. (A) Manueover
    (B) Manoeuvre
    (C) Manuovere
    (D) Maneouvre

20. (A) Sovenir
    (B) Suovenir
    (C) Souvenir
    (D) Suvenior

The Madras High Court on Friday granted 30 days of ordinary leave to S. Nalini, 52, a life convict in the former Prime Minister Rajiv Gandhi's assassination case. The order was passed after she argued her case in person and made a **fervent** plea to the judges in a choked voice that she may be allowed to step out of prison for some days to make arrangements for the marriage of her daughter, who is residing in London.

Nalini had many years ago come out on short paroles of a day each to attend her brother Bhagyanathan's wedding and her father's last rites.

Justices M. M. Sundresh and M. Nirmal Kumar took judicial notice that the State Cabinet itself had on September 9 last year made a recommendation to the Governor to release all seven convicts in the Rajiv Gandhi assassination case. "If, in the view of the government, the petitioner can be allowed to lead a normal life and she would not be a hindrance to the society, the request for leave can never be objected to," they said.

The judges also directed the State Government to bear the expenses of providing escort to her during the period of leave since she expressed difficulty in paying the charges.

"There is no material to hold that she is a women of means. Admittedly, she and her husband are in incarceration for decades. Asking the petitioner to pay the cost would in a way take away the very order passed by us when it is impossible of compliance," they said.

21. Why was S. Nalini sentenced to lifetime imprisonment by the judiciary of the country?

(A) She murdered a lot of people during her school days and that came out in the open later

(B) She murdered her family out of mercy though her husband had left her for another woman before that

(C) She did not do anything but the court was of the view that she could do something if left to fend for herself within the society

(D) She was involved in the assassination of the former Prime Minister of India

22. Which among the following is correct regarding the attitude of the State Government towards the sentence of life imprisonment given to S. Nalini?

(A) The State Government has nothing to say in the whole issue since the case was dealt with by the Central Government.

(B) The State Government could not understand the fact that there was nothing wrong done by S. Nalini many years ago.

(C) The State Government is of the opinion that the sentence given to S. Nalini can be remitted at once.

(D) The State Government wants the convict to continue with the given sentence by the court for the crime committed by her.

23. Which among the following are **not** correct as per the given passage?

    I.   This is the first time that S. Nalini has been given the permission to come out on parole.

    II. S. Nalini has been granted the right to come out on parole to perform the last rites of her husband.

    III. S. Nalini has no child and that is why she is not at all happy with the sentence.

    (A) Both I and II

    (B) Both II and III

    (C) Both I and III

    (D) All I, II and III

24. Which among the following is/are correct regarding the observations of the Madras High Court regarding S. Nalini?

    I.   S. Nalini is a very rich woman and that is why no monetary support is required to be given to her.

    II. S. Nalini is a dreaded criminal and that is why she should be put behind the bars for life with no chance at any kind of reformation.

    III. S. Nalini has intentionally jeopardized her relationship with her husband and that is why she should be punished for that.

    (A) Both I and II

    (B) Both II and III

    (C) Both I and III

    (D) None of I, II and III

25. Which among the following would be similar in meaning to the word **fervent** as used in the passage?

    (A) Ardent

    (B) Vehement

    (C) Feeling

    (D) Pragmatic

Directions (Q. Nos. 26–30) : **In each of the questions given below, a sentence is given which is divided into four parts such that the parts are jumbled and do not make a meaningful sentence. Rearrange the following parts to form a grammatically correct and meaningful sentence, and choose the correct rearrangement from the options given below each question.**

