1. What is PCR?
   (A) Plain Chain Reaction
   (B) Protein Carbyl Reaction
   (C) Paternal Choice Reaction
   (D) Polymerase Chain Reaction

2. What is studied in forensic palynology?
   (A) Pollens and spores
   (B) Soils
   (C) Dust
   (D) Fossilized microorganisms

3. What does the term 'forensic' mean?
   (A) pertaining to medicine
   (B) pertaining to death
   (C) pertaining to crime
   (D) pertaining to the law

4. A dust print is a print that
   (A) is created by dust patterns
   (B) has been adulterated with foreign matter
   (C) has an opaque appearance
   (D) None of these

5. What is the name given to the study of fingerprints?
   (A) Palynology
   (B) Entomology
   (C) Dactyloscopy
   (D) Trichology

6. What is the function of the ridges on our fingers which create fingerprints?
   (A) They help us to identify individual human beings
   (B) They provide protection for our touch receptors
   (C) They enable us to grasp objects
   (D) They provide insulation for the tissues under our skin

7. What causes fingerprints to be left behind when we touch things?
   (A) the moisture in the atmosphere
   (B) the smoothness of the surfaces we touch
   (C) the natural oils in the skin
   (D) the dust on the things we touch
8. What is the minimum number of matching points required to identify an unknown latent print?
   (A) 12  (B) 16  (C) 32  (D) There is no minimum

9. Who was responsible for starting the first national fingerprint register in America in the 1920s?
   (A) August Vollmer  (B) J. Edgar Hoover  (C) Calvin Coolidge  (D) Herbert Hoover

10. When two objects touch, there is a transfer of material from one to the other. This trace evidence is the basis of forensic science. What is the idea known as?
    (A) Locard's Principle  (B) Forensic Law  (C) Bertillon's Principle of Transference  (D) Murphy's Law of Contact

11. If you know what to look for, you can tell a male from a female skeleton. Which of the following statements is not true?
    (A) The female pelvis is usually deeper than the male pelvis  (B) The male skull is usually larger than the female skull
    (C) The female chin is usually more rounded than the male chin  (D) The male skull has a more prominent brow ridge

12. Forensic odontology involves the study of teeth. When old skeletons are found, the teeth are an important source of information. In such cases, which of the following statements is true?
    (A) Teeth can indicate a person's occupation and ethnic background  (B) Teeth are a good source of DNA for forensic analysis
    (C) Forensic scientists can usually tell the victim's age by their teeth  (D) All of these

13. What system of fingerprint classification is most widely used today?
    (A) the Edward system  (B) the Darwin system  (C) the Herschel system  (D) the Henry system

14. Which one of these is NOT a type of fingerprint found at the scene of the crime?
    (A) compound  (B) visible  (C) plastic  (D) latent
15. What is being analyzed when RFLP or mtDNA processes are being used?
   (A) DNA    (B) Fingerprints
   (C) Bones  (D) None of these

16. A triangular fingerprint pattern is called
   (A) Vertex    (B) Cone
   (C) Delta     (D) None of these

17. Which process of taking fingerprints involves the development of prints by using amino acids resulting from perspiration?
   (A) Anhydrin    (B) Cohydrin
   (C) Ferrohydrid (D) Ninhydrin

18. What does DNA stand for?
   (A) Deoxyribonucleic acid (B) Deribonucleic acid
   (C) Dexoynucleic acid    (D) None of these

19. The time of death can be calculated by various means. One is rigor mortis, Latin for 'the stiffness of death'. Another indication is livor mortis or lividity. What does this term refer to?
   (A) Gravitational pooling of blood
   (B) Cloudiness in the eyes
   (C) Degree of digestion of stomach contents
   (D) Relaxation of muscles subsequent to rigor mortis

20. DNA is the genetic material in our cells which controls heredity and plays a large role in determining our physical characteristics. Which of the following statements is NOT true?
   (A) Identical twins can have different fingerprints
   (B) Red blood cells are the best source of DNA
   (C) Only identical twins will have identical DNA
   (D) DNA can show a person's gender but not their age or race

21. The MXRF technique makes use of which of the following for imaging fingerprints?
   (A) Electron beams
   (B) X-Rays
   (C) Gamma Rays
   (D) Laser beams
22. The Chilka Lake Region is situated between the deltas of
   (A) Krishna and Kaveri  (B) Godavari and Krishna
   (C) Ganga and Mahanadi  (D) Mahanadi and Godavari

23. Which of the following countries is the largest rice producing nation in the world?
   (A) Australia  (B) USA
   (C) India  (D) China

