

24/HV/M-2023-26

Booklet Series

Candidate's Roll Number

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Serial No.

Question Booklet

LANGUAGE, GENERAL STUDIES AND COMPUTER SCIENCE

Time Allowed : 2:30 Hours

Maximum Marks : 150

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

IMPORTANT INSTRUCTIONS

1. This Question Booklet is divided into three Parts—Part-I, Part-II and Part-III. Part-I contains questions of **Language (Qualifying)**, Part-II contains questions of **General Studies** and Part-III contains questions of **Computer Science**.
2. **Part-I** consists of Question Nos. **1 to 30**, **Part-II** consists of Question Nos. **31 to 70** and **Part-III** consists of Question Nos. **71 to 150**. The questions and their responses are printed in English and Hindi versions both of Part-II and Part-III.
3. **All** questions carry equal marks.
4. **Immediately after commencement of the examination, you should check up your Question Booklet and ensure that the Question Booklet Series is printed on the top right-hand corner of the Booklet. Please check that the Booklet contains 48 printed pages including two pages (Page Nos. 46 & 47) for Rough Work and no page or question is missing or unprinted or torn or repeated. If you find any defect in this Booklet, get it replaced immediately by a complete Booklet of the same series.**
5. You must write your Roll Number in the space provided on the top of this page. Do not write anything else on the Question Booklet.
6. An Answer Sheet will be supplied to you separately by the Invigilator to mark the answers. **You must write your Name and other particulars in the space provided on Page-1 of the Answer Sheet provided, failing which your Answer Sheet will not be evaluated.**
7. You should encode your **Roll Number** and the **Question Booklet Series A, B, C or D** as it is printed on the top right-hand corner of the Question Booklet with Black/Blue ink ballpoint pen in the space provided on **Page-2** of your Answer Sheet. **If you do not encode or fail to encode the correct series of your Question Booklet, your Answer Sheet will not be evaluated correctly.**
8. Each question comprises of **five** responses—(A), (B), (C), (D) and (E). You are to select **ONLY ONE** correct response and mark it in your Answer Sheet. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
9. In the Answer Sheet, there are **five** circles—(A), (B), (C), (D) and (E) against each question. To answer the questions, you are to mark with Black/Blue ink ballpoint pen **ONLY ONE** circle of your choice for each question. Select only one response for each question and mark it in your Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. **Use Black/Blue ink ballpoint pen only to mark the answer in the Answer Sheet. Any erasure or change is not allowed.**
10. You should not remove or tear off any sheet from the Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the examination. **After the examination has concluded, you must hand over your Answer Sheet to the Invigilator.** Thereafter, you are permitted to take away the Question Booklet with you.
11. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.
12. Candidates must assure before leaving the Examination Hall that their Answer Sheets will be kept in Self Adhesive LDPE Bag and completely packed/sealed in their presence.

ध्यान दें : अनुदेशों का हिन्दी रूपान्तर इस पुस्तिका के अन्तिम पृष्ठ पर छपा है।

PART—I
(LANGUAGE)

Directions (Q. Nos. 1 and 2) : Fill in the blanks with suitable articles like 'a', 'an' and 'the' :

1. There are 30 or 31 days in _____ month.
(A) the
(B) a
(C) an
(D) More than one of the above
(E) None of the above
2. My father is _____ engineer in the Water Works Department.
(A) the
(B) an
(C) a
(D) More than one of the above
(E) None of the above
3. Which of the following is a part of bedroom?
(A) Pillow
(B) Table lamp
(C) Curtains
(D) More than one of the above
(E) None of the above
4. Which of the following is a part of a room?
(A) Window
(B) Ceiling
(C) Floor
(D) More than one of the above
(E) None of the above
5. Rainy season comes before
(A) winter
(B) spring
(C) summer
(D) More than one of the above
(E) None of the above
6. The eighth month of the year is
(A) July
(B) September
(C) October
(D) More than one of the above
(E) None of the above
7. Sister-in-law is
(A) husband's sister
(B) wife's sister
(C) brother's wife
(D) More than one of the above
(E) None of the above
8. Cousins are
(A) maternal
(B) paternal
(C) siblings
(D) More than one of the above
(E) None of the above