26. I.   Scientists have discovered

    II. That may pave way for sustainable ways to clean up oil spills

    III. A unique oil-eating bacteria in the Mariana Trench, the

    IV. Deepest part of the earth's oceans, a finding

    (A) II–III–IV–I

    (B) I–III–IV–II

    (C) IV–III–II–I

    (D) III–IV–II–I

27. I.   Andhra Pradesh on Monday morning

    II. EMISAT, from Sriharikota in coastal

    III. The Indian Space Research Organisation (ISRO) launched

    IV. The country's first electronic surveillance satellite

    (A) III–IV–II–I

    (B) I–III–IV–II

    (C) I–IV–III–II

    (D) IV–III–II–I

28. I. Concept used when

II. Philosophy of technology

III. Technological somnambulism is a

IV. Talking about the

(A) III–I–IV–II

(B) I–II–III–IV

(C) II–III–IV–I

(D) III–I–II–IV

29. I. With the interim budget out,

II. All eyes are now on the Monetary

III. Policy Committee's decision that

IV. Will be announced on 7 February

(A) III–I–IV–II

(B) I–II–III–IV

(C) I–IV–III–II

(D) III–I–II–IV

30. I. By scrapping the five years domestic

II. Liberalizing the right to fly abroad

III. Real room for manoeuvring investors

IV. Flight operations requirement does not create

(A) II–I–III–IV

(B) II–I–IV–III

(C) IV–I–III–II

(D) IV–II–III–I

Directions (Q. Nos. 31–35) : **In the following passage there are blank spaces, each of which has been numbered. These numbers are printed in the blank spaces and against each four options are suggested, one of which fits the blank space appropriately. Find out the appropriate word in each case and mark that as your answer.**

It is neither the size nor the length of life which makes man __31__. The growth of mind and intellect is __32__ in proportion to the growth of the human body. The man may __33__ physically the state of a giant, yet he may remain __34__ a dwarf. The true worth of man __35__ upon his actions, deeds and thoughts.

31. (A) human

(B) polite

(C) better

(D) humble

32. (A) roughly

(B) usually

(C) ever

(D) never

33. (A) earn

(B) attain

(C) keep

(D) grow

34. (A) morally

(B) spiritually

(C) socially

(D) intellectually

35. (A) depends

(B) lies

(C) revolves

(D) gathers

36. He dare not to go there.

   (A) He dare

   (B) not to

   (C) go there

   (D) No error

37. He was elected as Chairman of the Committee.

   (A) He was elected

   (B) as Chairman

   (C) of the Committee

   (D) No error

38. Many of the young people studying abroad agreed that returning home was always an attractive option.

   (A) Many of the young people studying abroad

   (B) agreed that returning home was

   (C) always an attractive option

   (D) No error

39. Whoever assumes his confession true is foolish.

   (A) Whoever assumes

   (B) his confession true

   (C) is foolish

   (D) No error

40. She has been complaining about headache from morning.

   (A) She has been

   (B) complaining about headache

   (C) from morning

   (D) No error

41. "What do you want?" Sheila asked Ron.

   (A) Sheila asked Ron what did you want.

   (B) Sheila asked Ron what he wanted.

   (C) Sheila asked Ron what does he want.

   (D) Sheila asked Ron what he wants.

42. The Director said, "Can you dance?" and she said, 'No'.

   (A) The Director asked her if she could dance and she said that she couldn't.

   (B) The Director asked her if she could do the dance and she said that she can't.

   (C) The Director inquired her if she can dance and she said that she can't.

   (D) The Director asked her if she can dance and she said that she can't.

43. John said to his sister, "The RBI is India's central bank."

    (A) John told his sister the RBI was India's central bank.

    (B) John told his sister that the RBI was India's central bank.

    (C) John told his sister that the RBI is India's central bank.

    (D) John told his sister the RBI is India's central bank.

44. He requested her to accompany him.

    (A) He said to her, "Please, come with me."

    (B) He says, "Please come with me."

    (C) He said, "Let her come with me."

    (D) He said, "You have to come with me."

45. Sarita said to me, "I will do it now or never."

    (A) Sarita told me that I would do it then or never.

    (B) Sarita told me that she would do it now or never.

    (C) Sarita told me that she will do that now or never.

    (D) Sarita told me that she would do it then or never.

Directions (Q. Nos. 46–50) : In the following questions, four alternatives are given for the Idiom/Phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase.

