Sr. No. : 220214

CET (PG) – 2017

Booklet Series Code : B

Important : *Please consult your Admit Card / Roll No. Slip before filling your Roll Number on the Test Booklet and Answer Sheet.*

(In Figures) **(In Words)**

Roll No. : | | | | | | | .....

O.M.R. Answer Sheet Serial No. : | | | | | | |

Signature of the Candidate : .....

Subject : Forensic Science & Criminology

Time : 90 Minutes] **[Maximum Marks : 125**

No. of Questions : 125] **[Total No. of Printed Pages : 24**

DO NOT OPEN THE SEAL ON THE BOOKLET UNTIL ASKED TO DO SO

Note : (i) **Question Nos. 1 to 25 (General Science) compulsory for all.**

(ii) **Student has to attempt any *two* portions out of Physics (Q. Nos. 26–50), Chemistry (Q. Nos. 51–75), Biology (Q. Nos. 76–100) and Forensic Science (Q. Nos. 101–125).**

INSTRUCTIONS :

1. Write your Roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Subject and Series Code of Question Booklet on the OMR Answer Sheet. Darken the corresponding bubbles with **Black Ball Point/Black Gel Pen.**
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. To open the Question Booklet remove the paper seal gently when asked to do so.
5. Please check that this Question Booklet contains **125** questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
6. Each question has four alternative answers (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point/Black Gel Pen.**
7. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
8. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
9. Negative marking will be adopted for evaluation i.e., 1/4th of the marks of the question will be deducted for each wrong answer. A wrong answer means incorrect answer or wrong filling of bubble.
10. For calculations, use of simple log tables is permitted. Borrowing of log tables and any other material is not allowed.
11. For rough work only the sheets marked "Rough Work" at the end of the Question Booklet be used.
12. The Answer Sheet is designed for **computer evaluation.** Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e., not following the instructions completely, shall be of the candidate only.**
13. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
14. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so, would be expelled from the examination.
15. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent/Observer whose decision shall be final.
16. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculator is not allowed.**

SEAL

Note : (i) **Question Nos. 1 to 25 (General Science) compulsory for all.**
(ii) **Student has to attempt any *two* portions out of Physics (Q. Nos. 26–50), Chemistry (Q. Nos. 51–75), Biology (Q. Nos. 76–100) and Forensic Science (Q. Nos. 101–125).**

1. **In a solution of strong acid (HCl), if we dissolve a salt of strong acid strong base (NaCl) then the pH of solution will ?**
   (A) decrease (B) Increase
   (C) remain unchanged (D) any of above is possible

2. **The size of a normal bacteria like E. Coli cell is :**
   (A) around 2 micro meter long (B) around 2 nanometer long
   (C) around 2 milimeter long (D) around 2 femtometer long

3. **The size of human genome (haploid) is aproximately :**
   (A) 2.0* 10^6 base pair (B) 3.3 * 10^9 base pair
   (C) 2.0* 10^9 base pair (D) 23 base pair

4. **A solution is prepared by dissolving 0.1M acetic acid and 0.2 M sodium acetate. The pKa of the acetic acid is 4.7. The pH of solution will be approximately.**
   (A) 5.0 (B) 3.4
   (C) 1.4 (D) 7

5. **Which of the following will have longest wavelength ?**
   (A) x-ray (B) UV light
   (C) blue colour visible light (D) Red colur visible light

6. **The genetic information in Human Immunodeficiency Virus is contained on :**
   (A) RNA (B) DNA
   (C) No genome present (D) Reverse transcriptase enzyme

7. **Which of the following is not true ?**
   (A) Red blood cells has no nucleus
   (B) Mycobacterium tuberculosis can reside in nucleus of the macrophase
   (C) Mitochondria has no DNA in it
   (D) Human eye lense is made up of protein

8. **Which of the following is not true ?**
   (A) infrared absorption spectrum of a molecule is related to its molecular bond stretching and bending
   (B) UV visible absorption spectrum of a molecule is related to its excitement of electrons
   (C) NMR spectrum of a molecule is due to absorption of radio waves by the molecule for transition of Nuclear Magnetic spin states.
   (D) florescence spectrum of a molecule is related to its linear and rotational momentum

