

**MIZORAM PUBLIC SERVICE COMMISSION****COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF  
FOREST RANGER UNDER ENVIRONMENT, FORESTS & CLIMATE CHANGE  
DEPARTMENT, GOVERNMENT OF MIZORAM, JUNE, 2024.****GENERAL SCIENCE - III**

Time Allowed: 2 hours

Full Marks: 200

*All questions carry equal marks of 2 each.  
Attempt all questions.*

- The concept of "Scientific Temper" was introduced in India by
  - C.V. Raman
  - Jawaharlal Nehru
  - C.N.R. Rao
  - A.P.J. Abdul Kalam
- The world's second and India's first test tube baby was called
  - Ramayana
  - Guru Nanak
  - Krishna
  - Durga
- In Aadhaar, the most reliable biometric identification is scanning of the
  - face
  - DNA fingerprint
  - hand geometry
  - iris
- National Science Day in India is observed in honour of the Nobel laureate
  - Chandrashekhara Venkata Raman
  - Rabindranath Tagore
  - Amartya Sen
  - A.P.J. Abdul Kalam
- A mathematical symbol that was first used in India is
  - $\alpha$
  - 1
  - 0
  - $\pm$
- Agni-V is
  - an intercontinental ballistic missile
  - a medium-range ballistic missile
  - an intermediate-range ballistic missile
  - a short-range ballistic missile
- Ronald Ross received the 1902 Nobel Prize in Physiology or Medicine for his work in India, which is the discovery of the
  - causes of cancer
  - etiology of diabetes mellitus
  - transmission of malaria
  - first drug for tuberculosis
- Bosons, subatomic particles, are named after
  - Satyendra Nath Bose
  - Subhas Chandra Bose
  - Jagadish Chandra Bose
  - Amar Bose
- Chandrashekhhar limit is about the
  - rate of expansion of the galaxy
  - size of white dwarf star
  - number of protons in an element
  - speed of light in vacuum



10. The title “father of the Indian nuclear programme” is given to  
(a) Raja Ramanna (b) Rajagopala Chidambaram  
(c) Homi Jehangir Bhabha (d) Piara Singh Gill
11. The first satellite made by India is  
(a) Bhaskara (b) Aryabhata  
(c) Rohini (d) INSAT
12. Lollipop-like projection on coronaviruses are called  
(a) loops (b) capsids  
(c) envelope (d) spikes
13. India is home to a deadly infection called *kala azar* or visceral leishmaniasis which is transmitted by  
(a) sandflies (b) mosquitos  
(c) rats (d) fleas
14. ISRO stands for  
(a) Indian Science Research Organisation (b) Indian Space Research Organisation  
(c) International Space Research Operation (d) International Science Research Organisation
15. An infectious disease that is completely eradicated in India is  
(a) diphtheria (b) dracunculiasis  
(c) smallpox (d) polio
16. Dolly the sheep is related to an experimental technique called  
(a) in vitro fertilization (b) somatic nuclear transfer  
(c) genetic rejuvenation (d) genome editing
17. Mizoram falls within the biodiversity hotspot of  
(a) Indo-Burma and Eastern Himalayas (b) Indo-Burma only  
(c) Eastern Himalayas only (d) Western Ghats and Indo-Burma
18. A gas that acts as a hormone promoting fruit ripening and flowering in plants is  
(a) cytokinin (b) abscisic acid  
(c) gibberellin (d) ethylene
19. The first nuclear explosion made in 1945 was code named  
(a) Little Boy (b) Trinity  
(c) Fat Man (d) Manhattan
20. “The secret of life”, as discovered in 1953, refers to  
(a) deoxyribonucleic acid (b) tobacco mosaic virus  
(c) transposable elements (d) haemoglobin
21. The phrase *omnis cellula e cellula* in cell theory was introduced by  
(a) Robert Hooke (b) Antonie van Leeuwenhoek  
(c) Rudolf Virchow (d) Theodor Schwann
22. Which of the following hormones can be used as contraceptives?  
(a) oxytocin and aldosterone (b) prolactin and gonadotropic hormone  
(c) insulin and testosterone (d) estrogen and progesterone



