

# 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.*

- The term 'Forensic' is derived from
  - The Greek word
  - The Hebrew word
  - The Latin word
  - The Persian word
- Locard's Principle of Exchange relates to
  - Foreign exchange
  - Exchange of trace evidence material
  - Exchange of hearts
  - Exchange of Criminal information
- Which of the following is the most suitable method of handling a blood stained knife with few hairs?
  - Holding the knife with its handle
  - Holding the knife with tips of index finger and thumb
  - Remove the hairs and handle the knife as usual
  - Hold the blade with the tips of index finger and thumb
- Which of the following is a Designer Drug?
  - Morphine
  - Codeine
  - Proxylon
  - Metamphetamine
- Which amongst the following is a powerful hallucinogenic drug of abuse?
  - Heroin
  - Charas
  - Amphetamine
  - L.S.D.
- Mass liquor tragedies in India are caused due to consumption of alcoholic liquor adulterated with
  - Methanol
  - Chloral hydrate
  - Pyridine
  - Butyl alcohol
- What is the level of blood alcohol concentration that can render a person safe for driving?
  - 30 to 50mg. %
  - 50 to 100 mg. %
  - 100 to 200 mg. %
  - None of these
- The main source of physical evidence for reconstruction of crime is
  - The scene of crime
  - The victim of the crime
  - The perpetrator of crime
  - 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) Leave
  - (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

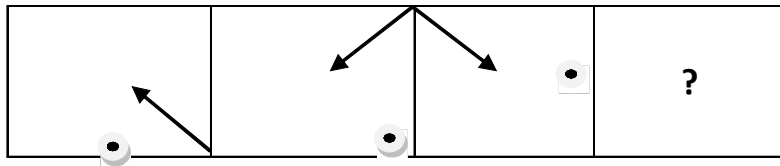
61. Which of the following is not an option when printing handouts in PowerPoint?  
(a) Five slides per page (b) Six slides per page  
(c) Three slides per page (d) Two slides per page
62. Which PowerPoint view works best for adding slide transitions?  
(a) Slide show view (b) Slide sorter view  
(c) 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

***Directions to solve (Questions 66 - 68): What will come in place of the question mark (?) in the following questions?***

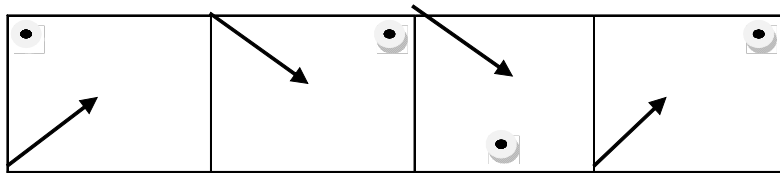
66. 384, 192, 96, 48, ?  
(a) 36 (b) 32  
(c) 28 (d) 24
67. 6, 13, 28, 59, ?  
(a) 120 (b) 122  
(c) 124 (d) 126
68. 2, 5, 9, ?, 20, 27  
(a) 14 (b) 16  
(c) 18 (d) 24
69. From the given alternatives, select the word which best expresses the meaning of the given word.  
VINDICATE  
(a) Deny (b) Accuse  
(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 POURS  
(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:**



**Answer figures:**



**A**

**B**

**C**

**D**

(a) A

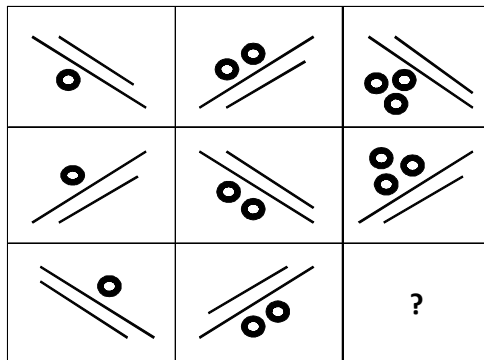
(b) B

(c) C

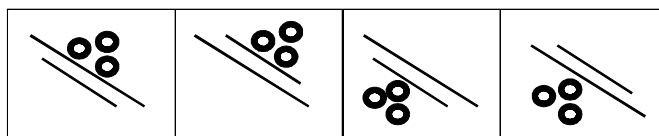
(d) D

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

**Problem figures:**



**Answer figures:**



**A**

**B**

**C**

**D**

(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) NMMO |
| (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 |

\* \* \* \* \*