9. **Which of the following is the right equation for 2nd law of thermodynamics ?**
   (A) $G = H + T^*S$ (B) $\Delta G = \Delta H - T^*\Delta S$
   (C) $\Delta G = \Delta H + T^*\Delta S$ (D) $\Delta G = \Delta H - T^*S$

10. **Which of the following is right expression of michalis mental equation of enzyme kinetics ?**
   (A) $V = V_{max}{}^*S/(Km + S)$ (B) $V = V_{max} - S/(Km + S)$
   (C) $V = V_{max} - S/(Km^*S)$ (D) $V = V_{max}{}^*S/(Km^*S)$

11. **In gamma ray emission from a nucleus :**
   (A) Both the neutron number and the proton number change
   (B) There is no change in the proton number and the neutron number
   (C) Only the neutron number changes
   (D) Only the proton number changes

12. **Which of the following is not true ?**
   (A) Insulin hormone is recombinantly produced for therapeutic use
   (B) Biodiesel is modified diesel for human consumption as alternative food
   (C) Golden rice has golden colour due to more vitamin A
   (D) Bt crops are genetically modified crops with gene for Bt toxin inserted

13. **A sample of ^{14}C, whose half-life is 5730 years, has a decay rate of 14 disintegration per minute (dpm) per gram of natural carbon. An artefact is found to have radioactivity of 3.5 dpm per gram of its present C, how old is the artefact ?**
   (A) 17190 years (B) 22920 years
   (C) 1432.5 years (D) 11460 years

14. **Which of the following is not true :**

A catalyst is a substance which

(A) Increases the equilibrium concentration of the product

(B) Shortens the time to reach equilibrium reaction

(C) Supplies energy to the reaction

(D) Increases the equilibrium constant of the reaction

15. **Interphase :**

(A) Is the same as prophase, metaphase anaphase and telophase

(B) Include stages G1, S and G2

(C) Requires the use of polar fibres and kinetochore fibres

(D) Rarely occurs

16. **Which of the following is not correct equation according to Newton's equation of motion where *s* is distance, *m* is mass, *f* is force, *a* is accelaration, *v* is velocity and *u* is intial velocity ?**

(A) $s = ut + (1/2)at^2$ (B) $f = ma^2$

(C) $v = u + at$ (D) $v^2 = u^2 + 2as$

17. **A 100 volt dc power pack is connected to an instrument, if the current flowing is found to be 5 ampears, how much is the electric resistance of the instrument ?**

(A) 20 ohms (B) 500 ohms

(C) 0.05 ohms (D) 1 ohms

18. **In the genetic code, tryptophane amino acid is coded only by TGG sequence. Suppose average probablity of a nucleotide getting mutated to other nucleotide during replication of a virus DNA is 0.00001. What is the probability of a tryptophane amino acids code in its gene being replaced by some other code during replication ?**