23. An Indian-born scientist who received the Nobel Prize in Chemistry and Padma Vibhusan, and became President of the Royal Society is
- (a) Jagadish Chandra Bose (b) C. V. Homi Jehangir Bhabha  
(c) Venkatraman Ramakrishnan (d) Subrahmanyam Chandrasekhar
24. Who was popularly known as the Birdman of India?
- (a) Salim Ali (b) Iskandar Mirza  
(c) Humayun Abdulali (d) Abbas Tyabji
25. National Science Day in India is observed on
- (a) 28 February (b) 28 March  
(c) 18 April (d) 18 June
26. The title “father of the Indian nuclear programme” is given to
- (a) Venkatraman Radhakrishnan (b) Rajagopala Chidambaram  
(c) Homi Jehangir Bhabha (d) Piara Singh Gill
27. An Indian scientist who received the Nobel Prize for his works on “the structure and evolution of the stars” is
- (a) Chandrasekhara Venkata Raman (b) Subramanyan Chandrasekhar  
(c) Jagadish Chandra Bose (d) Venkatraman Radhakrishnan
28. In astronomy, Saraswati refers to
- (a) the estimated size of the universe (b) the number of stars in Milky Way  
(c) a supermassive blackhole (d) a supercluster of galaxies
29. In which of the following field of science C.V. Raman did not make a contribution?
- (a) Nerve propagation (b) Scattering of light  
(c) Acoustics (d) Physiology of vision
30. The first discovered antibiotic for the treatment of tuberculosis was
- (a) quinine (b) streptomycin  
(c) penicillin (d) salvarsan
31. A dye that was originally developed in India was
- (a) magenta (b) indigo  
(c) red oxide (d) saffron
32. Three Indian scientists who had received the highest civilian award Bharat Ratna are
- (a) C. N. R. Rao, C.V. Raman and A. P. J. Abdul Kalam  
(b) C.V. Raman, V. Ramakrishnan and A. P. J. Abdul Kalam  
(c) K. S. Chandrasekharan, C.V. Raman and A. P. J. Abdul Kalam  
(d) A. P. J. Abdul Kalam, C.N.R. Rao and Homi Jehangir Bhabha
33. One of the most prestigious scientific awards in India is
- (a) Infosys Prize  
(b) Aryabhata Award  
(c) Shanti Swarup Bhatnagar Prize for Science and Technology  
(d) G. D. Birla Award for Scientific Research
34. Nobel Prize winner, Har Gobind Khorana was known for the discovery of
- (a) pulsar (b) supermassive blackholes  
(c) DNA structure (d) genetic code



35. Discovered in india, crescograph is a device for measuring
- (a) music (b) heartbeat  
(c) plant growth (d) rate of sound wave
36. Crescograph was invented by
- (a) Jagadish Chandra Bose (b) Venkatraman Radhakrishnan  
(c) Ashoke Sen (d) C.V. Raman
37. An Indian scientist who made important contributions in quantum statistics was
- (a) Shiraz Minwalla (b) Subramanyan Chandrasekhar  
(c) Jagadish Chandra Bose (d) Satyendra Nath Bose
38. A thought experiment in quantum mechanics that gives a state of being dead and alive at the same time is called
- (a) Schrödinger's cat (b) Pavlov's experiment  
(c) The Cheshire Cat (d) Heisenberg's Uncertainty
39. Raman effect is about
- (a) speed of light (b) event horizon  
(c) electrical conductance (d) scattering of photons
40. The first nuclear test explosion in India was in 1974 at
- (a) Bombay (b) Pokhran  
(c) Kharagpur (d) Thar
41. The first pharmaceutical company in India was started by
- (a) Prafulla Chandra Ray (b) Amiya Charan Banerjee  
(c) K. S. Chandrasekharan (d) Debasish Ghose
42. An aerospace scientist who became the 11<sup>th</sup> President of India was
- (a) Sarvepalli Radhakrishnan (b) Shankar Dayal Sharma  
(c) Varahagiri Venkata Giri (d) A.P.J. Abdul Kalam
43. Recipient of the Turing Award, Raj Reddy is internationally renowned for his works on
- (a) solar car (b) LED light  
(c) radiology (d) artificial intelligence
44. Internet in India was started in 1995 by
- (a) TATA (b) BSNL  
(c) VSNL (d) JIO
45. A discovery in India that malaria is transmitted by mosquito was by
- (a) Ronald Ross (b) J.B.S. Haldane  
(c) Charles Donovan (d) William Leishman
46. The first supercomputer in India PARAM 8000 was made in
- (a) Delhi (b) Pune  
(c) Mumbai (d) Bangalore
47. The first Indian satellite to the Moon was
- (a) Rohini RS-1 (b) Chandrayaan-1  
(c) Bhaskara Seg-I (d) INSAT 1