9. 'चाँदी' शब्द में कौन-सी संज्ञा है?
- (A) द्रव्यवाचक संज्ञा
(B) जातिवाचक संज्ञा
(C) भाववाचक संज्ञा
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
10. निम्नलिखित शब्दों में से कौन-सा 'एकवचन' है?
- (A) हस्ताक्षर
(B) छाया
(C) आँसू
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
11. हिन्दी शब्दकोश में 'क्ष' का क्रम किस वर्ण के बाद आता है?
- (A) त्र के पश्चात्
(B) ज्ञ के पश्चात्
(C) क के पश्चात्
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
12. "जिसकी यह पुस्तक है, उसे लौटा दो।" इस वाक्य में कौन-सा सर्वनाम है?
- (A) निश्चयवाचक
(B) संबंधवाचक
(C) पुरुषवाचक
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
13. विशेषण का प्रमुख भेद कौन-सा नहीं है?
- (A) असार्वनामिक विशेषण
(B) गुणवाचक विशेषण
(C) परिमाणवाचक विशेषण
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
14. निम्नलिखित में से कौन-सा अशुद्ध शब्द है?
- (A) वीभत्स
(B) लगान
(C) आगामी
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
15. निम्नलिखित में से कौन-सा शुद्ध वर्तनी वाला शब्द है?
- (A) क्षत्रिय
(B) क्षत्रीय
(C) उज्ज्वल
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं
16. निम्नलिखित में से कौन-सा 'तत्सम' शब्द है?
- (A) घर
(B) स्नेह
(C) छेद
(D) उपर्युक्त में से एक से अधिक
(E) उपर्युक्त में से कोई नहीं



17. निम्नलिखित में से कौन-सा विदेशी शब्द है?

- (A) बाघ
- (B) परीक्षा
- (C) चाय
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

18. रचना के आधार पर 'जिन शब्दों के खंड सार्थक न हों' उन्हें कौन-सा शब्द कहा जाता है?

- (A) रूढ़
- (B) यौगिक
- (C) योगरूढ़
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

19. निम्नलिखित में से किस वाक्य में 'अकर्मक क्रिया' है?

- (A) उसे मत लजाओ।
- (B) बालिका लजाती है।
- (C) सेवक नदी से गागर भरता है।
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

20. निम्नलिखित में से कौन-सा देशज शब्द है?

- (A) आवारा
- (B) भौरा
- (C) परवल
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

21. निम्नलिखित में से कौन-सा शब्द रूढ़ शब्द नहीं है?

- (A) लकड़ी
- (B) जलधारा
- (C) महर्षि
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

22. 'खारिज' किस भाषा का शब्द है?

- (A) अरबी
- (B) फारसी
- (C) तुर्की
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

23. अशुद्ध और शुद्ध वर्तनी का कौन-सा युग्म सही नहीं है?

- (A) कोमलांगिनी—कोमलांगी
- (B) सुश्रूषा—शुश्रूषा
- (C) माहात्म—महात्म्य
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

24. "‘उसका भविष्य उज्ज्वल है।’" इस वाक्य में रेखांकित शब्द की शुद्ध वर्तनी कौन-सी है?

- (A) उज्ज्वल
- (B) उज्वल
- (C) उज्जवल
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं



25. एक छोटी आकृति का चमकीला वर्ग, जो स्क्रीन पर किसी चिह्न की स्थिति को स्पष्ट करता है, उसे क्या कहते हैं?

- (A) करसर
- (B) चिप
- (C) कमांड
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

26. 'कुरुक्षेत्र' के लेखक का क्या नाम है?

- (A) हरिऔध
- (B) श्रीधर पाठक
- (C) मैथिलीशरण गुप्त
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

27. "जसोदा हरि पालनै झुलावै।
हलरावै दुलराइ मल्हावै, जोइ-सोइ कलु गावै॥"
उक्त काव्य-पंक्तियों में कौन-सा रस है?