(A) 0.00003 (B) 0.00001

(C) 0.0000033 (D) 0

19. **The building block of proteins is :**

(A) Amino acid (B) ATP

(C) Fat (D) DNA

20. **Which of the following amino acid contains sulfur atom in it ?**

(A) Serine (B) Threonine

(C) Cystine (D) Phenyl alanine

21. **The proteins are synthesised in cells by :**

(A) Ribosomes (B) Mitochondria

(C) DNA polymerase (D) Proteosome

22. **Which is true ?**

(A) longer wavelength electromagnetic waves has lower energy

(B) longer wavelength electromagnetic waves has higher energy

(C) energy of electromagnetic waves is not dependent on wavelength

(D) the energy of electromagnetic waves is dependent on its speed in vacuum

23. **The process of synthesis of RNA from DNA template in cells is called :**

(A) Replication (B) Translation

(C) RNAfication (D) Transcription

24. **Who of the following proposed the double helix structure of DNA ?**

(A) Watson and Crick (B) Hargovind Khurana

(C) CV Raman (D) All of above together

25. **Which of the following amino acid has highest hydrophobic side chain ?**

(A) Histidine (B) Serine

(C) Threonine (D) Phenylalanine

26. **The damping in the oscillations of a LCR tank circuit is due to :**

(A) Inductor

(B) Capacitor

(C) Resistance

(D) The combination of inductor and capacitor

27. **Which of the following light source has the maximum coherence ?**

(A) A candle (B) Sodium vapor lamp

(C) Sunlight (D) Laser

28. **The temperature of a perfect black-body radiator is doubled. What happens to the net emission of the electromagnetic radiation ?**

(A) It doubles up (B) It remains same

(C) It goes up by a factor of 16 (D) It goes up by a factor of 8

29. **The volume of a right cylinder travelling parallel to its height at a velocity of 0.6 times the velocity of light with respect to laboratory frame gets contracted compared to its rest volume by a factor of :**

(A) $1/\sqrt{0.64}$ (B) $\sqrt{0.6}$

(C) $\sqrt{0.64}$ (D) 0.6

30. **Which of the following statement will not hold for an inertial frame of reference ?**

(A) The Newton's second law of inertia holds for such frames.

(B) These frames moves with respect to each other at constant velocities.

(C) The first postulate of the special theory of relativity holds for these frames.

(D) The frames have velocities always comparable to the velocity of light.

31. **The minimum energy required by a photon to produce an electron-positron pair is approximately :**

(A) 0.51 MeV (B) 0.51KeV

(C) 1.02 MeV (D) 0.77 MeV

32. **In terms of the percentage change in the initial wavelength of the incident photon, the Compton scattering effect can be most easily observable in the :**

(A) Visible region (B) X-rays region

(C) Infra-red region (D) Ultra-violet region

33. **The quantized energy state of a particle in a box is proportional to the :**

(A) inverse of the square of the length of the box.

(B) square of the particle mass.

(C) independent of the particle mass.

(D) inverse of the length of the box.

34. **Identify the incorrect statement regarding the Rutherford scattering formula of alpha particles. The number of scattered alpha particles at an angle is directly proportional to :**

(A) the thickness of the foil.

(B) the square of the atomic number (Z) of the foil.

(C) the square of the atom's number density of the foil.

(D) the number of the incident alpha nuclides.

35. **Determine the approximate value of $(1/\lambda)$ in terms of the Rydberg constant (R) for the first atomic transition in the Lyman series of the hydrogen atom :**

(A) 0.75 R (B) 0.88 R

(C) 0.66 R (D) 0.95 R

36. **The molar specific heat at constant volume of a diatomic gas is :**

(A) 5 R/ 2 (B) 3 R/2

(C) 3R (D) R/2

37. **The collector current in a bipolar transistor is 4 mA for a base current of 0.02 mA. What is the current gain of the transistor ?**

(A) 100 (B) 200

(C) 50 (D) 500

38. **Which of the following statement regarding an adiabatic process is not appropriate ?**

(A) The heat exchange does not occur between system and surrounding.

(B) The amount of work done is equal to the net change in the internal energy of a system.

(C) A constant temperature is maintained during the process.

(D) PV^{γ} is a constant, where γ is the ratio of the two specific heats.

39. **Which of the following species follow Fermi-Dirac statistics at room temperature ?**

(A) Free electrons in metals (B) ^{4}He gas

(C) An ideal gas (D) Lattice atoms in a solid

40. **What would be the range of resistance offered by a PN diode in forward bias above the threshold ?**

(A) kilo-ohms (B) Mega-ohms

(C) Infinity (D) ohms

41. **Which of the following configuration will not produce electromagnetic induction in a coil that is in the vicinity of a magnet ?**

(A) When the coil is moved with respect to the stationary magnet

(B) When the magnetic field is kept constant and nothing is moved

(C) When the magnetic fleld is varied in the magnet without moving anything

(D) When the magnet is moved with respect to the stationary coil

42. **Which of the following material will always be repelled outside when brought in the vicinity of any one of the ends of a solenoid, irrespective of the orientation the material ?**

(A) Paramagnet

(B) Ferromagnet

(C) Diamagnet

(D) A permanent magnet

43. **Which of the following statement is wrong for the Young's double slit experiment ?**

(A) The experiment supports the dual particle-wave nature of light.