48. The first successful nuclear bomb test in India was nicknamed  
 (a) Smiling Buddha (b) Fat Boy  
 (c) Praying Mantis (d) Prithvi
49. The first railway in India ran from  
 (a) Delhi to Agra (b) Pune to Kolkata  
 (c) Hyderabad to Secunderabad (d) Bombay to Thane
50. The biopiracy case of the neem tree (*Azadirachta indica*) was between  
 (a) India and Pakistan (b) India and U.S.  
 (c) India and U.K. (d) India and China
51. Name the Mizo hero who fought against the British.  
 (a) Khuangchera (b) Zampuimanga  
 (c) Vanapa (d) Chawngbawla
52. When was James Winchester killed and Mary Winchester, her small daughter, was kidnapped at Alexandrapore?  
 (a) 1870 (b) 1871  
 (c) 1872 (d) 1873
53. Which of the following is associated with *Khawzim pathian*?  
 (a) Pawl kut (b) Mim kut  
 (c) Chapchar kut (d) Thalfavang kut
54. The first Superintendent of Lushai Hills was  
 (a) TH. Lewin (b) Major J. Shakespeare  
 (c) C.W Bolton (d) S.N Barkataki
55. The literacy rate of Mizoram according to 2011 census is  
 (a) 93.39% (b) 91.85%  
 (c) 89.44% (d) 85.62%
56. The largest musical instrument of Mizo in early days was  
 (a) Bengbung (b) Darkhuang  
 (c) Darbu (d) Darmang
57. One who performs religious and other social functions for the villagers was called  
 (a) Sadawt (b) Puithiam  
 (c) Ramhual (d) Senior elder
58. Which Mizo folktale is associated with *Hmuichukchuriduninu*?  
 (a) Zialung khawchhan Hrangkhupa (b) Mualzavata  
 (c) Nuchhimi (d) Sichangneii
59. Which of the following character is related to *Vazuntei*?  
 (a) Sichangneii (b) Kawrdumbela  
 (c) Sawngkhara (d) Chertuala leh Darthiangi
60. Very ugly young man in Mizo folktale is  
 (a) Tuaisiala (b) Dotheia  
 (c) Mualzavata (d) Chepahakhata

61. Which of the following is not true in regards to *Chai hla*?
- (a) Nilen zai (b) Lalvunga zai  
(c) Thailungi zai (d) Mangkhaia zai
62. Famous cave called *Lamsial puk* is situated near
- (a) Khawbung village (b) Farkawn village  
(c) Maite village (d) Biate village
63. What is the state Flower of Mizoram?
- (a) *Rhynchosyilis Retusa* (b) Red Vanda  
(c) *Aerides Odorata* (d) *Lilium Mackliniae*
64. Lianchhiari Lunglen tlang was located in which district?
- (a) Champhai (b) Saitual  
(c) Serchhip (d) Khawzawl
65. Which of the following is not true in regards to *Chai hla*?
- (a) Lalvunga zai (b) Phunthanga zai  
(c) Sahlam zai (d) Zopui zai
66. When did Mizoram become a Union Territory?
- (a) 21 January 1972 (b) 21 January 1982  
(c) 21 January 1977 (d) 21 January 1987
67. Famous famine called *Thingtam* occurred in the year
- (a) 1861 (b) 1871  
(c) 1880 (d) 1911
68. The Mizo traditional dance that doesn't have particular occasion or performed any occasion
- (a) Chheih lam (b) Cheraw  
(c) Khuallam (d) Salulam zai
69. A feast performed with dance in honour of the spirit of the ancestors was
- (a) chai (b) chheih lam  
(c) mithirawplam (d) sakung
70. Who was the Speaker of the First State Assembly of Mizoram?
- (a) Pu Rokamlova (b) Pu J. Thanghuama  
(c) Dr. H. Thansanga (d) Pu Thingridema
71. Which is the largest Wildlife Sanctuary in Mizoram?
- (a) Ngengpui Wildlife Sanctuary (b) khawnglung Wildlife Sanctuary  
(c) Dampa Wildlife Sanctuary (d) Lengteng Wildlife Sanctuary
72. Who is the Second Chief Minister of Mizoram?
- (a) C. Chhunga (b) Brig T. Sailo  
(c) Lal Thanhawla (d) Laldenga
73. *Tialpari puk* is situated in
- (a) Sur tlang (b) Lengteng tlang  
(c) Phawngpui tlang (d) Pukzing village