46. Please be as brief as you can, I <u>have other fish to fry</u>.

    (A) To fool others

    (B) To attend to some important work

    (C) To cook food

    (D) To complete my work

47. I'll be able to perform my duties effectively when I <u>know the ropes</u>.

    (A) Become more confident

    (B) Put in more hard work

    (C) Learn the procedures

    (D) Work more

48. It takes <u>a month of Sundays</u> to chop all that wood.

    (A) A holiday

    (B) No time

    (C) A long time

    (D) A short period

49. It is difficult to have a sensible discussion with her as she <u>flies off at a tangent</u>.

    (A) Starts discussing something irrelevant

    (B) Loses her temper

    (C) Does not really understand anything

    (D) Gets lost in her thoughts

50. We have a small amount of money saved, hardly enough <u>to keep the wolf from the door</u>.

    (A) To regain the lost position

    (B) To earn an honest living

    (C) To keep thieves away

    (D) To avoid poverty and starvation

PART—B : GENERAL KNOWLEDGE AND APTITUDE

(*Marks* : 100)

Each question carries **2** marks :

51. Where is Lord Ayyappa Temple located?
- (A) Madhya Pradesh
- (B) Uttarakhand
- (C) Kerala
- (D) Tamil Nadu

52. Which State of India launched India's first Social Audit Law, 2017?
- (A) Kerala
- (B) Gujarat
- (C) Meghalaya
- (D) West Bengal

53. What temperature is the same in both Celsius and Fahrenheit scale?
- (A) −40°
- (B) +40°
- (C) −10°
- (D) +5°

54. Who among the following scientists coined the phrase 'God Particle' and auctioned his Nobel Prize Gold Medal?
- (A) Leon Lederman
- (B) James Watson
- (C) John Nash
- (D) Amartya Sen

55. Dr. Abdul Kalam Island is known for
- (A) Rocket Launching Station
- (B) Missile Testing Facility
- (C) ISRO Satellite Centre
- (D) Nanotechnology Hub

56. Which among the following is *incorrect* about Nyaya Panchayats?
- (A) They compose a system of alternative dispute resolution
- (B) They have judicial functions both in civil as well as in criminal fields
- (C) They lead to democratic decentralization and also provide easy access to justice
- (D) None of the above

57. Who wrote the book, *A Century is not Enough*?
- (A) Greg Chappell
- (B) Sachin Tendulkar
- (C) Sourav Ganguly
- (D) John Buchanan

58. 'BrahMos', the world's fastest supersonic cruise missile, is a joint venture between
- (A) China and Russia
- (B) China and USA
- (C) India and Russia
- (D) Russia and Germany

59. With reference to the Parliament of India, 'Rule of Lapse' refers to
- (A) adjournment of the House by the Presiding officer due to lack of quorum
- (B) a condition when a bill pending in the Lok Sabha lapses due to dissolution of the Lok Sabha
- (C) dissolution of the Lok Sabha due to passage of no-confidence motion
- (D) returning of unspent granted money to the consolidated fund of India at the end of the financial year

60. Aung San Suu Kyi is a native of
- (A) Tibet
- (B) China
- (C) Myanmar
- (D) Arunachal Pradesh

61. 'One Belt One Road' is which country's ambitious initiative to link many countries for trade?

(A) China

(B) Russia

(C) Japan

(D) Germany

62. If the President of India exercises his power as provided under Article 356 of the Indian Constitution in respect of a particular State, then

(A) the Assembly of the State is automatically dissolved

(B) the powers of the legislature of the State shall be exercisable by the authority of the Parliament

(C) Article 19 is suspended in that State

(D) President can make laws relating to that State

63. Which of the following countries is *not* a BRICS member?

(A) Britain

(B) India

(C) Brazil

(D) China

64. Which of the following schemes has been launched in India to provide affordable housing to the poor?

(A) Rajiv Awas Yojana

(B) Indira Awas Yojana

(C) Pradhan Mantri Awas Yojana

(D) Bharat Home Yojana

65. The key objective of 'Ek Bharat Shreshtha Bharat' programme is

(A) to promote the unity in diversity and national integration between all States

(B) to maintain peace and order and avoid the communal conflicts

(C) to protect the cultural heritage through public engagement

(D) to enhance the trusteeship culture for using natural resources

66. Under Civil Disobedience movement Gandhiji *did not* call for which of the following?

(A) Public can boycott law courts by refraining from litigation

(B) Government servants can resign from their posts

(C) Truth and non-violence is subject to personal opinion

(D) Local leaders should be obeyed under Gandhi's arrest

67. When the office of the Chief Justice of a High Court is vacant, the duties of the office shall be performed by

(A) the seniormost judge available

(B) such one of the other judges of the court as the President may appoint

(C) such one of the other judges of the court as the President may appoint after consultation with the Governor

(D) the seniormost judge available after consultation with Council of Ministers

68. Which among the following may extend the jurisdiction of a High Court to, or exclude the jurisdiction of a High Court from any Union Territory?

