

### **ACKNOWLEDGMENT**

The COVID-19 Pandemic has brought forth several challenges to all apart from educating ourselves in keeping oneself, healthy & safe. One such challenge is to keep our students engaged in educational activities and keeping them abreast with their courses during these unprecedented closures of schools.

In the interest of the student community, the Department of Education (School), Manipur with the support from the Board of Secondary Education, Manipur has brought out Notes & Solutions in all subjects for classes I-XII for which we are immensely grateful to the Hon'ble Minister Education, Manipur, Shri. Thokchom Radheshyam for his guidance & encouragement all throughout the process.

The Department would also like to convey our acknowledgment to Shri. T. Ranjit Singh (IAS), Commissioner of Education (S), Government of Manipur for his wholehearted support as well as to Shri. Th. Kirankumar (IAS) erstwhile Director Education (S), Manipur and Shri. L. Nandakumar (IAS), Joint Secretary Education-S, Government of Manipur for sowing the seeds for such an innovative approach to reach out to the students during the lockdown period.

The Department is also indebted to all the core team of teachers who have contributed their mite in whatever way possible to help in materializing the dream.

The work would not have seen the light of the day without the involvement of the Team of MES Officers & Officials of the Department, Data Entry Operators, N.E.S.T Advertising & Marketing Pvt. Ltd and innumerable number of persons who have made this possible.



## **Government of Manipur Department Of Education (S)** NOTES PREPARATION FOR CLASS IX

# For the Government Schools of Manipur

### EDITORIAL TEAM FOR CLASS IX

- 1. Th. Kirankumar (IAS), Director of Education (S), Manipur
- 2. Hmangte Lerte Kom (MCS), Addl. Director of Schools (Hills), Manipur
- 3. Chingakham Sachi (MCS), Addl. Director of Schools (Valley), Manipur
- 4. Dennis Elangbam (MES), Nodal Officer Notes Preparation for Class IX & X

### LIST OF CONTRIBUTORS

- 1. Ph. Sunil Sharma, Lecturer, Biology, Lilong Hr Sec School, Madrasa
- 2. Thoudam Subhaschandra Singh, Lecturer, Mathematics, Bengoon Hr. Sec. School
- 3. Athokpam Rabikanta Singh, Lecturer, Mathematics, Ananda Singh Hr. Sec. Academy
- 4. Ranita Pukhrambam, Lecturer, Home Science, TG Hr. Sec. School
- 5. S. Laxmi, Lecturer, Home Science, Tengkhongjang Hr. Sec. School
- 6. Khumukcham Jelena Devi, Lecturer, Home Science, Ibotonsana Hr. Sec. School
- 7. Ngasepam Sonia, , Lecturer, Home Science, Sugnu Hr. Sec. School
- 8. Dr. Bondina Elangbam, Lecturer, English, TG Hr. Sec. School
- 9. Linda Haobam, Lecturer, English, Jiribam Hr. Sec. School
- EDUCATION (S) 10. Oinam Deepa Chanu, Lecturer, English, Bishnupur Hr. Sec. School
- 11. Rajkumari Memtombi Devi, Lecturer, English, Sagolmang Hr. Sec. School
- 12. Annie Moirangthem, Lecturer, English, TG Hr. Sec. School
- 13. Lukram Subashchandra Singh, Lecturer, English, Model Hr. Sec. School
- 14. Rajkumari Shivani, Lecturer, Physics, Model Hr Sec School
- 15. A. Brojendrakumar Sharma, Lecturer, Political Science, Model Hr Sec School
- 16. Khaidem Kamala Devi, Lecturer, History, TG Hr Sec School
- 17. Miranda Luithui, Lecturer, History, TG Hr Sec School



- 18. Th. Chanu Merryland, Lecturer, Economics, TG Hr Sec School
- 19. Khilona Thokchom, Lecturer, Chemistry, Model Hr Sec School
- 20. Irom Usharani Devi, Lecturer, Chemistry, Ananda Singh Hr. Sec. Academy
- 21. Karam Sushini Devi (Retd.), Curator, Manipuri, Johnstone Hr. Sec. School
- 22. Meena Kamei, Lecturer, Manipuri, Ram Lal Paul Hr. Sec. School
- 23. Laishram Kapil, Lecturer, Mathematics, Nilapadma Hr. Sec. School
- 24. N. Ranjan, Lecturer, Geography, Nilapadma Hr Sec School
- 25. Thounaojam Neetu Chanu, Lecturer, English, TG Hr. Sec. School
- 26. Chandam Elizabeth Chanu, GT, English Malom Megha High School
- 27. Annee Chirom, GT, English, Kumari High School
- 28. Athokpam Ranjita Devi, PT, English, Uyumpok UPS
- 29. O. Robert Singh, GT, History, Kumari High School
- 30. Y. Badal, GT, Economics, Nilapadma Hr Sec School
- 31. Dr. K. Dhanapati Devi, SGT, Chemistry, Ananda Singh Hr. Sec. Academy
- 32. Bijaya Soibam, SGT, Chemistry, Lamlong Hr Sec School
- 33. Ksh. Meena, UPT, Chemistry, Khurai Popular High School
- 34. Rojita Angom, UPT, Phaknung UPS
- 35. Jarina Kshetrimayum, PT, Biology, Kumari High School
- 36. Y. Bijayanti Devi, GT, Biology, Ananda Singh Hr. Sec. Academy
- 37. Maibam Achou Singh, PT, Moirangkhom Jr High School
- 38. Sh. Sunildutt Sharma, GT, Wangkhei High School

- 40. Thokchom Nibeditya Devi, GT, Physics, Takhok Mapal High School
  41. Laishram Mangi Singh, GT Mathematic
- 42. Leenthoi Ningombam, GT, Mathematics, Johnstone Hr. Sec. School
- 43. Th. Tamphasana Devi, GT, Mathematics, TG Hr. Sec. School
- 44. I. Milanjit, GT, Mathematics, Nilapadma Hr. Sec. School
- 45. Kh. Sapana Devi, GT, Home Science, Ibotonsana Hr Sec School
- 46. S. Swarnalata Devi, GT, Home Science, Ananda Singh Hr. Sec. Academy
- 47. N. Thambalngou Singh, GT, Geography, Ibotonsana Hr Sec School
- 48. Salam Surmila Devi, GT, Geography, Wangkhei High School



- 49. Laishangbam Ranita Devi, GT, Political Science, Wangkhei High School
- 50. Dr. Bisnulatpam Tarunkumari Devi, GT, Wangkhei High School
- 51. B. Nivedita Devi, GT, English, Keishamthong High School
- 52. Tourangbam Aruna, GT, English, TG Hr. Sec. School
- 53. Abujam Bharatbuson Singh, GT, Mathematics, Samurou High School
- 54. Laishram Chanchanbala Devi, GT, Manipuri, Takyel Khongbal High School

