

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

**SERIES : I**

## QUESTION BOOKLET

**Subjects : General English, General Knowledge & Current Affairs,  
Aptitude & Reasoning and Elementary Mathematics**

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 :

<b>Part—A : General English</b>	<b>: 40 questions</b>
<b>Part—B : General Knowledge &amp; Current Affairs</b>	<b>: 50 questions</b>
<b>Part—C : (i) Aptitude &amp; Reasoning</b>	<b>: 30 questions</b>
<b>(ii) Elementary Mathematics</b>	<b>: 30 questions</b>
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.

SEAL

## PART—A : GENERAL ENGLISH

( Marks : 80 )

Each question carries 2 marks

1. A gourmet loves
  - (A) fashion
  - (B) action
  - (C) films
  - (D) food
  
2. The street is not properly
  - (A) illumined
  - (B) illuminined
  - (C) illuminated
  - (D) enlightened
  
3. The man who follows his nose actually follows his
  - (A) passion
  - (B) instinct
  - (C) rationality
  - (D) memory
  
4. Select the pair in the following options which is set in opposition :
  - (A) Divine : Infernal
  - (B) Manly : Virile
  - (C) Earthly : Terrestrial
  - (D) Doggish : Canine
  
5. Select the pair in the following options which is set in opposition :
  - (A) Humid : Arid
  - (B) Pedant : Pedagogic
  - (C) Erroneous : Faulty
  - (D) Horrible : Horrendous
  
6. A Pugilist is a/an
  - (A) swimmer
  - (B) boxer
  - (C) athlete
  - (D) weightlifter
  
7. A fictitious name used by an author :
  - (A) Anonymous
  - (B) Biographer
  - (C) Pseudonym
  - (D) Philanthropist
  
8. A person who can do anything for money :
  - (A) Migrant
  - (B) Misanthrope
  - (C) Martyr
  - (D) Mercenary
  
9. A person who draws/makes maps :
  - (A) Cartographer
  - (B) Lexicographer
  - (C) Broker
  - (D) Sculptor
  
10. A particular way or method of doing something :
  - (A) Modus vivendi
  - (B) Modus operandi
  - (C) Mimic
  - (D) Monopoly

11. A gentleman should be true \_\_\_\_ his words.

(A) from (B) in  
(C) to (D) on

12. The father was vexed \_\_\_\_ his son.

(A) in (B) from  
(C) about (D) with

13. The tourists alighted from the bus \_\_\_\_ the entrance of the National Zoo.

(A) at (B) through  
(C) across (D) to

14. The soldiers are \_\_\_\_ war.

(A) in (B) at  
(C) by (D) till

15. There's a rift \_\_\_\_ these two kids.

(A) behind (B) among  
(C) between (D) since

16. Choose the word from the options which is nearest in meaning to the underlined part of the following sentence :

Hike in price may mar the future of the trade world.

(A) Harness (B) Help  
(C) Better (D) Worsen

17. Choose the word from the options which is nearest in meaning to the underlined part of the following sentence :

The children were very vivacious in the playground.

(A) Lively/full of life  
(B) Smiling  
(C) Sportive  
(D) Joyful

18. Choose the word from the options which is nearest in meaning to the underlined part of the following sentence :

The singer has a very sonorous voice.

(A) Soft  
(B) Resonant  
(C) Gentle  
(D) Flat

19. 'Jump the gun' means

(A) pull the trigger  
(B) make it worse  
(C) act too early  
(D) take a risk

20. 'Under the weather' means

(A) raining heavily  
(B) in trouble  
(C) get to the point  
(D) feeling unwell

21. To 'go out on a limb' means  
(A) stop and wait  
(B) tell a secret  
(C) a big success  
(D) take a chance

22. \_\_\_\_ uncle of mine sent me this present.  
(A) The  
(B) And  
(C) An  
(D) From

