MIZORAM PUBLIC SERVICE COMMISSION
TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF JUNIOR SCIENTIFIC OFFICER (CHEMISTRY) (CONTRACT) UNDER HOME (FORENSIC) DEPARTMENT. MAY, 2016.

PAPER – II

Time Allowed : 2 hours Full Marks : 150

All questions carry equal marks of 2 each.

Attempt all questions.

1. The term ‘Forensic’ is derived from
   (a) The Greek word  (b) The Hebrew word  
   (c) The Latin word  (d) The Persian word

2. Locard’s Principle of Exchange relates to
   (a) Foreign exchange  (b) Exchange of trace evidence material  
   (c) Exchange of hearts  (d) Exchange of Criminal information

3. Which of the following is the most suitable method of handling a blood stained knife with few hairs?
   (a) Holding the knife with its handle  
   (b) Holding the knife with tips of index finger and thumb  
   (c) Remove the hairs and handle the knife as usual  
   (d) Hold the blade with the tips of index finger and thumb

4. Which of the following is a Designer Drug?
   (a) Morphine  (b) Codeine  
   (c) Proxyvon  (d) Metamphetamine

5. Which amongst the following is a powerful hallucinogenic drug of abuse?
   (a) Heroin  (b) Charas  
   (c) Amphetamine  (d) L.S.D.

6. Mass liquor tragedies in India are caused due to consumption of alcoholic liquor adulterated with
   (a) Methanol  (b) Chloral hydrate  
   (c) Pyridine  (d) Butyl alcohol

7. What is the level of blood alcohol concentration that can render a person safe for driving?
   (a) 30 to 50mg.%  (b) 50 to 100 mg.%  
   (c) 100 to 200 mg.%  (d) None of these

8. The main source of physical evidence for reconstruction of crime is
   (a) The scene of crime  (b) The victim of the crime  
   (c) The perpetrator of crime  (d) All the three sources
9. Which equipment is most suitable for positive identification of volatile flammable material?
   (a) High performance Liquid Chromatography
   (b) Fourier Transform Infra Red Spectrometer
   (c) High Performance Thin Layer Liquid Chromatography
   (d) Gas Chromatography

10. The first duty of the police officer at the scene of crime is
   (a) To sketch the scene
   (b) To barricade the scene
   (c) To photograph the scene
   (d) To collect the physical evidence

11. Which of the following is the most preferred method of search for clues at indoor scene of crime?
   (a) Wheel method
   (b) Spiral method
   (c) Zone method
   (d) Strip method

12. Which of the following is not a narcotic drug?
   (a) Morphine
   (b) Codeine
   (c) Diazepam
   (d) Papavarine

13. Which of the following drugs of abuse are not the products of plant origin?
   (a) Opium
   (b) Charas
   (c) Amphetamine
   (d) Cannabis

14. Ethyl alcohol is
   (a) Polyhydric alcohol
   (b) Trihydric alcohol
   (c) Dihydric alcohol
   (d) Monohydric alcohol

15. Which among the following is not distilled liquor?
   (a) Rum
   (b) Champagne
   (c) Whiskey
   (d) Brandy

16. Proof spirit is mixture of alcohol-water having specific gravity 0.91976 at 15° C containing
   (a) 57.1% alcohol by weight
   (b) 57.12% alcohol by weight
   (c) 57.2% alcohol by weight
   (d) 57.21% alcohol by weight

17. The amount of heat that a fuel will release during a complete oxidation reaction is
   (a) Heat of reaction
   (b) Heat of oxidation
   (c) Heat of combustion
   (d) Heat of ignition

18. Which of the following is excluded in the definition of Ganja?
   (a) Leaf
   (b) Fruit
   (c) Flowering
   (d) None of these

19. Most common drug of abuse in Mizoram nowadays is
   (a) Alprazolam
   (b) Heroin
   (c) Cough syrup
   (d) Ganja

20. One of the common adulterants in standard cement is
   (a) Potassium sulphate
   (b) Potassium nitrate
   (c) Oxides of silica
   (d) Fly ash