(A) President of India

(B) Parliament by law

(C) President of India after consultation with administrator of Union Territory

(D) None of the above

69. Contingency Fund of India has been established by

(A) Parliament

(B) President of India

(C) Cabinet order

(D) Ordinance

70. This Park is famous for the golden cat and the barking deer. It is famous for pitcher plant and many medicinal plants called 'Dikke'. Which of the following could be this?

(A) Balpakram National Park

(B) Nokrek Ridge National Park

(C) Namdapha National Park

(D) Bhitarkanika National Park

71. 'Operation clean money' was launched to

(A) remove the old and dirty currency and bring the clean currency in functioning

(B) capture illegal money and invest it in share market

(C) encourage legal investment in stock market

(D) bring illegal wealth on books

72. Organic manure is considered better than fertilizers because

(A) it enhances the water holding capacity of soil

(B) it makes the soil porous due to which exchange of gases becomes easy

(C) it increases the number of friendly microbes

(D) All of the above

73. India's first Defence Industrial Park has been approved to be set up at

(A) Ottappalam

(B) Kochi

(C) Ernakulam

(D) Thiruvananthapuram

74. Information technology giant, Microsoft has launched a cloud computing-based offering Edu-Cloud. Which of the following is *not* correct in this regard?

(A) It has an aim to make learning seriously and intensively

(B) It seeks to enhance digital learning and teaching in schools and higher education institutions in India through virtual learning platforms

(C) Edu-Cloud will create, deliver and manage educational content from any device, anywhere, anytime

(D) All of the above

75. Northeast India's largest Hub for Information Technology (IT) was inaugurated in

(A) Agartala

(B) Shillong

(C) Itanagar

(D) Guwahati

76. The owner of a cellphone shop charges his customer 32% more than the cost price. If a customer paid ₹ 6,600 for the cellphone, then what was the cost price of the cellphone?

(A) ₹ 5,800   (B) ₹ 6,100

(C) ₹ 5,000   (D) ₹ 5,400

77. The difference between 89% of a number and 73% of the same number is 448. What is 49% of that number?

(A) 1426   (B) 1372

(C) 1218   (D) 1124

78. $(432 \times 66) - 1562 = ?$

(A) 23450   (B) 24360

(C) 25890   (D) 26950

79. $56 \cdot 6 \times 16 \cdot 6 \times 6 \cdot 6 = ?$

(A) 6102·196

(B) 6210·196

(C) 6021·196

(D) None of the above

80. An amount of ₹ 1,98,001 is distributed equally among 49 persons. How much would each person receive?

(A) ₹ 4,483·67

(B) ₹ 4,040·83

(C) ₹ 4,048·37

(D) None of the above

81. In an annual examination, Wanbok scores a total of 421 marks out of 675. What is his approximate percentage in the examination?

(A) 56

(B) 88

(C) 62

(D) 63

82. What is the product of 2071 and 309?

(A) 6·702   (B) 6·722

(C) 639939   (D) 80769

83. If 40% of 1225 employees were transferred, what number of employees were transferred?

(A) 540   (B) 490

(C) 630   (D) 710

84. If 37% of the days in 2023 received sunshine, how many days had sunshine approximately?

(A) 235   (B) 135

(C) 140   (D) 130

85. 56% of a number is 1064. What is 38% of that number?

(A) 666

(B) 856

(C) 912

(D) 722

86. Auna invests ₹ 89,856, which is 26% of her annual income, in mutual funds. What is her monthly income?

(A) ₹ 33,606·25

(B) ₹ 3,45,600

(C) ₹ 28,800

(D) ₹ 23,980·50

87. A basket had 250 oranges and 120 apples. 16% of the oranges and 10% of the apples were unripe. How many ripened fruits were in the basket?