23. He is always ready to help \_\_\_\_ poor.  
(A) all  
(B) the  
(C) some  
(D) a

24. He was \_\_\_\_ well-informed.  
(A) too  
(B) to  
(C) badly  
(D) poorly

25. Choose the correct synonym for the word 'Kaleidoscopic'.  
(A) Monotonous  
(B) Colourful  
(C) Dull  
(D) Drab

26. Choose the correct synonym for the word 'Amiable'.  
(A) Hostile  
(B) Aloof  
(C) Friendly  
(D) Unpleasant

27. Choose the correct synonym for the word 'Fathom'.  
(A) Fake  
(B) Shy  
(C) Shallow  
(D) Understand

28. Choose the correct antonym for the word 'Timid'.  
(A) Bold  
(B) Fearful  
(C) Kind  
(D) Guilty

29. Choose the correct antonym for the word 'Diligent'.  
(A) Hardworking  
(B) Lazy  
(C) Active  
(D) Calm

30. Choose the correct antonym for the word 'Intricate'.  
(A) Complicated  
(B) Sophisticated  
(C) Simple  
(D) Faithful

31. The rotten tomatoes \_\_\_\_ a bad smell.

(A) brought out  
(B) broke down  
(C) are always  
(D) gave off

32. The poor man \_\_\_\_ a golden chain.

(A) came across  
(B) came up  
(C) got caught  
(D) have caught

33. The soldiers \_\_\_\_ their arms.

(A) fell through  
(B) laid down  
(C) got through  
(D) broke up

34. Negotiations \_\_\_\_ because neither side would compromise.

(A) came off  
(B) broke open  
(C) fell through  
(D) went through

35. The professor \_\_\_\_ the idea clearly.

(A) took down  
(B) gave off  
(C) gave in  
(D) brought out

36. He enjoys \_\_\_\_ to his iPod.

(A) listening to  
(B) to listen  
(C) listen  
(D) listening

37. At last they decided \_\_\_\_ the house.

(A) rental  
(B) renting  
(C) to rent  
(D) for rent

38. \_\_\_\_ along the beach is a great way to relax.

(A) Walk  
(B) Walking  
(C) Walks  
(D) Walk on

39. Why don't we give \_\_\_\_ a few minutes to rest before we start walking again?

(A) ourselves  
(B) yourself  
(C) themselves  
(D) itself

40. \_\_\_\_ you like to watch movies?

(A) Do  
(B) Don't  
(C) Did  
(D) Does

## PART—B : GENERAL KNOWLEDGE & CURRENT AFFAIRS

( Marks : 100 )

Each question carries 2 marks

41. 'Doctors Without Borders (Médecins Sans Frontières)', often in the news, is

- (A) a division of World Health Organization
- (B) a non-governmental international organization
- (C) an inter-governmental agency sponsored by European Union
- (D) a specialized agency of United Nations

42. 'Belt and Road Initiative' is sometimes mentioned in the news in the context of the affairs of

- (A) African Union
- (B) Brazil
- (C) European Union
- (D) China

43. 'Global Financial Stability Report' is prepared by the

- (A) European Central Bank
- (B) International Monetary Fund
- (C) International Bank for Reconstruction and Development
- (D) Organization for Economic Cooperation and Development

44. What was the main reason for the split in the Indian National Congress at Surat in 1907?

- (A) Introduction of communalism into Indian politics by Lord Minto
- (B) Extremist lack of faith in the capacity of the moderates to negotiate with the British Government
- (C) Foundation of Muslim League
- (D) Aurobindo Ghose's inability to be elected as the President of the Indian National Congress

45. North Indian architecture is called

- (A) Indo-Saracenic style
- (B) Dravidian style
- (C) Roman-Greek style
- (D) Nagara style

46. Khajuraho was one of the capitals of which of the following dynasties?

- (A) Kalachuri dynasty
- (B) Pratihara dynasty
- (C) Pala dynasty
- (D) Chandela dynasty

47. Who among the following participated in the All World Religious Conference held in 1893 in Chicago?

(A) Swami Vivekananda  
(B) Swami Dayanand  
(C) Swami Sahajananda  
(D) Raja Ram Mohan Roy

48. Which of the following books was *not* written by Jyotiba Phule?

(A) *Gulamgiri*  
(B) *Shetkaryacha Asud*  
(C) *Brahmananche Kasab*  
(D) *The Untouchables*

49. In which of the following years did Mahatma Gandhi lead the Satyagraha and Hunger Strike for the first time in India?