- (A) शृंगार
- (B) वीर
- (C) वात्सल्य
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

28. हिन्दी भाषा के उद्भव का काल माना जाता है

- (A) 500 ई० पू०
- (B) 500 ई०
- (C) 1000 ई०
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

29. भारतीय काव्यशास्त्र में क्षमाशील, गम्भीर, स्थिरचित्त, स्वाभिमानी एवं दृढ़ प्रतिज्ञ नायक को कहा गया है

- (A) धीरललित
- (B) धीरोदात्त
- (C) धीर प्रशांत
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं

30. जिन शब्दों पर लिंग, वचन, कारक का कोई प्रभाव न पड़े, वे कहलाते हैं

- (A) व्यय
- (B) विकारी
- (C) अविकारी
- (D) उपर्युक्त में से एक से अधिक
- (E) उपर्युक्त में से कोई नहीं



PART—II
(GENERAL STUDIES)

- 31.** The floor of a rectangular hall has a perimeter 250 meters. If the cost of painting the four walls at the rate of ₹ 10 per (meter)² is ₹ 15,000, then the height of the hall is
- (A) 7 meters
(B) 16 meters
(C) 6 meters
(D) More than one of the above
(E) None of the above
- 32.** Which of the following statements is **not** true?
- (A) Every natural number is a whole number.
(B) Every integer is a whole number.
(C) Every natural number is an integer number.
(D) More than one of the above
(E) None of the above
- 33.** The average of 7 consecutive numbers is 20. The largest of these numbers is
- (A) 20
(B) 21
(C) 23
(D) More than one of the above
(E) None of the above
- 34.** The equation $ax^2 + bx + c = 0$ has two distinct real roots, if
- (A) $b^2 - 4ac < 0$
(B) $b^2 - 4ac > 0$
(C) $b^2 - 4ac = 0$
(D) More than one of the above
(E) None of the above
- 35.** Mohan can do a bit of work in 25 days which can be completed by Sohan in 20 days. Both together labour for 5 days and afterward Mohan leaves off. How long will Sohan take to complete the remaining work?
- (A) 20 days
(B) 11 days
(C) 14 days
(D) More than one of the above
(E) None of the above



- 36.** If $X = a^2 - b^2$, $Y = 30$ and $a + b = 15$, then
- (A) X is lesser than Y if $a = b$
 - (B) X is greater than Y if $a > b$
 - (C) Y is greater than X if $a = b$
 - (D) More than one of the above
 - (E) None of the above
- 37.** The probability of a non leap year selected at random will contain 53 Sundays is
- (A) $\frac{1}{7}$
 - (B) $\frac{2}{53}$
 - (C) $\frac{1}{53}$
 - (D) More than one of the above
 - (E) None of the above
- 38.** If $7^{12x+6} = 49^{3x+12}$, then the value of x is
- (A) 3
 - (B) 4
 - (C) 7
 - (D) More than one of the above
 - (E) None of the above
- 39.** Myopia is a disease in which a person cannot see
- (A) distant objects clearly
 - (B) nearby objects clearly
 - (C) nearby as well as distant objects clearly
 - (D) More than one of the above
 - (E) None of the above
- 40.** The term 'heredity' chiefly refers to
- (A) anatomy
 - (B) meiosis
 - (C) genetics
 - (D) More than one of the above
 - (E) None of the above
- 41.** The cans in which food is packed are coated with tin and not zinc because
- (A) tin is more reactive than zinc
 - (B) zinc is more reactive than tin
 - (C) zinc is costlier than tin
 - (D) More than one of the above
 - (E) None of the above



42. The process in which atmospheric carbon dioxide is converted into carbohydrates during photosynthesis is

- (A) oxidation
- (B) reduction
- (C) hydrolysis
- (D) More than one of the above
- (E) None of the above

43. The quality of a printer is determined as

- (A) words per inch
- (B) strike per inch
- (C) dots per inch
- (D) More than one of the above
- (E) None of the above

44. Trachoma disease is related to

- (A) lungs
- (B) ears
- (C) eyes
- (D) More than one of the above
- (E) None of the above

45. Which of the following makes use of Newton's third law of motion?

- (A) Archery
- (B) Space rocket
- (C) Venturimeter
- (D) More than one of the above
- (E) None of the above

46. Particles which can be added to the nucleus of an atom without changing its chemical properties are

- (A) neutrons
- (B) electrons
- (C) protons
- (D) More than one of the above
- (E) None of the above