(B) The separation distance of the two slits is generally kept very small compared to the distance of the slits from the screen.

(C) The interference pattern appears for monochromatic light.

(D) The fringe spacing is independent of the wavelength.

44. **Which of the following element can be doped in an intrinsic semi-conductor to synthesis a P-type semiconductor ?**

(A) Boron

(B) Antimony

(C) Arsenic

(D) Phosphorous

45. **The dimensional form of work done is :**

(A) $M L^{-2} T^{-1}$ (B) $M L^{2} T^{-2}$

(C) $M L^{2} T^{-1}$ (D) $M L^{1} T^{-2}$

46. **Which of the following is the heaviest ?**

(A) Neutron (B) Proton

(C) Electron (D) Deutron

47. **Which of the following photon energies are generally in the MeV (million electron volt) range ?**

(A) X-rays (B) Ultra-violet rays

(C) Gamma rays (D) Infrared rays

48. **Which of the following interaction holds the nucleus against the electrostatic repulsion of protons inside the nucleus ?**

(A) Gravity (B) Electromagnetic

(C) Weak interaction (D) Strong interaction

49. **Why is the beta-decay spectrum continuous ?**

(A) The beta decay in accomplished by the emission of a beta particle and a neutrino.

(B) The nuclear forces are saturated and short-ranged.

(C) Pairing effect of nucleons.

(D) Nucleus has a strong Coulomb barrier.

50. **What would be the gain in the velocity after 10 second of an object undergoing free fall on Earth ? Assume a constant value of the acceleration due to gravity :**

(A) 9.8 m/s (B) 98 m/s

(C) 980 m/s (D) 0.98 m/s

51. Which of the following metal ions is present in chlorophyll ?

(A) Fe^{2+} (B) Mg^{2+}

(C) Cu^{2+} (D) Co^{2+}

52. Which of the following is an electrophile ?

(A) NH_3 (B) H_2O

(C) CH_3OCH_3 (D) BF_3

53. Optical isomers which are not mirror images are called :

(A) Diastereomers (B) Meso compounds

(C) Enantiomers (D) Tautomers

54. In UV spectroscopy shift of absorption maximum toward shorter wavelength called :

(A) Bathochromic shift (B) Hypsochromic shift

(C) Hyperchromic shift (D) Hypochromic shift

55. Anti-Markonikof cis hydration of alkene can be achieved by using :

(A) H_2O/H_2SO_4 (B) $Hg(OAc)_2$-THF/$NaBH_4$

(C) B_2H_6/H_2O_2–NaOH (D) OsO_4

56. Electrophile involved in nitration of benzene is :

(A) NO_3 (B) NO_2^+

(C) NO_3^- (D) NO_2

57. The reactive intermediate involved in Reimer-Tiemann reaction is :

(A) $\overset{\oplus}{C}Cl_2$ (B) $\dot{C}Cl_2$

(C) $\overset{\ominus}{C}Cl_2$ (D) $:CCl_2$

58. **Which aldehyde will not respond to Cannizzaro reaction ?**

(A) Formaldehyde

(B) Acetaldehyde

(C) Benzaldehyde

(D) Trimethyl acetaldehyde [$(CH_3)_3CCHO$]

59. **Which carboxylic acid derivative is most reactive towards acyl nucleophilic substitution ?**

(A) Acid anhydrides (B) Acid chlorides

(C) Amides (D) Esters

60. **Reduction of nitrobenzene wit Zn/HCl results in formation of :**

(A) Azobenzene (B) Phenylhydoxylamine

(C) Hydroazobenzene (D) Aniline

61. **Freundlich isotherms is not applicable at :**

(A) Low pressure (B) High pressure

(C) Room temperature (D) 273 K

62. **90.03 g of oxalic acid (anhydrous) is dissolved in 1 litres of water. The normality of the solution is :**