(A) 1917  
(B) 1918  
(C) 1919  
(D) 1920

50. Which Kingdom was described by Lord Dalhousie as 'A cherry that will drop into our mouth one day'?

(A) Delhi  
(B) Awadh  
(C) Jhansi  
(D) Gwalior

51. Who gave the slogan 'Do or Die' and when?

(A) Subhas Chandra Bose during Quit India Movement  
(B) Jawaharlal Nehru during Non-Cooperation Movement  
(C) Mahatma Gandhi during Quit India Movement  
(D) None of them

52. Who among the following was the last Governor-General of India before the office was permanently abolished?

(A) Lord Mountbatten  
(B) Chakravarti Rajagopalachari  
(C) Lord Wavell  
(D) Lord Linlithgow

53. Which of the following is an example of both an igneous as well as metamorphic rock?

(A) Gabbro  
(B) Geyserite  
(C) Gneissoid  
(D) Granite

54. The torrid zone lies between

(A) Tropic of Cancer and Tropic of Capricorn  
(B) North Pole and Arctic Circle  
(C) Antarctic Circle and Tropic of Capricorn  
(D) Arctic Circle and Tropic of Cancer

55. Which of the following is **not** correctly matched?

<i>Capital</i>	<i>Country</i>
(A) Naypyidaw	Myanmar
(B) Khartoum	Ethiopia
(C) Dublin	Ireland
(D) Ottawa	Canada

56. The Aravalli is the name of a \_\_\_\_ in India.

- (A) plateau
- (B) valley
- (C) mountain range
- (D) lake

57. Which is the largest sea located in the North Indian Ocean, covering an area of about 3.86 million square kilometres?

- (A) Java Sea
- (B) Andaman Sea
- (C) Red Sea
- (D) Arabian Sea

58. Who gave the expanding universe hypothesis?

- (A) Galileo Galilei
- (B) Edwin Hubble
- (C) James Clerk Maxwell
- (D) C. V. Raman

59. Which of the following freedoms is **not** guaranteed by the Indian Constitution under Article 19?

- (A) Freedom to assemble peacefully and without arms
- (B) Freedom to own, acquire and dispose of property
- (C) Freedom to move freely throughout the country
- (D) Freedom to practice any trade or profession

60. Which Article of the Indian Constitution provides equality before the law?

- (A) Article 20
- (B) Article 16
- (C) Article 18
- (D) Article 14

61. The Right to Education has been given in which of the following Articles in the Indian Constitution?

- (A) Article 21A
- (B) Article 25A
- (C) Article 21
- (D) Article 20

62. In which Schedule of the Indian Constitution, provisions for disqualification on grounds of defection are given?

- (A) 9th Schedule
- (B) 10th Schedule
- (C) 11th Schedule
- (D) 6th Schedule

**63.** In which of the following years was the Goods and Services Tax (Compensation to States) Bill passed?

(A) 2002  
(B) 2017  
(C) 2014  
(D) 2007

**64.** Which of the below mentioned elements occurs when the Government's revenue expenditure is more than its revenue receipts?

(A) Budgetary deficit  
(B) Revenue deficit  
(C) Capital deficit  
(D) Fiscal deficit

**65.** According to the Census of India 2011, among the Seven Sister States, which State has the highest literacy rate?

(A) Tripura  
(B) Nagaland  
(C) Mizoram  
(D) Manipur

**66.** Who won the Nobel Peace Prize, 2025?

(A) Nihon Hidankyo  
(B) Donald Trump  
(C) Maria Corina Machado  
(D) Narges Mohammadi

**67.** Who is the current Governor of Meghalaya?

(A) Ganga Prasad  
(B) Phagu Chauhan  
(C) Tathagatha Roy  
(D) C. H. Vijayashankar