(A) 52

(B) 318

(C) 320

(D) 365

88. 65% of 599 = ?

(A) 345·65

(B) 389·35

(C) 413·75

(D) 436·85

89. Find the missing letter in the following series :

JAK, KBL, LCM, MDN, _____

(A) PFQ   (B) MEN

(C) GET   (D) NEO

90. 11·6 × ? = 899

(A) 77·5   (B) 78·5

(C) 79·5   (D) 81·5

91. $44^3 \times 16^3 - 18678^2 = ?$

(A) 45980   (B) 44890

(C) 43780   (D) 42670

92. Find the mismatched number in the given series :

3, 7, 16, 35, 70, 153

(A) 70   (B) 16

(C) 153   (D) 35

93. 85332 – 11638 – 60994 = ?

(A) 12700

(B) 12600

(C) 12800

(D) 12500

94. The population of a State is 20000. It increases by 20% during the first year and 30% during the second year. The population after two years will be

(A) 32000   (B) 40000

(C) 31200   (D) 30000

95. Rohit deposits an amount of ₹ 56,500 to obtain a simple interest at the rate of 12% p.a. for 3 years. What total amount will Rohit get at the end of 3 years?

(A) ₹ 75,680   (B) ₹ 77,540

(C) ₹ 76,840   (D) ₹ 73,420

96. A canteen requires 798 bananas for a week. Total how many bananas did it require for the months of January, February and March, 2008?

(A) 10480   (B) 10277

(C) 10586   (D) 10374

97. $\frac{3}{8}$ of $\frac{5}{7}$ of $\frac{2}{5}$ of 1680 = ?

(A) 150   (B) 180

(C) 210   (D) 240

98. 66606 + 40998 = ? – 24848

(A) 132452   (B) 132242

(C) 132425   (D) 132254

99. The total number of students in a school is 1224. If the number of girls in the school is 600, then what is the respective ratio of the total number of boys to the total number of girls in the school?

(A) 26 : 25   (B) 21 : 17

(C) 18 : 13   (D) 5 : 4

100. In an examination, it is required to get 270 of the aggregate marks to pass. A student gets 216 marks and is declared failed by 8% marks. What are the maximum aggregate marks a student can get?

(A) 825   (B) 675

(C) 750   (D) 705

(*Marks* : 100)

Each question carries **2** marks :

101. If $0 \leq \theta \leq \dfrac{\pi}{2}$ and $\sec^2 \theta + \tan^2 \theta = 7$, then θ is equal to

(A) $\dfrac{\pi}{4}$ (B) $\dfrac{\pi}{3}$

(C) $\dfrac{\pi}{6}$ (D) $\dfrac{\pi}{5}$

102. The numerator of a fraction is 4 less than its denominator. If the numerator is decreased by 2 and the denominator is increased by 1, then the denominator becomes 8 times the numerator. The fraction is

(A) $\dfrac{3}{7}$ (B) $\dfrac{4}{7}$

(C) $\dfrac{5}{7}$ (D) $\dfrac{6}{7}$

103. If the cost of 2 tables and 3 chairs is ₹ 3,500 and cost of 3 tables and 2 chairs is ₹ 4,000, then the cost of 1 table is

(A) ₹ 1,500   (B) ₹ 1,000
(C) ₹ 750   (D) ₹ 500

104. A right circular cylinder and a right circular cone have the same radius and same volume. The ratio of the height of the cylinder to that of the cone is

(A) 3 : 5   (B) 2 : 5
(C) 3 : 1   (D) 1 : 3

105. In a fort, there is provision for 40 days for 275 persons. After 16 days, 125 persons leave the fort. For how many more days will the provision last?

(A) 35 days   (B) 44 days
(C) 45 days   (D) 53 days

106. A train travels from Dehradun to Delhi at a speed of 40 km/hr and returns at 60 km/hr. The average speed for the entire journey is

(A) 50 km/hr   (B) 45 km/hr
(C) 48 km/hr   (D) 40 km/hr

107. A can do a piece of work in 6 days. B can do the same work in 3 days. If both of them work together, in how many days will they complete the work?