(A) 1 N (B) 1.2 N

(C) 2 N (D) 4.2 N

63. The enthalpy of neutralization ($\Delta H_{neutralization}$) is always :

(A) Negative (B) Positive

(C) Positive *or* Negative (D) Zero

64. Number of carbon atoms present in 6 g of carbon are :

(A) 6.02×10^{23} (B) 3.01×10^{23}

(C) 6.02×10^{12} (D) 3.01×10^{12}

65. Which of the following is not an extensive property ?

(A) Gibb's free energy (B) Internal energy

(C) Entropy (D) Density

66. Which of the following will most conveniently confirm if a known solid sample is impure ?

(A) NMR spectrum (B) Mass spectrum

(C) IR spectrum (D) Melting point

67. The pH of 0.10 M NaOH is :

(A) 0.10 (B) 1.0

(C) 10 (D) 13

68. Effect of dilution on conductance is as follows :

(A) Specific conductance decreases, molar conductance increases

(B) Both decreases with dilution

(C) Specific conductance increases, molar conductance decreases

(D) Both increase with dilution

69. Which of the following has highest electron affinity ?

(A) F (B) Cl

(C) Br (D) I

70. Choose a molecule with sp^3d hybridization of central atom from the following

(A) CH_4 (B) SF_4

(C) PF_5 (D) $SnCl_2$

71. Which among the following possesses a banana bond ?

(A) B_2H_6 (B) BCl_3

(C) S_4N_4 (D) $B_3N_3H_6$

72. Which of the following is a hexadentate ligand ?

(A) Ethylenediamine (B) Oxalate

(C) EDTA (D) Acetylacetonate

73. Which of the following forms stable +4 oxidation state ?

(A) La (B) Eu

(C) Ce (D) Gd

74. Which of the following is not a Lewis acid ?

(A) CO_2 (B) BF_3

(C) Mn^{2+} (D) CO

75. Pick a molecule which does not follow Effective Atomic Number (EAN) rule ?

(A) $V(CO)_6$ (B) $W(CO)_6$

(C) $Ni(CO)_4$ (D) $Fe(CO)_5$

76. **Which one is not correct about glycolysis ?**

(A) Breakdown of glucose to two molecules of pyruvate

(B) Occurs in cytoplasm

(C) Two NAD+accept two electrons and become NADH

(D) It yields 36 molecules of ATP

77. **Which of the following is not true about "theory of evolution" ?**

(A) It says fittest will survive

(B) It can explains origin of new species

(C) It is based on random variation in species and natural selection on them

(D) It was proposed by John Gregory Mandel

78. **Find out the odd among the following :**

(A) Cocci (B) Vibrio

(C) Spirulina (D) Bacilli

79. **The major components of cotton fiber is :**

(A) Starch (B) Protein

(C) Chitin (D) Cellulose

80. **Which of the following is not true about antibodies ?**

(A) They are composed of two heavy chain polypeptide and two light chain polypeptide.

(B) Antigen binding site is composed of light chain only.

(C) Heavy chain and light chain are covalently bonded.

(D) One antibody have two identical antigen binding site

81. **Heroin is a produces from :**

(A) Iodine (B) Cannabis

(C) Caffeine (D) Opium

82. **Birefringence is about :**

(A) Having different indices of refraction associated with different crystallographic directions.

(B) Having different indices of refraction dependent on with wavelengths.

(C) Having two different reflections of image by half mirror.

(D) Having a bypass path of reflected light.