21. The chemical used in trap case investigation is
   (a) Phenolphthalein
   (b) Dragendorff
   (c) Potassium permanganate
   (d) Potassium dichromate
22. Analysis of Gold in Aqua-regia is conducted by the technique of
   (a) GCMS  (b) ICP  (c) XRD  (d) Electrophoresis
23. Which of the following properties of paint cannot be determined by microscopic examination?
   (a) Colour  (b) Texture  (c) Sequence of layer  (d) Composition
24. The identification of polymers is done by
   (a) Thermal Decomposition  (b) Solubility tests  (c) Elemental analysis  (d) All the above methods
25. The main constituents of Chemical fertiliser is
   (a) Sulphates  (b) Nitrates  (c) Phosphates  (d) Nitrides
26. The word ‘Toxicon’ is derived from
   (a) Latin  (b) Arabic  (c) Hebrew  (d) Greek
27. Viscera of a person who died of an unknown poison best preserved in
   (a) Methylated spirit  (b) Disinfectant  (c) Common salt  (d) Rectified spirit
28. The real definition of poison depends upon
   (a) The type of poison  (b) The potency  (c) The rate of absorption  (d) The dose
29. The intensity of poisoning is not caused by
   (a) Dose  (b) Absorption  (c) Allergy  (d) Tolerance
30. Hypotension is mainly caused by
   (a) Sedative  (b) Amphetamine  (c) Corticosteroids  (d) Anti-cholinergic agents
31. The efficiency of extraction is determined by
   (a) Partition co-efficient  (b) Extraction co-efficient  (c) Distribution co-efficient  (d) None of these
32. A system of two___________ liquid is required for the separation of material by solvent extraction.
   (a) Miscible  (b) Immiscible  (c) High polar  (d) Low polar
33. Arsine is
   (a) Non-volatile inorganic  (b) Volatile organic  (c) Non-volatile organic  (d) Volatile inorganic
34. Fresh blood is best preserved in
   (a) EDTA  (b) Sodium fluoride  (c) Sodium Azide  (d) Normal saline
35. Stas-Otto Method is for the extraction of
   (a) Volatile inorganic  (b) Volatile organic  (c) Non-volatile organic  (d) Non-volatile inorganic
36. In Chromatography, substance which have higher affinity for the___________ phases are moved or carried along with it.
   (a) Stationary  (b) Mobile
   (c) Both (a) and (b)  (d) None of these

37. In chromatographic technique, there are_______types of column phases
   (a) 4  (b) 2
   (c) 3  (d) None of these

38. In toxicology, there are_____ types of matrices.
   (a) 2  (b) 3
   (c) 4  (d) 5

39. A Forensic expert report must be
   (a) Scientific and systematic  (b) Concise, clear and simple
   (c) In-ambiguous and lengthy  (d) All of these

40. Which Sec. of CrPC tells about Forensic Expert?
   (a) 173  (b) 293
   (c) 273  (d) 193

41. MLPC Act was introduced in
   (a) 2015  (b) 1995
   (c) 2014  (d) None of these

42. As per CrPC, only those above the rank of___________ can be declared as Government scientific expert.
   (a) JSO  (b) A/D
   (c) D/D  (d) None of these

43. Drugs & Cosmetic Act 1940 extends to
   (a) Only Mizoram  (b) The whole of India
   (c) The whole North East India  (d) None of these

44. Pseudoephedrine Case is booked under
   (a) 9A/25A of ND&PS Act’85  (b) 21A of ND&PS Act’85
   (c) 9A/21A of ND&PS Act’85  (d) None of these

45. Highest penalty that can be imposed under ND&PS Act’85 is
   (a) Death penalty  (b) Life Imprisonment
   (c) 10 Years  (d) 10 Years with RI

46. An Expert is mentioned in Sec________of I.E.A.
   (a) 46  (b) 43
   (c) 45  (d) 47

47. Any Drug Cases can only be punished under
   (a) ADC Act.  (b) D&C Act.
   (c) ND&PS Act.  (d) All of these

48. Heroin is punished under Sec
   (a) 22 of ND&PS Act’85  (b) 23 of ND&PS Act’85
   (c) 21 of ND&PS Act’85  (d) 20 of ND7PS Act’85
49. CrPC was enacted in the Parliament in the year
   (a) 1974   (b) 1970
   (c) 1971   (d) 1973

50. Assam Drugs (Control) Act’1950 as applied to Mizoram authorised to investigate by Police officers and Excise officers besides Drug controllers in the year
   (a) 1986   (b) 1998
   (c) 1995   (d) 1954