(A) 1 day   (B) 4 days

(C) $1\dfrac{1}{2}$ days   (D) 2 days

108. If a train moves at 36 km/hr, then its speed in m/sec is

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

109. A candidate must get 33% marks to pass. If he gets 220 marks and fails by 11 marks, then the maximum number of marks is

(A) 600   (B) 700
(C) 800   (D) 900

110. If each side of a square is doubled, its area will become

(A) double

(B) three times

(C) four times

(D) eight times

111. The fourth proportional to 5, 8, 15 is

(A) 18   (B) 24
(C) 20   (D) 21

112. A bag contains 6 black and 8 white balls. One ball is drawn at random. What is the probability that the ball drawn is white?

(A) $\dfrac{4}{7}$ (B) $\dfrac{1}{8}$

(C) $\dfrac{3}{7}$ (D) $\dfrac{1}{4}$

113. A metallic sphere of radius 12 cm is melted into three smaller spheres. If the radii of two smaller spheres are 6 cm and 8 cm, then the radius of the third sphere is

(A) 16 cm   (B) 14 cm

(C) 12 cm   (D) 10 cm

114. $\dfrac{\tan A + \tan B}{\cot A + \cot B}$ is equal to

(A) $\cot A \ \cot B$

(B) $\sec A \ \operatorname{cosec} B$

(C) $\tan A \ \tan B$

(D) $\sin A \ \cos B$

115. In $\triangle ABC$, $\angle A : \angle B : \angle C = 2 : 3 : 4$. Then the $\angle B$ is

(A) 40°   (B) 60°

(C) 80°   (D) 20°

116. A chord 12 cm long is drawn in a circle of radius 10 cm. The distance of the chord from the centre is

(A) 6 cm   (B) 10 cm

(C) 16 cm   (D) 8 cm

117. In what time ₹ 8,000 will amount to ₹ 9,261 at 10% per annum compound interest, when the interest is compounded half-yearly?

(A) $3\dfrac{1}{2}$ years   (B) $1\dfrac{1}{2}$ years

(C) $2\dfrac{1}{2}$ years   (D) 2 years

118. A man bought oranges at the rate of 8 for ₹ 34 and sold them at the rate of 12 for ₹ 57. How many oranges should be sold to earn a profit of ₹ 45?

(A) 90   (B) 100

(C) 135   (D) 150

119. If $x + y = 4$ and $\dfrac{1}{x} + \dfrac{1}{y} = 4$, then the value of $x^2 + y^2$ is

(A) 16   (B) 15

(C) 14   (D) 13

120. The cube root of 9261 is

(A) 31   (B) 21

(C) 41   (D) 51

121. The value of $\dfrac{(9\cdot 8)^3 - (6\cdot 8)^3}{(9\cdot 8)^2 + 9\cdot 8 \times 6\cdot 8 + (6\cdot 8)^2}$ is

(A) 6   (B) 5

(C) 4   (D) 3

122. An angle which is one-fourth of its supplement is

(A) 35°   (B) 32°

(C) 36°   (D) 37°

123. How many odd numbers are there between 1 to 200?

(A) 300   (B) 100

(C) 150   (D) 250

124. The fractional form of $6\cdot\overline{46}$ is

(A) $\dfrac{640}{99}$ (B) $\dfrac{640}{100}$

(C) $\dfrac{646}{100}$ (D) $\dfrac{646}{99}$

125. Simplify $\sqrt{41 - \sqrt{21 + \sqrt{19 - \sqrt{9}}}}$.

(A) 11   (B) 8

(C) 6   (D) 5

126. The HCF and LCM of two numbers are 18 and 252 respectively. If one of the numbers is 126, then the other number is
(A) 42   (B) 36
(C) 58   (D) 28

127. If $A : B = 3 : 4$ and $B : C = 5 : 6$, then $A : C$ is
(A) 3 : 5   (B) 4 : 5
(C) 5 : 8   (D) 5 : 4

128. The sum of three consecutive positive numbers is 39. The smallest number is
(A) 12   (B) 13
(C) 11   (D) 14

129. $6\frac{1}{4}\%$ of ₹ 1,600 is equal to
(A) ₹ 150   (B) ₹ 180
(C) ₹ 100   (D) ₹ 220