24. Guwahati is situated on the bank of the river
   (A) Brahmaputra  (B) Teesta
   (C) Sone  (D) Hooghly

25. Mt Everest is situated in
   (A) Russia  (B) Nepal
   (C) Manipur  (D) Himachal Pradesh

26. With which set of the following countries has Arunachal Pradesh common border?
   (A) Bhutan, Bangladesh and China
   (B) Myanmar, Bangladesh and China
   (C) Bhutan, China and Myanmar
   (D) Bhutan, Bangladesh and Myanmar

27. Which among the following is not a Gallantry award?
   (A) Arjuna Chakra (B) Ashok Chakra
   (C) Param Vir Chakra (D) Shaurya Chakra

28. What is the official residence of the US President?
   (A) The Kremlin  (B) Elysee Palace
   (C) Buckingham Palace  (D) White House

29. Who among the following has not been a Chief Justice of India?
   (A) R. C. Lahoti  (B) G. B. Pattanaik
   (C) S. S. Gill  (D) V. N. Khare
30. Sachin is younger than Rahul by 7 years. If their ages are in the respective ratio of 7 : 9, how old is Sachin?
   (A) 16 years  (B) 18 years
   (C) 28 years  (D) $24\frac{1}{2}$ years

31. The present ages of three persons are in the proportion 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present respective ages (in years).
   (A) 8, 20, 28  (B) 16, 28, 36
   (C) 20, 35, 45  (D) None of these

32. The ratio between the length and the breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq.m.) is
   (A) 15360  (B) 153600
   (C) 30720  (D) 307200

33. An error 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is
   (A) 2%  (B) 2.02%
   (C) 4%  (D) 4.04%

34. The ratio between the perimeter and the breadth of a rectangle is 5 : 1. If the area of the rectangle is 216 sq.cm, what is the length of the rectangle?
   (A) 16 cm  (B) 18 cm
   (C) 24 cm  (D) Data inadequate

35. In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?
   (A) 6.25  (B) 6.5
   (C) 6.75  (D) 7

36. A family consists of two grandparents, two parents and three grandchildren. The average age of the grandparents is 67 years, that of the parents is 35 years and that of the grandchildren is 6 years. What is the average age of the family?
   (A) $28\frac{4}{7}$ years  (B) $31\frac{5}{7}$ years
   (C) $32\frac{1}{7}$ years  (D) None of these
37. What comes next?
5, 2, 7, 9, 16, 25, ______?
\(\sqrt{A}\) 41 (B) 45 (C) 48 (D) 52

38. What comes next?
7, 26, 63, 124, 215, 342, ______?
(A) 391 (B) 421 (C) 481 (D) 511

39. What comes next?
6, 18, 3, 21, 7, 56, ______?
(A) 8 (B) 9 (C) 63 (D) 64

40. Find the missing number :
4, 9, 25, ______, 121, 169, 289, 361
(A) 49 (B) 64 (C) 81 (D) 87

41. What comes next?
6, 13, 28, 59, ______?
(A) 111 (B) 113 (C) 114 (D) 122

42. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative :
cccbbaa ______ c
(A) acbc (B) baca (C) baba (D) acba

43. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative :
bca ______ aabc ______ a ______ caa
\(\sqrt{A}\) acab (B) bcbb (C) cbab (D) ccab

17 MSC007115
Read the given information carefully and answer Q Nos. 44 to 48. (i) There are five persons P, Q, R, S and T. One is a football player, one a chess player and one a hockey player. (ii) P and S are unmarried ladies and do not participate in any game. (iii) None of the ladies plays chess or football. (iv) There is a married couple in the group in which T is the husband. (v) Q is the brother of R and is neither a chess player nor a hockey player.

44. Who is the Football player?
   (A) P  (B) Q
   (C) R  (D) S

45. Who is the Hockey player?
   (A) P  (B) Q
   (C) R  (D) S

46. Who is the chess player?
   (A) Q  (B) R
   (C) S  (D) T

47. Who is the wife of T?
   (A) P  (B) Q
   (C) R  (D) S

48. The three ladies are
   (A) P, Q, R  (B) Q, R, S
   (C) P, Q, S  (D) P, R, S
49. The ALU (Arithmetic Logic Unit) of a computer normally contains a number of high speed storage elements called
   (A) semi-conductor memory  (B) registers
   (C) hard disks  (D) magnetic disks

50. The term “operating system” means
   (A) a set of programs which control computer working
   (B) the way computer operator works
   (C) conversion of high level language into machine code
   (D) the way a floppy disk drive operates

51. Card reader is an example of which of the following?
   (A) batch operating system  (B) multiprogramming
   (C) multi-tasking  (D) none of these