74. Who was the first recipient of the Padma Shri Award from Mizoram?  
(a) Khawlkungi (b) Nuchhungi Renthlei  
(c) Jamesh Dokhuma (d) Anselm Sawihlira
75. In which category did Jeremy Lalrinnunga win the Gold Medal at the Commonwealth Games 2022?  
(a) Men's 57 Kg (b) Men's 67 Kg  
(c) Men's 77 Kg (d) Men's 87 Kg

**Directions (Q Nos. 76 - 83):** The numbers in the following questions follow a certain pattern. Find the missing number from the series.

76. 39, 42, 36, 45, ....., 48  
(a) 33 (b) 31  
(c) 41 (d) 43
77. 21, 32, 45, 60, ....., 96, 117, 140  
(a) 69 (b) 77  
(c) 82 (d) 90
78. 118, ....., 104, 97, 90, 83  
(a) 115 (b) 111  
(c) 109 (d) 107
79. 91, 92, 96, 105, 121, .....,  
(a) 125 (b) 130  
(d) 135 (d) 146
80. 19, 2, 38, 3, 114, 4, .....,  
(a) 225 (b) 400  
(c) 456 (d) 625
81. 121, 225, 361, ....., 729  
(a) 441 (b) 484  
(c) 529 (d) 576
82. 5, 9, ....., 20, 27, 35  
(a) 14 (b) 16  
(c) 18 (d) 19
83. 1, 9, 17, 33, 49, 73, .....,  
(a) 97 (b) 99  
(c) 111 (d) 113

**Directions: Read the following passage and answer the questions that follow.**

Electric cars may still survive since the car's emissions would be far less polluting than those that run on fossil fuels. With very minor emissions of sulphur caused when the batteries charge and discharge, when compared to current emissions standards, electric cars are zero emissions. The gasoline engine by comparison does not fare as well. Gasoline and diesel fuel burned in internal combustion engines for transportation-account for 54 percent of nitrites of oxygen, 89 percent of carbon monoxide and 28 percent of carbon dioxide pollution produced. Switching to electric vehicles drops those percentages to zero, and only slightly increases sulphur emissions. So even when the power plants burn dirty fuel, the amount of pollution is less than an oil burning car would create. And this picture is improving all the time, as clean energy sources are added to the grid. The goal should be to make more electric cars with greater incentives for consumers and producers, as well as feeding grids with more power from renewable resources as per the objectives stated in the numerous plans on climate change. And till this goal is achieved, the debate whether controlling emission at a few power plants is more convenient than controlling emission at millions of tailpipes is, would continue.

**Directions (Question Nos. 84 - 85): Choose the word/group of words which is most similar in meaning to the word printed in bold as used in the passage.**

**84. picture**

- |                    |                |
|--------------------|----------------|
| (a) situation      | (b) photograph |
| (c) representation | (d) art work   |

**85. feeding**

- |               |                 |
|---------------|-----------------|
| (a) eating    | (b) supplying   |
| (c) consuming | (d) encouraging |

**Directions (Question No. 86): Choose the word/group of words which is most opposite in meaning to the word printed in bold as used in the passage.**

**86. slightly**

- |                |                   |
|----------------|-------------------|
| (a) adequately | (b) miserly       |
| (c) certainly  | (d) substantially |

**Directions (Question Nos. 87 - 90): Each of the following idioms is followed by four meanings (a, b, c and d) of which only one is correct. Select the correct meaning.**

**87. Gift of the gab**

- |                         |                           |
|-------------------------|---------------------------|
| (a) To be lucky         | (b) To get something free |
| (c) Talent for speaking | (d) To be blessed         |