130. What sum will amount to ₹ 1,352 in 2 years at 4% per annum compound interest?
(A) ₹ 1,000   (B) ₹ 1,050
(C) ₹ 1,200   (D) ₹ 1,250

131. 12 men complete a piece of work in 24 days. 8 men can complete the same piece of work in
(A) 36 days   (B) 48 days
(C) 25 days   (D) 40 days

132. The ages of Khraw, Bok and Ban are in the ratio $6 : 4 : 7$. If the sum of their ages is 34 years, then Ban's age is
(A) 12 years   (B) 14 years
(C) 10 years   (D) 16 years

133. Bala goes to school from her house at a speed of 3 km/hr and returns at a speed of 2 km/hr. If she takes 5 hours in going and coming, then the distance between her house and school is
(A) 4 km   (B) 5 km
(C) 5·5 km   (D) 6 km

134. The sum of the first four prime numbers is
(A) 15   (B) 16
(C) 17   (D) 18

135. The value of $\dfrac{2\cdot8 \times 2\cdot8 - 1\cdot2 \times 1\cdot2}{2\cdot8 - 1\cdot2}$ is
(A) 3   (B) 4
(C) 5   (D) 6

136. A man has some hens and cows. If the number of heads is 48 and the number of feet is 140, then the number of hens is
(A) 26   (B) 24
(C) 23   (D) 22

137. The least number that must be subtracted from 9985 so that it becomes a perfect square is
(A) 160   (B) 172
(C) 180   (D) 184

138. The average age of 24 students in a class is 10. If the teacher's age is included, the average becomes 11. Then the age of the teacher is
(A) 25   (B) 35
(C) 45   (D) 55

139. The difference between a two-digit number and the number obtained by interchanging the two digits of the number is 9. The sum of the two digits is 15. Then the number is

(A) 78   (B) 69

(C) 87   (D) 96

140. A mother is 25 years older to her daughter. Five years ago, the age of the mother was 6 times the age of the daughter. The present age of the daughter is

(A) 7 years   (B) 8 years

(C) 9 years   (D) 10 years

141. A train 160 m long is running at 40 m/sec. In how much time will it take to pass a platform 40 m long?

(A) 5 sec   (B) 8 sec

(C) 10 sec   (D) 12 sec

142. Pipe A and pipe B can fill a tank in 10 hours and 15 hours respectively. Both pipes are opened together. How much time will the tank take to fill?

(A) 5 hours   (B) 6 hours

(C) 7 hours   (D) 8 hours

143. The population of a town is 40000. If the population increases 20% every year, then the population of the town after 3 years is

(A) 80540   (B) 75600

(C) 69120   (D) 68420

144. On selling an article for ₹ 270, there is a gain of 12·5%. Then the cost price is

(A) ₹ 200   (B) ₹ 210

(C) ₹ 220   (D) ₹ 240

145. If the simple interest on ₹ 500 for 4 years is ₹ 40, then the rate percent per annum is

(A) $2\frac{1}{2}$%   (B) 3%

(C) 2%   (D) $3\frac{1}{2}$%

146. The area of a circle is 154 cm². Then its circumference is

(A) 77 cm   (B) 44 cm

(C) 11 cm   (D) 7 cm

147. A reservoir is 3 m long, 2 m wide and 1 m deep. Its capacity in litres is

(A) 6000   (B) 3000

(C) 4500   (D) 9000

148. If $x + \dfrac{1}{x} = 1$, then the value of $\dfrac{x^2 + 3x + 1}{x^2 + 7x + 1}$ is

(A) 2   (B) $\dfrac{1}{2}$

(C) 3   (D) $\dfrac{3}{7}$

149. If the angle of elevation of a tower from a distance 100 m from its foot is 45°, then the height of the tower is

(A) 50 m   (B) 150 m

(C) 100 m   (D) 200 m

150. The value of $\dfrac{\sqrt{80} - \sqrt{112}}{\sqrt{45} - \sqrt{63}}$ is

(A) $\dfrac{3}{4}$ (B) $1\dfrac{3}{4}$

(C) $1\dfrac{1}{3}$ (D) $1\dfrac{7}{9}$