47. Before Elon Musk announced change of the signature Blue Bird logo to Sign 'X' logo, who is regarded as the creator of Twitter's iconic Bird in its final version in 2012?
- (A) Jack Dorsey
 - (B) Martin Grasser
 - (C) Noah Glass
 - (D) More than one of the above
 - (E) None of the above
48. Who is the Director of the famous film *Oppenheimer*, a film about high-concept science, released this year?
- (A) Christopher Nolan
 - (B) Guy Ritchie
 - (C) Laura McGann
 - (D) More than one of the above
 - (E) None of the above
49. Which one of the following has pulled out from hosting the 2026 edition of Commonwealth Games due to huge estimated expenditure on its organization?
- (A) London, UK
 - (B) Kuala Lumpur, Malaysia
 - (C) Victoria, Australia
 - (D) More than one of the above
 - (E) None of the above
50. What is the full form of INDIA, a recently formed alliance of opposition political parties?
- (A) Indian National Developmental Inclusive Alliance
 - (B) Indian National Development for Improvement Alliance
 - (C) Indian National Developmental Inclusive Association
 - (D) More than one of the above
 - (E) None of the above
51. What message was sent by Chandrayaan-2 lunar orbiter to Chandrayaan-3's lander module when it established contact with it in August 2023?
- (A) "Welcome home"
 - (B) "Chalo chand ke paar chalein"
 - (C) "Welcome, buddy"
 - (D) More than one of the above
 - (E) None of the above



52. Name the former President of China who crushed the pro-democracy movement in 1989.

- (A) Mao Tse Tung
- (B) Yang Shangkun
- (C) Jiang Zemin
- (D) More than one of the above
- (E) None of the above

53. Who has elected for the second term as Ireland's Prime Minister?

- (A) Sanna Marin
- (B) Robert Abela
- (C) Leo Varadkar
- (D) More than one of the above
- (E) None of the above

54. African Union was made a permanent member in the G-20 Summit held in India. Who is the Chairman of the African Union?

- (A) Azali Assoumani
- (B) Justin Trudeau
- (C) Ursula von der Leyen
- (D) More than one of the above
- (E) None of the above

55. As per geographical area, arrange the following physiographic units of India in ascending order

1. Central highlands
2. Great plains
3. Coastal plains
4. Northern Mountains

Select the correct answer using the codes given below.

- (A) 3, 1, 2, 4
- (B) 1, 2, 3, 4
- (C) 2, 4, 1, 3
- (D) More than one of the above
- (E) None of the above

56. Arrange the following ranges from North to South in sequence :

1. Ladakh
2. Karakoram
3. Pir Panjal
4. Zaskar

Select the correct answer using the codes given below.

- (A) 1, 3, 2, 4
- (B) 2, 1, 4, 3
- (C) 3, 4, 1, 2
- (D) More than one of the above
- (E) None of the above



57. During the monsoon season in India, most of the cyclones have their origin

- (A) between 8° N and 13° N latitude
- (B) between 10° N and 15° N latitude
- (C) between 16° N and 21° N latitude
- (D) More than one of the above
- (E) None of the above

58. Which of the following areas is **not** landslide-prone area?

- (A) Western Ghats
- (B) Eastern Ghats
- (C) Himalayan Regions
- (D) More than one of the above
- (E) None of the above

59. Which of the following coasts of India is most affected by violent tropical cyclones?

- (A) Malabar
- (B) Coromandel
- (C) Konkan
- (D) More than one of the above
- (E) None of the above

60. When running water cuts through clayey soils and makes deep channels, they lead to

- (A) gully erosion
- (B) sheet erosion
- (C) deforestation
- (D) More than one of the above
- (E) None of the above

61. Which of the following receives heavy rainfall in the month of October and November?

- (A) Hills of Garo, Khasi and Jaintia
- (B) Coromandel Coasts
- (C) Plateau of Chota Nagpur
- (D) More than one of the above
- (E) None of the above

62. Cultivation of fruits and vegetables is called

- (A) floriculture
- (B) agriculture
- (C) horticulture
- (D) More than one of the above
- (E) None of the above