83. **Which of the following does not have nucleus in it ?**

(A) Phagocytes (B) WBC

(C) RBC (D) T- cells

84. **Most common pattern fingerprint is :**

(A) Whorls (B) Loops

(C) Composite (D) Arches

85. **For transplantation cornea can be removed from dead upto :**

(A) 6 hrs (B) 12 hrs

(C) 18 hrs (D) 24 hrs

86. **First internal organ to putrefy after death is :**

(A) Heart (B) Brain

(C) Larynx / trachea (D) Kidney

87. **The Nobel Prize in Physiology or Medicine 2016 was awarded for :**

(A) Juan Manuel Santos (B) Bob Dylan

(C) David J. Thouless (D) Yoshinori Ohsumi

88. **Hydrogenation process used for converting vegetable oil into vegetable ghee :**

(A) Oxidizes unsaturated fat (B) Decreases saturated fat

(C) Decreases unsaturated fat (D) Increases unsaturated fat

89. **Type II topoisomerases :**

(A) Cut one strand of the DNA helix to relax supercoils

(B) Cut both strands of the DNA helix to relax supercoils

(C) Do not use ATP while relaxing supercoils of DNA

(D) Are found in mammals only for relaxing supercoils of DNA

90. **Angiosperms :**

(A) Are flowering plants

(B) Are not having vessel elements in xylem

(C) Are less complex compared to gymnosperms

(D) Has no endosperm within the seeds

91. **Which of the following statements about the lipid constituents of membranes is correct ?**

(A) Lateral movement of membrane lipids is catalysed by special proteins

(B) The inner and outer halves of the lipid bilayer are identical

(C) Lateral movement of membrane lipids occurs rapidly within the plane of the bilayer

(D) Transverse movement of membrane lipids within the bilayer is unrestricted

92. **Which of the following statements about the mechanism of the Na^+/K^+ pump is correct ?**

(A) The Na^+/K^+ ATPase uses energy to pump Na^+ outside the cell and K^+ inside

(B) The Na^+/K^+ ATPase uses energy to pump Na^+ inside the cell and K^+ outside

(C) The Na^+/K^+ ATPase uses energy to bind both Na^+ and K^+ in turn

(D) The phosphorylation of the Na^+/K^+ ATPase does not change its conformation

93. **Which of the following best describes the function of rough endoplasmic reticulum in eukaryotic cells ?**

(A) Processing and packaging proteins into transport vesicles for delivery to the Golgi apparatus

(B) Synthesis of new membrane lipids

(C) Synthesis of proteins

(D) Synthesis of ribosomes

94. **Which eukaryotic cellular organelles are believed to have evolved from symbiotic bacteria ?**

(A) Endoplasmic reticulum and the Golgi apparatus

(B) Mitochondria and chloroplasts

(C) Lysosomes

(D) Peroxisomes

95. **Which of the following statements about skeletal muscle is correct ?**

(A) Skeletal muscle is controlled by involuntary nervous action

(B) Skeletal muscle can maintain its contraction for long periods

(C) Skeletal muscle contracts slowly

(D) Skeletal muscle has a striated appearance under the microscope

96. **The information for hereditary characters are contained on :**

(A) DNA (B) Protein

(C) Lipids (D) Carbohydrates

97. **The antibiotic penicillin kills bacteria by :**

(A) Inhibiting DNA polymerase of Bacteria

(B) Disrupting the cell wall formation of Bacteria

(C) Damaging the DNA of Bacteria

(D) Inhibiting the RNA synthesis

98. **Which of the following is true ?**

(A) An enzyme decreases the energy of the transition state of the chemical reaction