52. An operation in database management system, that will increase the length of a list is
   (A) Insert  (B) Look up
   (C) Modify  (D) All of these

53. A “form” can be used to
   (A) modify records  (B) delete records
   (C) format printed output  (D) all of these

54. What is XSL?
   (A) An XML based language used to create style sheets
   (B) This is a language not used in XML
   (C) Extensible Solution Language
   (D) Extended Stylesheet Language

55. Which tissue samples are used for DNA fingerprinting?
   (A) Hair  (B) Skin  (C) Blood  (D) Any of these
56. Which of the following is NOT one of the three basic types of fingerprint patterns?
   (A) Arches          (B) Spirals
   (C) Whorls          (D) Loops

57. At what age do human beings acquire fingerprints?
   (A) at birth       (B) at two weeks of age
   (C) at three month's gestation (D) at six month's gestation

58. Which of the following statements about fingerprints is NOT true?
   (A) Fingerprints are unique for every human being
   (B) Fingerprint patterns do not change with growth or age
   (C) Even identical twins do not have identical fingerprints
   (D) Fingerprints are no more similar between two family members than between two strangers

59. Which animal is said to have fingerprints virtually indistinguishable from those of human beings?
   (A) lemur          (B) raccoon
   (C) panda          (D) koala

60. Why is it usually impossible to obtain fingerprints from textiles such as fabric, clothing and carpet?
   (A) because textiles almost always contain synthetic materials
   (B) because textile fibres are resistant to the powders used to dust for prints
   (C) because textiles are very absorbent
   (D) because most modern fibres are treated with fluorocarbons to repel moisture

61. Who is generally recognized as being the first person to use fingerprints as a means of identification?
   (A) Alphonse Bertillon       (B) Sir William Herschel
   (C) Dr. Henry Faulds         (D) Sir Edward Henry

MSC007115  20  k
62. What is the main system used by the FBI and other organizations today to find a match to a latent fingerprint?
   (A) FIS  (B) LPIS  (C) AFIS  (D) CATFISH
   (C) AFIS

63. A hidden fingerprint made visible with powders, is known as
   (A) Obscure print  (B) Latent print  (C) Opaque print  (D) None of these
   (B) Latent print

64. What are the small ridge characteristics on a fingerprint called?
   (A) Crests  (B) Minutiae  (C) Chitin  (D) None of these
   (B) Minutiae

65. The centre of a loop or whorl is called
   (A) Apex  (B) Focus  (C) Concentrate  (D) Core
   (C) Concentrate

66. A form used to record and preserve a person's fingerprints, is called
   (A) Data Card  (B) Cardex  (C) Ten Card  (D) Point Card
   (C) Ten Card

67. Superglue foaming (Cyanoacrylate) works best for prints on what surfaces?
   (A) Paper  (B) Rubber and wood  (C) Plastic, metal and glass  (D) None of these
   (C) Plastic, metal and glass

68. Which is the most common ridge pattern?
   (A) Loops  (B) Whorls  (C) Circles  (D) Cones
   (A) Loops

69. Which are the main groups of fingerprints among?
   (I) Latent  (II) Plastic  (III) Complex  (IV) Visible
   (A) I, II, III and IV  (B) I, II and III  (C) II and IV  (D) I, II and IV
   (D) I, II and IV
70. The identification of a person through pores formation in the ridges of friction skin of fingers is a part of fingerprint science. What is this method known as?
   (A) Dermascopy  (B) Poroscopy  (C) Drillscopy  (D) Colonoscopy

71. What is a gap caused in a ridge by the presence of foreign matters like dirt on the finger print ink, slab and roller, called?
   (A) Abyss  (B) Chasm  (C) Hiatus  (D) Perforation

72. What is the congenital absence of one or more digits (fingers) known as?
   (A) Syndactyly  (B) Dactylovanity  (C) Ectrodactyly  (D) Macroductyly

73. In the case of a person with Keratosis, what type of fingerprints can be obtained?
   (A) Extremely bright and sharp prints  (B) Extremely red coloured prints  
   (C) Thick finger prints are obtained  (D) No print can be obtained from the hand of such a person

74. As compared to a fingerprint, in a toe print which of the following would be true?
   (A) Toe print pattern will be larger in size 
   (B) In toe print periphery ridges will not appear 
   (C) In Toe print, phalange crease will not appear 
   (D) All of these

75. When the running ridges touch cut marks on the finger, the ridges will be disturbed or slightly out of position. This phenomenon is known as ______ of ridges.
   (A) Flickering  (B) Puckering  (C) Stoppering  (D) Hankering

76. Which of the following would be characteristic of a Rolled Finger Print?
   (A) Full contour of the finger is present in the print 
   (B) Core and delta area are clearly visible for classification 
   (C) Large number of ridge characteristics are available for comparison
   (D) All of these