- 63.** Who provided leadership in the districts of Patna, Ara and Shahabad during the Revolt of 1857 in Bihar?
- (A) Raj Kumar Shukla
(B) Namdar Khan
(C) Kunwar Singh
(D) More than one of the above
(E) None of the above
- 64.** The Partition of Bengal was made effective on
- (A) 14 October, 1905
(B) 15 October, 1905
(C) 16 October, 1905
(D) More than one of the above
(E) None of the above
- 65.** The Quit India Resolution was adopted by the Congress in Bombay on
- (A) 7 August, 1942
(B) 8 August, 1942
(C) 9 August, 1942
(D) More than one of the above
(E) None of the above
- 66.** The British ruled India for a long period due to the
- (A) liberal policies of the Congress
(B) imprisonment of Indian leaders
(C) policy of Divide and Rule
(D) More than one of the above
(E) None of the above
- 67.** Queen Victoria's Proclamation was issued on which of the following dates?
- (A) 1 November, 1857
(B) 27 March, 1858
(C) 1 November, 1858
(D) More than one of the above
(E) None of the above
- 68.** Which of the following statements is/are correct?
- (A) Raja Rammohan Roy was the pioneer of modern education.
(B) Swami Dayanand proclaimed India for Indians.
(C) Vivekananda participated in the Parliament of World Religions.
(D) More than one of the above
(E) None of the above
- 69.** Who among the following became India's unofficial Ambassador to England?
- (A) Surendranath Banerjee
(B) Dadabhai Naoroji
(C) Swami Vivekananda
(D) More than one of the above
(E) None of the above
- 70.** Who described the Government of India Act, 1935 as a 'Charter of Slavery'?
- (A) Mahatma Gandhi
(B) Netaji Subhas Chandra Bose
(C) Maulana Hasrat Mohani
(D) More than one of the above
(E) None of the above



PART—III
(COMPUTER SCIENCE)

- 71.** The brain of computer is
- (A) CPU
 - (B) memory
 - (C) I/O device
 - (D) More than one of the above
 - (E) None of the above
- 72.** Intel 8085 microprocessor is of _____ generation.
- (A) first
 - (B) second
 - (C) third
 - (D) More than one of the above
 - (E) None of the above
- 73.** The maximum memory size of third generation microprocessor is
- (A) 4 GB
 - (B) 16 MB
 - (C) 16 GB
 - (D) More than one of the above
 - (E) None of the above
- 74.** CPU on a single chip is called
- (A) microprocessor
 - (B) microcontroller
 - (C) solid-state device
 - (D) More than one of the above
 - (E) None of the above
- 75.** Computer on a single chip is called
- (A) microcontroller
 - (B) microprocessor
 - (C) assembler
 - (D) More than one of the above
 - (E) None of the above
- 76.** Which one of the following is used for playing video games?
- (A) Mouse
 - (B) Trackball
 - (C) Joystick
 - (D) More than one of the above
 - (E) None of the above



77. _____ is used to store softwares that **does not** update.

- (A) SRAM
- (B) DRAM
- (C) ROM
- (D) More than one of the above
- (E) None of the above

78. Which of the following contains a laser?

- (A) CD Drive
- (B) RAM
- (C) Hard Disk Drive
- (D) More than one of the above
- (E) None of the above

79. A computer program that converts an assembly language program into equivalent machine language program is called

- (A) compiler
- (B) assembler
- (C) linker
- (D) More than one of the above
- (E) None of the above

80. A computer program that converts a high-level language program into an equivalent machine language program is called

- (A) assembler
- (B) compiler
- (C) loader
- (D) More than one of the above
- (E) None of the above

81. A computer program that translates high-level language program into machine language program statement-by-statement is called

- (A) compiler
- (B) loader
- (C) interpreter
- (D) More than one of the above
- (E) None of the above

82. Which of the following is **not** an operating system?

- (A) Linux
- (B) Windows
- (C) Oracle
- (D) More than one of the above
- (E) None of the above