51. Which of the following are components of Central Processing Unit (CPU)?
   (a) Arithmetic logic unit, Mouse    (b) Arithmetic logic unit, Integrated Circuits
   (c) Arithmetic logic unit, Control unit  (d) Control Unit, Monitor, RAM

52. From which year 5th generation of computers is considered?
   (a) 1970   (b) 1980
   (c) 1990   (d) 2000

53. In Microsoft Windows Operating System MyComputer was introduced from
   (a) Windows 3.1   (b) Windows 3.11
   (c) Windows 95   (d) Windows 98

54. In MS DOS, DIR command is used to
   (a) Display a list of files in a directory  (b) Display contents of files in directory
   (c) Display type of files in a sub directory  (d) None of the above

55. In MS words Portrait and Landscape are
   (a) Paper Size    (b) Page Orientation
   (c) Page Layout   (d) Page Break

56. How will MS Word respond in repeated word?
   (a) A Red wavy line under the repeated word
   (b) A Green wavy line under the repeated word
   (c) A Blue wavy line under the repeated word
   (d) None of these

57. The ability to combine name and addresses with a standard MS Word document is called
   (a) Document formatting    (b) Mail merge
   (c) Database management   (d) Form letters

58. A worksheet in MS Excel 2003 can have a maximum of …. Number of rows
   (a) 256   (b) 1024
   (c) 2048   (d) 65535

59. Which of the following Excel formulas will not be able to calculate?
   (a) =SUM(A1:A5)*.5   (b) =SUM(A1:A5)/(10-9)
   (c) =SUM(Sales)-A3   (d) =SUM(A1:A5)-10

60. The short cut key Ctrl + R is used in MS Excel to
   (a) Right align the content of cell
   (b) Remove the cell contents of selected cells
   (c) Fill the selection with active cells to the right
   (d) None of these
61. Which of the following is not an option when printing handouts in PowerPoint?
(a) Five slides per page
(b) Six slides per page
(c) Three slides per page
(d) Two slides per page

62. Which PowerPoint view works best for adding slide transitions?
(a) Slide show view
(b) Slide sorter view
(c) Slide view
(d) Notes view

63. How can you create a uniform appearance by adding a background image to all slides?
(a) Create a template
(b) Edit the slide master
(c) Use the autocorrect wizard
(d) All of these

64. The first page of a website is called?
(a) Design page
(b) First page
(c) Main page
(d) Home page

65. TCP/IP is a:
(a) Network Hardware
(b) Network Software
(c) Protocol
(d) None of these

66. 384, 192, 96, 48, ?
(a) 36
(b) 32
(c) 28
(d) 24

67. 6, 13, 28, 59, ?
(a) 120
(b) 122
(c) 124
(d) 126

68. 2, 5, 9, ?, 20, 27
(a) 14
(b) 16
(c) 18
(d) 24

69. From the given alternatives, select the word which best expresses the meaning of the given word.
VINDICATE
(a) Deny
(b) Accuse
(c) Defend
(d) State

70. From the given alternatives, select the one which best expresses the meaning of the given saying.
IT NEVER RAINS BUT IT POIRS
(a) misfortunes tend to arrive all at the same time
(b) easy come, easy go
(c) the least predictable thing in life is the weather
(d) every cloud has a silver lining

71. From the given alternatives, select the word which has the OPPOSITE meaning of the given word.
PLACATE
(a) Appease
(b) Enrage
(c) Cover
(d) Arouse
72. Select one figure from the answer figures which will replace the question mark (?

**Problem figures:**

![Problem figures diagram]

**Answer figures:**

![Answer figures diagram]

(a) A  (b) B  (c) C  (d) D

73. Find out which of the answer figures completes the incomplete set.

**Problem figures:**

![Problem figures diagram]

**Answer figures:**

![Answer figures diagram]

(a) A  (b) B  (c) C  (d) D
74. From the following sets of letters, three of the four sets follow a certain rule. Find the one that does not follow the rule.

(a) TSSU  
(b) NMNO  
(c) EDDG  
(d) IHHJ

75. In a certain language ‘to be polite’ is coded as ‘fa so la’, ‘she is polite’ is coded as ‘so me pa’, and ‘to have manners’ is coded as ‘na la ma’. Which of the following is the code for ‘be’ in that language?

(a) so  
(b) fa  
(c) la  
(d) na

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