**88. To chew the cud**

- |                            |                                    |
|----------------------------|------------------------------------|
| (a) To eat slowly          | (b) To ruminate over the past      |
| (c) To swallow one's pride | (d) To take each day as it arrives |

**89. Hobson's choice**

- |  |
|--|
| (a) No choice at all because there is only one alternative |
| (b) Choice to live or die                                  |
| (c) Multiple choice  |
| (d) A dilemma  |

**90. To go into black**

- |                                  |                       |
|----------------------------------|-----------------------|
| (a) To disappear without a trace | (b) To plan secretly  |
| (c) To mourn                     | (d) To go underground |



Directions (Question Nos. 91 - 95): In each of the following questions, find out the correct answer out of the four Answer Figures, if the problem figures continue in the same sequence.

91. Problem Figures

?	.	=	@	X	@	?	D	X	D	&
?	X			D				&	X	D

Answer Figures

D	&	\$	&	O	\$	&	\$	&	\$
(a)	(b)	(c)	(d)						

92. Problem Figures

*	@	@	*	△	△	@	#	#	@	@	*	△
#	△		#	#	*	@		△	*	#	*	△

Answer Figures

△	@	*	*	@	△	@	*	#	@	*
	#		#	#	#	△				△
(a)	(b)	(c)	(d)							

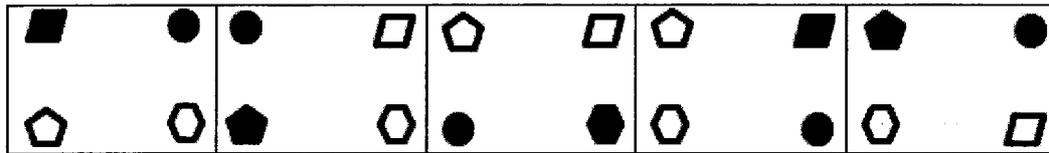
93. Problem Figures

←	←	┐	┐	┐
┐	┐	→	→	┐
┐	┐	┐	┐	←

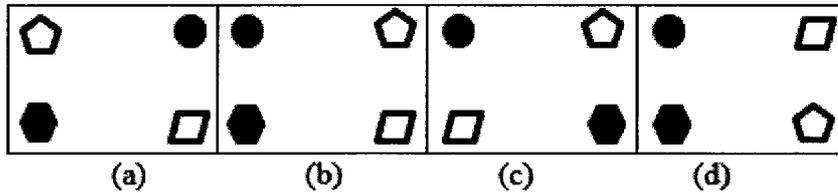
Answer Figures

┐	┐	┐	┐
→	┐	┐	┐
┐	←	→	←
(a)	(b)	(c)	(d)

94. Problem Figures



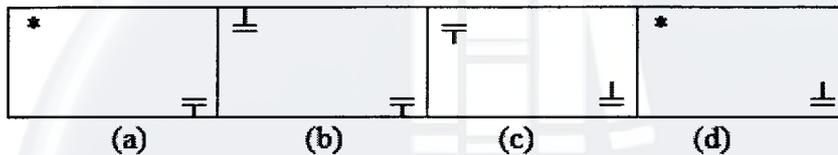
Answer Figures



95. Problem Figures



Answer Figures



**Directions (Question Nos. 96 - 100): Refer to the following information and answer the questions.**

A, B, P, Q, Y and Z cook pizza, burger, rice, sandwich, pasta and pastry.

- i. Z, who is shorter than B and is taller than Y, cooks pastry
- ii. The shortest among them cooks pasta
- iii. A, who is between B and P in decreasing order of tallness, cooks burger
- iv. B and P neither cooks pasta nor sandwich
- v. The tallest among them cooks sandwich

96. Who among the following is the shortest?

- (a) B
- (b) P
- (c) Y
- (d) None of these

97. Which food does Z cook?

- (a) Pasta
- (b) Pizza
- (c) Burger
- (d) Pastry

98. Who among the following cooks sandwich?

- (a) B
- (b) Q
- (c) Y
- (d) None of these

99. Which food does B cook?

- (a) Rice
- (b) Pizza
- (c) Either Rice or Pizza
- (d) None of these

100. Who among the following is taller than A?

- (a) B
- (b) Q
- (c) Z
- (d) Y