83. A software that runs on a computer hardware and serves as a platform for other softwares to run is called
- (A) system software
 - (B) operating system
 - (C) application software
 - (D) More than one of the above
 - (E) None of the above
84. Which of the following is **not** a system tool?
- (A) Scandisk
 - (B) Format
 - (C) Folder
 - (D) More than one of the above
 - (E) None of the above
85. The key/keys used to delete a file without allowing it to store in recycle bin is/are
- (A) Delete
 - (B) Shift + Delete
 - (C) Ctrl + Delete
 - (D) More than one of the above
 - (E) None of the above
86. The three main components of a digital computer system are
- (A) memory, I/O, DMA
 - (B) ALU, CPU, memory
 - (C) memory, CPU, I/O
 - (D) More than one of the above
 - (E) None of the above
87. FFFF will be the last memory location in a memory of size
- (A) 16K
 - (B) 32K
 - (C) 64K
 - (D) More than one of the above
 - (E) None of the above
88. The cost of storing a bit is minimum in
- (A) cache
 - (B) register
 - (C) magnetic tape
 - (D) More than one of the above
 - (E) None of the above



- 89.** Tera means
- (A) 2^{20}
 - (B) 2^{40}
 - (C) 2^{30}
 - (D) More than one of the above
 - (E) None of the above
- 90.** Which of the following system softwares resides always in main memory?
- (A) Loader
 - (B) Linker
 - (C) Assembler
 - (D) More than one of the above
 - (E) None of the above
- 91.** The postfix expression equivalent of the prefix expression $* + ab - cd$ is
- (A) $ab + cd - *$
 - (B) $abcd + - *$
 - (C) $ab + cd * -$
 - (D) More than one of the above
 - (E) None of the above
- 92.** Which data structure is used to convert infix notation to postfix notation?
- (A) Stack
 - (B) Queue
 - (C) Tree
 - (D) More than one of the above
 - (E) None of the above
- 93.** The data structure in which data are added at the rear and deleted from front is called
- (A) stack
 - (B) queue
 - (C) linked list
 - (D) More than one of the above
 - (E) None of the above
- 94.** Queue data structure uses
- (A) FIFO
 - (B) LIFO
 - (C) LILO
 - (D) More than one of the above
 - (E) None of the above



95. Stack data structure uses

- (A) FIFO
- (B) LIFO
- (C) LILO
- (D) More than one of the above
- (E) None of the above

96. A constructor is called whenever

- (A) an object is created
- (B) a class is created
- (C) a class is declared
- (D) More than one of the above
- (E) None of the above

97. All members of a structure in C++ are _____ by default.

- (A) public
- (B) private
- (C) protected
- (D) More than one of the above
- (E) None of the above

98. In C++, all members of a class are _____ by default.

- (A) public
- (B) private
- (C) protected
- (D) More than one of the above
- (E) None of the above

99. In C++, what does a class hold?

- (A) Array
- (B) Data
- (C) Data and functions
- (D) More than one of the above
- (E) None of the above

100. The number of access specifiers in class of C++ is

- (A) 2
- (B) 3
- (C) 4
- (D) More than one of the above
- (E) None of the above



101. Which of the following is used to define the members of a class externally in C++?

- (A) :
- (B) ::
- (C) #
- (D) More than one of the above
- (E) None of the above

102. Which concept of C++ is used to reuse the written code?

- (A) Polymorphism
- (B) Inheritance
- (C) Encapsulation
- (D) More than one of the above
- (E) None of the above

103. What will be the output of the following program fragment?

```
int i = 10;
void main( )
{ int i = 20;
  {
    int i = 30;
    printf("%d, %d", i, : :i);
  }
}
```

- (A) 30,10
- (B) 30,20
- (C) 20,30
- (D) More than one of the above
- (E) None of the above

104. Choose the correct statement about inline function in C++.

- (A) It speeds up the execution.
- (B) It slows down the execution.
- (C) It decreases the code size.
- (D) More than one of the above
- (E) None of the above

105. What will be the output of the following?

```
int a = 5;
cout <<"FIRST" <<(a<<2) <<"SECOND";
```

- (A) FIRST 52 SECOND
- (B) FIRST 20 SECOND
- (C) SECOND 25 FIRST
- (D) More than one of the above
- (E) None of the above

106. cout in C++ stands for

- (A) class output
- (B) character output
- (C) common output
- (D) More than one of the above
- (E) None of the above



107. Group of instructions that directs a computer is called

- (A) memory
- (B) storage
- (C) program
- (D) More than one of the above
- (E) None of the above