**68.** Who was the first Speaker of the Meghalaya Legislative Assembly?

(A) W. Syiemiong  
(B) R. S. Lyngdoh  
(C) P. G. Marbaniang  
(D) P. R. Kyndiah

**69.** Which is the State animal of Meghalaya?

(A) Leopard  
(B) Clouded leopard  
(C) Tiger  
(D) Langur

**70.** Which is the official language of Meghalaya?

(A) Khasi  
(B) Garo  
(C) English  
(D) None of the above

**71.** Who was the first American President to serve two non-consecutive terms?

(A) Grover Cleveland  
(B) Jimmy Carter  
(C) Donald Trump  
(D) Barrack Obama

**72.** Who among the following is the author of the book, *The Inheritance of Loss*?

(A) Kamla Bhasin  
(B) Meena Kandasamy  
(C) Manju Kapur  
(D) Kiran Desai

73. Who among the following is the author of *The God of Small Things*?

- (A) Vikram Seth
- (B) Anita Desai
- (C) Arundhati Roy
- (D) Chitra Banerjee

74. Who was the first Home Minister of Independent India?

- (A) Maulana Abul Kalam Azad
- (B) Baldev Singh
- (C) Sardar Vallabhbhai Patel
- (D) Humayun Kabir

75. Which device is commonly used to connect computers within a local area network (LAN)?

- (A) Router
- (B) Repeater
- (C) Switch
- (D) Modem

76. Which method is used to protect sensitive information during data transmission?

- (A) Decryption
- (B) Hashing
- (C) Secure Socket Layer
- (D) Compression

77. When is the Army Day celebrated in India?

- (A) 15th January
- (B) 15th August
- (C) 24th January
- (D) 12th January

78. Who is responsible for hoisting the National Flag on Independence Day?

- (A) The President of India
- (B) The Vice President of India
- (C) The Attorney General of India
- (D) The Prime Minister of India

79. *Playing It My Way* is an autobiography of which of the following cricket players?

- (A) Brian Lara
- (B) Sachin Tendulkar
- (C) Ricky Ponting
- (D) Sunil Gavaskar

80. Which of the following is *not* a good conductor of electricity?

- (A) Gold
- (B) Sulphur
- (C) Silver
- (D) Aluminium

81. Who discovered the laws of levers and pulleys which allow us to move heavy objects using small forces?

- (A) Archimedes
- (B) Democritus
- (C) Pythagoras
- (D) Eudoxus

82. Which type of image is formed by a plane mirror?

- (A) Erect and inverted
- (B) Laterally inverted and virtual
- (C) Virtual and inverted
- (D) Virtual and erect

83. For which discovery in 1932 was James Chadwick best known?

- (A) Wave theory of light
- (B) Thermal ionization
- (C) Neutron
- (D) Electron

84. Which detergents are also used in toothpaste?

- (A) Anionic detergents
- (B) Non-ionic detergents
- (C) Cationic detergents
- (D) Synthetic detergents

85. The isotope of which one among the following elements is used in the treatment of cancer?

- (A) Uranium
- (B) Cobalt
- (C) Iodine
- (D) Fluorine

86. Which of the following elements is responsible for high blood pressure?

- (A) Sodium
- (B) Magnesium
- (C) Potassium
- (D) Calcium

87. Write the name of the disease that can be caused by Vitamin B deficiency.

- (A) Osteoporosis
- (B) Scurvy
- (C) Bleeding diathesis
- (D) Beriberi

88. Who among the following was the first to describe the nucleus as a cell organelle?

- (A) Lucio Fontana
- (B) Robert Brown
- (C) Eduard Strasburger
- (D) Robert Koch

89. Xylem in the plant is responsible for the transport of

- (A) water
- (B) water and dissolved mineral
- (C) gases
- (D) food

90. Which of the following tissues helps to connect two bones?

- (A) Tendon
- (B) Ligament
- (C) Areolar tissue
- (D) Cartilage

## PART—C : (i) APTITUDE & REASONING

( Marks : 60 )