(B) An enzyme decreases the free energy of the chemical reaction

(C) An enzyme shifts the equilibrium in chemical reaction towards more product

(D) An enzyme lowers the free energy of the product

99. **Stem cell are :**

(A) Extracted from the brain stem of humans

(B) Capable of cell devision and pluripotent in differentiation

(C) Completely differentiated cells that can be used for cell therapy

(D) Cancerous cells with damaged cell division control

100. **Which of the following is not true ?**

(A) Bt toxin gene was first found in a bacteria

(B) Bt toxin is highly toxic for human

(C) Bt toxin is a protein molecule

(D) Bt toxin acts as a protease inhibitor in insects

101. DNA barcoding of animals uses which of the following gene :

(A) Heamoglobin
(B) Cytochrome oxidase I
(C) Rubisco
(D) r-RNA

102. Saliva contains which of the following enzyme ?

(A) Amylase
(B) Cellulase
(C) Protease
(D) Lipase

103. Semen can not be detected using which of the following biomarker ?

(A) p30
(B) p53
(C) Acid phosphatase
(D) Seminogelin

104. How much amount of opium is considered as commercial quantity as per NDPS act ?

(A) 2.5 kg and more
(B) 5 kg and more
(C) 1 kg and more
(D) 1 g and more

105. FTIR stands for :

(A) Fourier transmittance IR spectroscopy
(B) Former transform IR spectroscopy
(C) Fourier transform IR spectroscopy
(D) False & true IR spectroscopy

106. Which of the following is a sedative ?

(A) Ethanol
(B) Cocaine
(C) Barbiturate
(D) Amphitamine

107. The growth rate of human head hair is :

(A) 1 cm/month
(B) 0·5 cm/ month
(C) 2 cm/month
(D) 3 cm/month

108. Java is a :

(A) Compiler
(B) Operating system
(C) Input device
(D) Programming language

109. Which of the following is true ?

(A) Adults have 206 bones
(B) Babies have 206 bones
(C) Babies have 209 bones
(D) Adults have 203 bones

110. Truth serum is :

(A) Sodium pentothal
(B) Cocaine
(C) Fetal calf serum
(D) Sodium per clorate

111. Sarin gas is :

(A) A precursor for making urea
(B) A weapon of mass destruction
(C) Found leaking in mines
(D) Used in operation theater to cause serenity in patient

112. The Telgi scam (by Abdul Karim Telgi) was related to :

(A) Fake currency
(B) Fake stamp papers
(C) Fake Mobil oil
(D) Fake medicines

113. Alternate light source used for crime scene investigation works on principle of :

(A) Fluorescence
(B) Chemiluminescence
(C) Absorbance spectrum
(D) Refraction

114. Livor mortis is :

(A) The discoloration of the skin following death

(B) Stiffening of muscles following death

(C) Death caused by liver diseases

(D) Is the change in body temperature following death

115. Innocence Project is for :

(A) Promoting DNA fingerprinting by innocent people

(B) Saving innocents from serial killers using DNA fingerprinting

(C) Inspiring innocence in school children through education on DNA fingerprinting

(D) Exonerating innocents by using DNA fingerprinting

116. Notorious criminal *Sansar Chand* was convicted for :

(A) Terrorism

(B) Share market fraud

(C) Wildlife poaching

(D) Serial killing

117. Which of the following is endangered species in India ?

(A) Camel

(B) Hyana

(C) Gray langurs

(D) Spotted Cat

118. The bill regarding database of forensic DNA profiles in India :

(A) was passed in 1990

(B) was passed in 1999

(C) is yet to be passed by parliament

(D) was passed in 2005

119. Which country has legalized drugs for recreational purposes :

(A) Thailand

(B) Indonesia

(C) China

(D) U.S.A.

120. A child is having blood group AB which of the following blood group can not be of her mother :

(A) A (B) B

(C) AB (D) O

121. The real name of Sherlock Holmes was :

(A) Conan Doyle (B) Dolorus Cregor

(C) Sherlock Huttington (D) Connan Huff

122. Who developed techniques for DNA fingerprinting and DNA profiling:

(A) Thomas Crick (B) James Watson

(C) Alec Jeffreys (D) Linus Pauling

123. The perpetrator of a crime will bring something into the crime scene and leave with something from it, and that both can be used as forensic evidence. This concept is also known as :

(A) Locard's exchange Principle (B) Sherlock association Theory

(C) Perpetrator lapse Hypothesis (D) Victim perpetrator Principle

124. The study insects life cycle and behavior for forensic applications is called :

(A) Forensic insectology (B) Forensic entomology

(C) Forensic arthropology (D) Forensic pestology

25. RFLP in DNA forensics stands forensic :

(A) Real Fragment length polymorphism

(B) Related Fragment length polymorphism

(C) Restriction Fragment length polymorphism

(D) Rare Fragment length polymorphism