77. Approximately how many hours after death does the Rigor Mortis stage represent?
   (A) One hour after death  (B) 8 to 24 hours after death  (C) More than 24 hours after death  (D) None of these
78. In which State is the hydel power project Nathpa Jhakri located?  
(A) Himachal Pradesh  
(C) Jammu and Kashmir  
(B) Uttaranchal  
(D) Sikkim

79. Nagda is well known as a centre of production of  
(A) Steel  
(C) Viscose staple fibre  
(B) Automobiles  
(D) Electric motors

80. The term “Tee” is connected with  
(A) Billiards  
(C) Golf  
(B) Bridge  
(D) Polo

81. ‘Merdeka cup’ is associated with  
(A) Badminton  
(C) Hockey  
(B) Football  
(D) Golf

82. Who became the first batsman to score two double centuries in One Day International Cricket?  
(A) Sachin Tendulkar  
(C) Virat Kohli  
(B) Rohit Sharma  
(D) Suresh Raina

83. Which Cricket ground (stadium) in India celebrated completion of 150 years in November, 2014?  
(A) Wankhade stadium, Mumbai  
(C) Eden Gardens stadium, Kolkata  
(B) M.A. Chidambaram stadium, Chennai  
(D) Chinnaswamy stadium, Bengaluru

84. L. Sarita who created news by returning / refusing her medal at the Incheon Asian Games, in 2014, is associated with which sport?  
(A) Swimming  
(C) Boxing  
(B) Archery  
(D) Fencing

85. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, son's age will be  
(A) 12 years  
(C) 18 years  
(B) 14 years  
(D) 20 years
86. A grocer has a sale of Rs. 6,435, Rs. 6,927, Rs. 6,855, Rs. 7,230 and Rs. 6,562 for 5 consecutive months. How much sale must he have in the sixth month so that he gets an average sale of Rs. 6,500?
   (A) Rs. 4,991  (B) Rs. 5,991
   (C) Rs. 6,001  (D) Rs. 6,991

87. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1,600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is
   (A) Rs. 120  (B) Rs. 121
   (C) Rs. 122  (D) Rs. 123

88. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Re. 1. The sum (in Rs.) is
   (A) 625  (B) 630
   (C) 640  (D) 650

89. A and B invest in a business in the ratio 3 : 2. If 5% of the total profit goes to charity and A's share is Rs. 855, the total profit is
   (A) Rs. 1,425  (B) Rs. 1,500
   (C) Rs. 1,537.50  (D) Rs. 1,576

90. A, B and C jointly thought of engaging themselves in a business venture. It was agreed that A would invest Rs. 6,500 for 6 months, B, Rs. 8,400 for 5 months and C, Rs. 10,000 for 3 months. A wants to be the working member for which, he was to receive 5% of the profits. The profit earned was Rs. 7,400. Calculate the share of B in the profit
   (A) Rs. 1,900  (B) Rs. 2,660
   (C) Rs. 2,800  (D) Rs. 2,840

91. Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are
   (A) 39, 30  (B) 41, 32
   (C) 42, 33  (D) 43, 34

92. A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had
   (A) 588 apples  (B) 600 apples
   (C) 672 apples  (D) 700 apples
93. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative:
ab _ d _ aaba _ na _ badna _ b

(A) andaa  (B) babda  (C) badna  (D) dbanb

94. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative:
m _ nm _ n _ an _ a _ ma _

(A) aamnan  (B) ammanm  (C) aammnn  (D) amammn

95. In the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative:
_ bcc _ ac _ aabb _ ab _ cc

(A) aabca  (B) abaca  (C) bacab  (D) bcaca

96. In a certain code language "PICTURE" is written as "QHDSVQF". How would "BROWSER" be written in that code?

(A) CQVVTDS  (B) CQPVTDS  (C) CQPUTDS  (D) CQVPPDS

97. GJ is related to MP in the same way as QT is related to

(A) WZ  (B) WY  (C) VZ  (D) VY

98. Fill in the option that will replace the question mark:
MNOP : KLMN : CRAV : ?

(A) APYT  (B) XIZE  (C) QRST  (D) ABCD

99. Choose the odd one out:

(A) 26  (B) 124  (C) 728  (D) 64

100. Choose the appropriate option that can replace the "?" sign in the relationship given
4, 2, 2, 4, : 2, 4, 4, 2, : 6, 4, 4, 6, 6, : ?

(A) 4, 6, 4, 6  (B) 4, 6, 6, 4  (C) 6, 4, 6, 4  (D) 2, 6, 6, 2