108. A computer program consists of

- (A) system flowchart
- (B) program flowchart
- (C) algorithms written in computer language
- (D) More than one of the above
- (E) None of the above

109. The topology with highest reliability is

- (A) star
- (B) ring
- (C) mesh
- (D) More than one of the above
- (E) None of the above

110. End-to-end connectivity is provided from host-to-host in

- (A) network layer
- (B) transport layer
- (C) session layer
- (D) More than one of the above
- (E) None of the above

111. The _____ measures the number of lost or garbled messages as a fraction of the total sent in the sampling period.

- (A) residual error rate
- (B) transfer failure probability
- (C) connection release failure probability
- (D) More than one of the above
- (E) None of the above

112. A high-speed communication equipment typically would **not** be needed for

- (A) e-mail
- (B) transferring large volume of data
- (C) supporting communication between nodes in a LAN
- (D) More than one of the above
- (E) None of the above



- 113.** A ____ topology uses a single connection to connect all devices together.
- (A) bus
 - (B) star
 - (C) ring
 - (D) More than one of the above
 - (E) None of the above
- 114.** A ____ is used to connect networking devices that are in a very close geographic area such as a floor of a building.
- (A) WAN
 - (B) LAN
 - (C) MAN
 - (D) More than one of the above
 - (E) None of the above
- 115.** In computer network, what is the size of IP address in IPv4?
- (A) 8 bits
 - (B) 16 bits
 - (C) 32 bits
 - (D) More than one of the above
 - (E) None of the above
- 116.** What is the size of MAC address in computer network?
- (A) 32 bits
 - (B) 16 bits
 - (C) 48 bits
 - (D) More than one of the above
 - (E) None of the above
- 117.** What is the name given to the act of gaining illegal entry to computer files through remote terminals or microcomputers?
- (A) Hacking
 - (B) Decoding
 - (C) Beating the system
 - (D) More than one of the above
 - (E) None of the above
- 118.** A computer virus is a software program which has the essential ability to
- (A) damage data
 - (B) damage program
 - (C) clone itself
 - (D) More than one of the above
 - (E) None of the above



119. Copying computer program/software without the permission of its authors is called

- (A) larceny
- (B) software piracy
- (C) highway robbery
- (D) More than one of the above
- (E) None of the above

120. A hard disk becomes totally inaccessible when a computer virus corrupts

- (A) partition table
- (B) file allocation table
- (C) root directory
- (D) More than one of the above
- (E) None of the above

121. An attribute of one table matching the primary key of another table is called as

- (A) foreign key
- (B) secondary key
- (C) candidate key
- (D) More than one of the above
- (E) None of the above

122. If every non-key attribute is fully dependent on the primary key, then the relation will be in

- (A) First Normal Form (1NF)
- (B) Second Normal Form (2NF)
- (C) Third Normal Form (3NF)
- (D) More than one of the above
- (E) None of the above

123. In relational database, the data type of values in each column of a table is called

- (A) attribute
- (B) domain
- (C) relation
- (D) More than one of the above
- (E) None of the above

124. In relational database, the number of attributes of a relation is called the ____ of relation.

- (A) domain
- (B) degree
- (C) cardinality
- (D) More than one of the above
- (E) None of the above



125. Which of the following SQL commands is used to change the attribute values of one or more rows in a table?

- (A) Update
- (B) Insert
- (C) Alter
- (D) More than one of the above
- (E) None of the above

126. To retrieve information from a database, which of the following SQL commands is used?

- (A) Display
- (B) Show
- (C) Select
- (D) More than one of the above
- (E) None of the above

127. Which of the following SQL commands is used to modify the structure of a table?

- (A) Alter
- (B) Modify
- (C) Update
- (D) More than one of the above
- (E) None of the above

128. Which of the following SQL keywords is used to display data from a table based on certain pattern?

- (A) IN
- (B) LIKE
- (C) BETWEEN
- (D) More than one of the above
- (E) None of the above

129. Degree and cardinality of a relation in relational database are 4 and 3 respectively. If 3 attributes and 4 tuples are added to the relation, what will be its new cardinality and degree?

