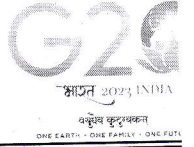


GOVERNMENT OF MIZORAM
DIRECTORATE OF HIGHER & TECHNICAL EDUCATION
(TECHNICAL WING)
MIZORAM : AIZAWL
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No.A.45011/2/2023-JDT(HTE)

Dated: Aizawl, the 1st May, 2024

OFFICE ORDER

The following are the Answer Keys of the State Medical And Technical Entrance Examination (SMATEE) 2024 , Display for information and necessary action of all those concern.

Complaint(s) if any, may be submitted to the Joint Director (Tech Wing) Higher & Technical Education Office,Chaltlang Lily Veng within one week from the date of issue of this office order.

Sd/-

ESTHER LAL RUATKIMI, IRS

Principal Secretary to the Govt. of Mizoram,
Higher & Technical Education Department
Cum

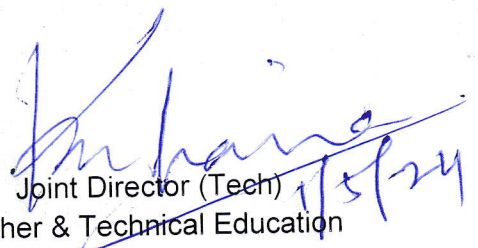
Chairman

State Selection Board Committee
Mizoram :Aizawl.

Dated: Aizawl, 1st May, 2024

Memo: No.A.45011/2/2023-JDT(HTE)

- Copy to:
1. P.S to Minister for information .
 2. Principal Secretary, H&TE for information.
 3. Director, H&TE for information.
 4. The Computer Programmer, Technical Wing, H&TE to upload in the office website
 5. All officers of Technical Wing for information and necessary action.
 6. Guard file/Relevant file


Joint Director (Tech)
Higher & Technical Education
Cum

Member Secretary,
State Selection Board Committee,
Mizoram :Aizawl

SMATEE – 2024- Answer Key
PHYSICS

1. Ans: (b) double
2. Ans: (b) 10 sec
3. Ans: (d) $m_1 = m_2$
4. Ans: (d) $9 \times 10^{13} \text{ J}$
5. Ans: (a) $\frac{1}{12} \text{ ML}^2$
6. Ans : (a) towards north
7. Ans : (d) remains constant
8. Ans: (b) total heat of the system
9. Ans: (c) 6
10. Ans: (c) microwave, infrared, ultraviolet, gamma rays
11. Ans: (a) 144s
12. Ans: (b) $30 \mu\text{C}$
13. Ans: (d) no change
14. Ans: (c) -40°C
15. Ans: (d) Magnetic equator
16. Ans: (c) Energy
17. Ans: (c) -10V
18. Ans: (d) Doppler's law
19. Ans: (a) 0.5 m
20. Ans: (d) narrower
21. Ans: (c) increases
22. Ans: (a) 11.2 km/s
23. Ans: (d) rectifier
24. Ans: (b) AND gate
25. Ans: (d) rectifier

CHEMISTRY

26. Ans: (d) 55.5
27. Ans: (b) n-type semiconductors
28. Ans: (d) H_2
29. Ans: (b) Isopropyl alcohol and methyl iodide
30. Ans: (a) $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
31. Ans: (a) Gattermann Koch reaction
32. Ans: (a) Copper and aqueous HCl
33. Ans: (c) 1-Chloro-4-methylbenzene

34. Ans: (d) 12σ– bonds and 3 π– bonds
35. Ans: (b) Spin quantum number
36. Ans: (a) high density polythene
37. Ans : (c) Utilization of existing knowledge for reducing the chemical hazards along with developmental activities
38. Ans : (b) Conductivity does not depends upon solvation of the ions present in solution
39. Ans: (a) – 87.42 kJ
40. Ans: (a) 5f, 6d and 7s energy levels are comparable energies
41. Ans : (b) $[\text{NiCl}_4]^{2-}$
42. Ans: (d) the lone pair of electrons on nitrogen atom in aniline is delocalized,
43. Ans : (b) Associated colloid
44. Ans : (c) Lewis concept
45. Ans: (c) tranquillizer
46. Ans : (c) Powdered sugar in hot water
47. Ans: (c) Liquation
48. Ans: (a) Hydrogen bond
49. Ans : (d) $\text{BaCl}_2 + \text{H}_2 \text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
50. Ans: (c) NO_2

BIOLOGY

51. Ans: (a) (i) & (ii)
52. Ans: (a) As selectable marker
53. Ans: (b) bird
54. Ans: (d) Fove
55. Ans: (c) Carbohydrates, proteins and lipids
56. Ans: (a) 0 %

57. Ans:

(c)	Replication	Transcription	Reverse Transcription	Translation
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58. Ans: (d) Addition of DNA by DNA polymerase
59. Ans: (c) Extension and amplification
60. Ans: (a) Ectotherms
61. Ans (d) High pCO_2
62. Ans: (d) Habitat loss & fragmentation
63. Ans: (d) Nematodes
64. Ans: (c) 8.0 mg per litre
65. Ans: (c) Cytokinins
66. Ans: (b) Destruction of Helper – T cells

67. Ans: (d) Unicellular, Multicellular & Eukaryotic
68. Ans: (b) Fungus
69. Ans: (c) When ovary occupies the highest position, the flower is epigynous
70. Ans: (b) Reabsorption of Cl⁻
71. Ans: (d) They are not regulated by any substances
72. Ans: (a) (i) – (y), (ii) – (z), (iii) – (w), (iv) – (x)
73. Ans: (a) Fertilisation outside the female body
74. Ans: (d) (i), (ii)
75. Ans: (c) ADH
76. Ans:(c) Metabolism
77. Ans: (a) Protoplast fusion
78. Ans: (a) (i) – (y), (ii) – (w), (iii) – (z), (iv) – (x)
79. Ans: (b) Coelenterata
80. Ans: (b) Dicot stem
81. Ans: (c) Secondary oocyte
82. Ans: (c) Cardiac muscles
83. Ans: (a) Exotic breeds of cow
84. Ans: (b) Both Statements I & II are correct and Statement II is not the correct explanation for Statement I
85. Ans: (c) Periodic Introducing bone marrow cells producing ADA into cells at early embryonic stages
86. Ans: (a) Wildlife Sanctuary
87. Ans: (b) Centriole
88. Ans: (b) Detritus Food Chain
89. Ans: (c) Bread and Beer
90. Ans: (b) Cut DNA at specific location
91. Ans: (d) Klinefelter's Syndrome
92. Ans: (c) 1971
93. Ans: (a) Tapetum, Middle layer, Endothecium, Epidermis
94. **There is mistake in the given question, all the candidates are awarded 4 marks against this question.**
Ans: (b) Blastocod Corrected spelling Blastoceal
95. Ans: (d) Hepatic portal vein
96. Ans: (b) Stratosphere
97. Ans: (a) Allergy
98. Ans: (c) (i) – (x), (ii) – (y), (iii) – (z), (iv) – (w)
99. Ans: (d) I band only
100. Ans: (b) Both Statements I & II are correct and Statement II is the correct explanation for Statement I