Each question carries 2 marks

91. If  $A = 1$ ,  $B = 2$ ,  $C = 3$ , ...., what is the value of 'LOGIC'?

(A) 52  
(B) 54  
(C) 46  
(D) 48

92. Find the missing number :  
7, 14, 28, 56, ?

(A) 84  
(B) 98  
(C) 112  
(D) 126

93. Find the next term :  
3, 9, 27, 81, ?

(A) 162  
(B) 243  
(C) 324  
(D) 729

94. Choose the odd one out.

(A) 4-16  
(B) 5-25  
(C) 6-36  
(D) 8-72

95. In a code, CAT = 24, DOG = 26. Find RAT.

(A) 39  
(B) 37  
(C) 38  
(D) 41

96. Pick the odd one out.

(A) Vitamin D  
(B) Vitamin A  
(C) Vitamin K  
(D) Vitamin C

97. A car covers 240 km in 4 hours. What is its speed?

(A) 40 km/hour  
(B) 50 km/hour  
(C) 60 km/hour  
(D) 80 km/hour

98. A train, 150 metres long crosses a platform of 350 metres long in 25 seconds. Find its speed.

(A) 60 km/hour  
(B) 72 km/hour  
(C) 80 km/hour  
(D) 90 km/hour

99. Pointing to a woman, Ramesh said she is the daughter of my grandfather's only son. What is their relation?

- (A) Mother
- (B) Aunt
- (C) Sister
- (D) Cousin

100. A is the father of B, but B is not the son of A. How is B related to A?

- (A) Daughter
- (B) Wife
- (C) Sister
- (D) Mother

101. Look at the series :

36, 34, 30, 28, 24, .....

What number should come next?

- (A) 22
- (B) 26
- (C) 23
- (D) 20

102. Which word **does not** belong with the others?

- (A) Index
- (B) Glossary
- (C) Chapter
- (D) Book

103. If you are facing east and turn 90° to your right, which direction are you facing now?

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

104. How many times in a day do the hands of a clock form a 180° angle?

- (A) 22
- (B) 44
- (C) 24
- (D) 48

105. Disha ranks 23rd from the top in a class of 28 students. What is her rank from the bottom?

- (A) 4th
- (B) 6th
- (C) 7th
- (D) 5th

106. Which of the following is a leap year?

- (A) 1076
- (B) 1675
- (C) 1354
- (D) 1998

**107.** If 4th November, 2021 was a Thursday, then what would be the day on 13th May, 2023?

- (A) Monday
- (B) Sunday
- (C) Friday
- (D) Saturday

**108.** Your classmate who is usually very energetic and happy, looks very upset and down. What will you do?

- (A) Carry on with your work
- (B) Tell one of your friends to go and talk to her
- (C) Go up to her and ask the reason
- (D) Wait for her to come and tell you the reason

**109.** Find the odd one out.

- (A) Square
- (B) Circle
- (C) Triangle
- (D) Cube

**110.** Statements :

1. All roses are flowers.
2. Some flowers fade quickly.

Conclusions :

- I. Some roses fade quickly.
- II. Some flowers are roses.

Which of the above conclusion(s) follow(s) the given statements?

- (A) Only I follows
- (B) Only II follows
- (C) Both follow
- (D) None of them follows

**111.** Read the given Assertion (A) and Reason (R) carefully and choose the option that accurately describes the relationship between them.

Assertion (A) :

All prime numbers are odd numbers.

Reason (R) :

Prime numbers can only be divided by itself or one.

- (A) Both (A) and (R) are true
- (B) (A) is false but (R) is true
- (C) Both (A) and (R) are false
- (D) Both (A) and (R) are true but (R) is not the correct explanation of (A)

**112.** Read the given Assertion (A) and Reason (R) carefully and select the appropriate option with respect to them.

Assertion (A) :

Trees grow against gravity.

Reason (R) :

Nature defies gravitational law.

- (A) Both (A) and (R) are false
- (B) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (C) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (D) (A) is true but (R) is false

**Directions (Q. Nos. 113-117) :**

In each of the following questions, arrange the words in a meaningful, logical order and select the appropriate sequence from the alternatives given below.