- (A) 7, 6
- (B) 7, 7
- (C) 8, 6
- (D) More than one of the above
- (E) None of the above

130. Which SQL command is used to remove a table from a database?

- (A) DELETE
- (B) DROP
- (C) ERASE
- (D) More than one of the above
- (E) None of the above



131. The register that contains the address of the next instruction to be executed is called

- (A) program counter
- (B) instruction register
- (C) accumulator
- (D) More than one of the above
- (E) None of the above

132. The register that contains the instruction that is being executed is called

- (A) accumulator
- (B) program counter
- (C) instruction register
- (D) More than one of the above
- (E) None of the above

133. The register which holds the address of location of memory to and from which data are to be transferred is known as

- (A) index register
- (B) memory address register
- (C) memory buffer register
- (D) More than one of the above
- (E) None of the above

134. A storage device used to compensate the difference in flow of data is known as

- (A) main memory
- (B) auxiliary memory
- (C) buffer
- (D) More than one of the above
- (E) None of the above

135. Memory in which any location can be reached in a fixed amount of time after specifying its address is called

- (A) Sequential Access Memory
- (B) Random Access Memory
- (C) Secondary Memory
- (D) More than one of the above
- (E) None of the above

136. If $(X567)_8 + (2YX5)_8 = (71YX)_8$, then the values of X and Y are

- (A) 4, 3
- (B) 3, 3
- (C) 4, 4
- (D) More than one of the above
- (E) None of the above



137. The range of the numbers that can be represented in 8-bit using 2's complement representation is

- (A) -128 to +128
- (B) -127 to +127
- (C) -128 to +127
- (D) More than one of the above
- (E) None of the above

138. If $(11X1Y)_8 = (12C9)_{16}$, then the values of X and Y are

- (A) 5, 1
- (B) 5, 7
- (C) 3, 1
- (D) More than one of the above
- (E) None of the above

139. Which of the following 4-bit numbers equals its 2's complement?

- (A) 1010
- (B) 0101
- (C) 1000
- (D) More than one of the above
- (E) None of the above

140. The number of 1's in the binary representation of the value of the decimal expression of

$$16^3 \times 9 + 16^2 \times 7 + 16 \times 5 + 3$$

is

- (A) 15
- (B) 9
- (C) 12
- (D) More than one of the above
- (E) None of the above

141. The Boolean expression $x + x'y$ equals

- (A) $x + y$
- (B) $x + xy$
- (C) $y + yx$
- (D) More than one of the above
- (E) None of the above

142. The Boolean expression

$$AB + AB' + A'C + AC$$

is independent of Boolean variable

- (A) A
- (B) B
- (C) C
- (D) More than one of the above
- (E) None of the above

143. The Boolean expression $A + BC$ equals

- (A) $(A' + B)(A' + C)$
- (B) $(A + B)(A' + C)$
- (C) $(A + B)(A + C)$
- (D) More than one of the above
- (E) None of the above



- 144.** The Boolean expression $x + xy$ will be equal to
- (A) x
 - (B) y
 - (C) $x + y$
 - (D) More than one of the above
 - (E) None of the above
- 145.** The Boolean expression $x(x + y)$ is equal to
- (A) x
 - (B) y
 - (C) xy
 - (D) More than one of the above
 - (E) None of the above
- 146.** If x is a Boolean variable, then $((x')')'$ will be
- (A) x'
 - (B) x
 - (C) $x + x'$
 - (D) More than one of the above
 - (E) None of the above
- 147.** In two-valued Boolean algebra, the maximum number of Boolean functions for two variables will be
- (A) 8
 - (B) 12
 - (C) 16
 - (D) More than one of the above
 - (E) None of the above
- 148.** Simplified Boolean function of Boolean function
- $$F = A'C + A'B + AB'C + BC$$
- is
- (A) $F = C + A'B$
 - (B) $F = A'B + B'C$
 - (C) $F = BC + A'B$
 - (D) More than one of the above
 - (E) None of the above
- 149.** Which of the following logic gates is called universal gate?
- (A) AND
 - (B) OR
 - (C) NAND
 - (D) More than one of the above
 - (E) None of the above
- 150.** The minimum number of NAND gates required to implement Boolean function $f = x'y + xy'$ is
- (A) 3
 - (B) 4
 - (C) 6
 - (D) More than one of the above
 - (E) None of the above