**113.** 1. Senior Secondary School

2. Primary School

3. Secondary School

4. Kindergarten

5. College

(A) 4, 2, 3, 1, 5

(B) 4, 3, 2, 5, 1

(C) 2, 4, 3, 1, 5

(D) 4, 3, 2, 1, 5

**114.** 1. Eiffel Tower

2. Empire State Building

3. Qutub Minar

4. Burj Khalifa

(A) 4, 2, 1, 3

(B) 1, 4, 2, 3

(C) 3, 2, 1, 4

(D) 1, 2, 3, 4

**115.** 1. Lal Bahadur Shastri

2. Atal Bihari Vajpayee

3. Jawaharlal Nehru

4. Manmohan Singh

5. Indira Gandhi

(A) 4, 2, 3, 1, 5

(B) 3, 5, 1, 4, 2

(C) 4, 2, 1, 5, 3

(D) 3, 1, 5, 2, 4

**116.** 1. Acre

2. Square yard

3. Square inch

4. Hectare

5. Square feet

(A) 3, 5, 1, 4, 2

(B) 3, 5, 2, 1, 4

(C) 3, 5, 1, 2, 4

(D) 3, 5, 2, 4, 1

**117.** 1. Atlantic Ocean

2. Pacific Ocean

3. Antarctic Ocean

4. Arctic Ocean

5. Indian Ocean

(A) 4, 3, 1, 2, 5

(B) 4, 1, 3, 2, 5

(C) 4, 3, 5, 2, 1

(D) 4, 3, 5, 1, 2

**118.** The Taj Mahal is related to India in the same way as the Colosseum is related to

(A) France (B) Italy

(C) England (D) Australia

**119.** East is related to Direction, in the same way as Summer is related to

(A) Season

(B) Room Cooler

(C) Heat

(D) Temperature

**120.** Valuable is related to Precious, in the same way as Dry is related to

(A) Humid

(B) Arid

(C) Rough

(D) Wet

**PART—C : (ii) ELEMENTARY MATHEMATICS**

( Marks : 60 )

Each question carries 2 marks

**121.** A solid metallic sphere of radius 9 cm is melted to form a solid sphere of radius 9 cm. The height of the cylinder is

(A) 12 cm  
(B) 18 cm  
(C) 36 cm  
(D) 96 cm

**122.** The angle described by the minute hand in 50 minutes is

(A)  $60^\circ$   
(B)  $120^\circ$   
(C)  $180^\circ$   
(D)  $300^\circ$

**123.** The ratio of two numbers  $A$  and  $B$  is  $3:2$ . If we decrease 60 from  $A$  and increase 60 to  $B$ , then the ratio of  $A$  and  $B$  is  $18:17$ . The original value of  $A$  is

(A) 440  
(B) 460  
(C) 450  
(D) 420

**124.** The number  $\pi$  is

(A) a fraction  
(B) a recurring decimal  
(C) a rational number  
(D) an irrational number

**125.** A number when increased by 12% gives 224. The number is

(A) 200  
(B) 210  
(C) 180  
(D) 220

**126.** When the area and the circumference of the circle are numerically equal, then the radius of the circle is equal to

(A) 1 unit  
(B) 2 units  
(C) 3 units  
(D) 4 units

**127.** A bicycle wheel makes 1000 revolutions in moving 88000 m. The diameter of the wheel is (Take  $\pi = \frac{22}{7}$ )

(A) 14 m  
(B) 24 m  
(C) 28 m  
(D) 40 m

**128.** If  $k$ ,  $2k-1$  and  $k+4$  are consecutive terms of an AP, then the value of  $k$  is

(A) -2  
(B) 3  
(C) -3  
(D) 6

**129.** If  $0 < x < 1$ , which of the following is greatest?

(A)  $x$   
 (B)  $x^2$   
 (C)  $\frac{1}{x}$   
 (D)  $\frac{1}{x^2}$

**130.** If  $p$  and  $q$  are relatively prime, then their HCF is

(A)  $pq$   
 (B)  $p$   
 (C)  $q$   
 (D) 1

**131.** If the length of the line segment joining the origin from the point  $P(x, 0)$  is 10, then the value of  $x$  is

(A)  $\pm 6$   
 (B)  $\pm 7$   
 (C)  $\pm 10$   
 (D)  $\pm 8$

**132.** If the difference between 62% and 80% of a number is 198, then the difference between 92% and 56% of the number will be

(A) 360  
 (B) 396  
 (C) 498  
 (D) 560

**133.** If the height of a vertical tower is 20 m, the length of its shadow when the sun's altitude is  $45^\circ$  is

(A)  $20\sqrt{2}$  m  
 (B)  $\frac{20}{\sqrt{2}}$  m  
 (C) 20 m  
 (D) 40 m

**134.** The vertical pole 6 m high and the length of its shadow is  $6\sqrt{3}$  m. Then the angle of elevation of the sun is

(A)  $30^\circ$   
 (B)  $45^\circ$   
 (C)  $60^\circ$   
 (D)  $90^\circ$

**135.** A sector is cut from a circle of radius 21 cm. The sector angle is  $150^\circ$ . Then the length of its arc is

(A) 27.5 cm  
 (B) 110 cm  
 (C) 55 cm  
 (D) 60 cm

**136.** A man riding his bicycle covers 150 metres in 25 seconds. What is his speed in km per hour?

(A) 20  
 (B) 21.6  
 (C) 23.5  
 (D) 25

137. The product of a person's age three years ago and his age seven years later is 56. How old is he presently?

- (A) 5 years
- (B) 7 years
- (C) 10 years
- (D) 12 years

138. If 30 labourers working 7 hours a day can finish a piece of work in 18 days, how many labourers are needed to finish the same work in 30 days if they work 6 hours a day?

- (A) 21
- (B) 24
- (C) 25
- (D) 28

139. The cost price of an article is ₹ 7,840. What should be the selling price (in ₹) of the article so that there is a profit of 7%?

- (A) ₹ 8,000
- (B) ₹ 8,300
- (C) ₹ 8,388.80
- (D) ₹ 8,500.50

140. A game of chance consists of spinning an arrow which comes to rest to point of the number 1, 2, 3, 4, 5, 6, 7, 8 and these are the likely outcomes. The probability that it will point to number greater than 2 is

- (A)  $\frac{2}{3}$
- (B)  $\frac{1}{8}$
- (C)  $\frac{3}{4}$
- (D)  $\frac{1}{2}$

141. The trigonometric identity of

$$\frac{1}{1 + \tan^2 \theta} + \frac{1}{1 + \cot^2 \theta}$$

is

- (A) 1
- (B) 2
- (C) 0
- (D) -1

142. The area of a rectangular field is 2100 sq. metres. If the field is 60 metres long, what is its perimeter (in metre)?

- (A) 190
- (B) 210
- (C) 240
- (D) 300

143. If  $\cos \theta = \sin \theta$ , then the value of  $\theta$  is

- (A)  $30^\circ$
- (B)  $45^\circ$
- (C)  $60^\circ$
- (D)  $90^\circ$

144. The value of  $x$  in the equation  $2\cos(3x) = 1$  is

- (A)  $10^\circ$
- (B)  $20^\circ$
- (C)  $15^\circ$
- (D)  $45^\circ$

145. Two poles of heights 13 m and 7 m respectively, stand vertically on a distance of 8 m from each other. The distance between their tops (in m) is

- (A) 8
- (B) 9
- (C) 10
- (D) 11

146. Corresponding sides of two similar triangles are in the ratio of 4 : 9. Areas of these triangles are in the ratio

- (A) 2 : 3
- (B) 4 : 9
- (C) 16 : 81
- (D) 9 : 4

147. The ratio 5 : 4 expressed as a percent equals

- (A) 12.5%
- (B) 40%
- (C) 80%
- (D) 125%

148. If the sum and the product of the roots of the equation

$$kx^2 + 6x + 4k = 0$$

are equal, then the value of  $k$  is

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

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

- (A) 87
- (B) 1
- (C) 174
- (D) 2

150. The value of  $\left(\frac{9^2 \times 18^4}{3^{16}}\right)$  is

- (A)  $\frac{3}{2}$
- (B)  $\frac{4}{9}$
- (C)  $\frac{16}{81}$
- (D)  $\frac{32}{243}$