

MIZORAM PUBLIC SERVICE COMMISSION

TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF SERICULTURE EXTENSION OFFICER UNDER SERICULTURE DEPARTMENT GOVERNMENT OF MIZORAM, AUGUST, 2022

TECHNICAL PAPER - I

Time Allowed : 2 hours

Full Marks : 150

All questions carry equal mark of 2 each.

Attempt all questions.

1. Soil of mulberry field has to supply
 - (a) Carbon dioxide
 - (b) Photosynthesis
 - (c) Oxygen
 - (d) Sulphuric acid
2. Mulberry grows best on
 - (a) Sandy soil
 - (b) Acidic soil
 - (c) Black soil
 - (d) Loamy soil
3. The optimum pH of soil for mulberry cultivation is
 - (a) 7.0 pH
 - (b) 6.7 pH
 - (c) 6.5 pH
 - (d) 5.5 pH
4. Soil affects the growth of the silkworm and the
 - (a) Colour of Cocoons
 - (b) Quality of cocoons
 - (c) Brightness of cocoons
 - (d) Weight of cocoons
5. Gypsum is applied to the soil, if the soil condition is
 - (a) Loamy soil
 - (b) Acidic soil
 - (c) Alkaline soil
 - (d) Alluvial soil
6. Main purpose of lime application is
 - (a) To reclaim saline soil
 - (b) To neutralize acid soil
 - (c) To improve alkaline soil
 - (d) To improve clayey loam soil
7. Micronutrient Iron deficiency is indicated by the appearance of
 - (a) Yellow leaf colouration
 - (b) Darkened veins
 - (c) Rotting in between the veins
 - (d) Chlorosis on the younger leaves
8. Species of Morus are diploid having
 - (a) 24 chromosomes
 - (b) 26 chromosomes
 - (c) 28 chromosomes
 - (d) 29 chromosomes
9. The most common method of propagating mulberry in India is through
 - (a) Root grafting
 - (b) Cutting
 - (c) Seed
 - (d) Budding
10. Tasar food plants Terminalia arjuna from 2 – 3 years' saplings become suitable for rearing within
 - (a) 5 years
 - (b) 4 years
 - (c) 3 years
 - (d) 2 years

11. Among Tasar food plants, the following varieties are propagated by air layering
 - (a) *T. arjuna*
 - (b) *T. tomentosa*
 - (c) *T. perviflora*
 - (d) *T. chebula*
12. Muga food plants som and soalu are propagated through
 - (a) Grafting
 - (b) Budding
 - (c) Stem cutting
 - (d) Seeds
13. Transplanting of the seedlings from the nursery is usually done
 - (a) After three (3) months
 - (b) After six (6) months
 - (c) After eight (8) months
 - (d) In the next monsoon season
14. Spacing for som and soalu plantation is
 - (a) 2×2 mtr for som & 2×2 mtr for soalu
 - (b) 3×3 mtr for som & 3×3 mtr for soalu
 - (c) 4×4 mtr for som & 5×5 mtr for soalu
 - (d) 5×5 mtr for som & 6×6 mtr for soalu
15. Muga food plants Som and Soalu are grown abundantly in
 - (a) Assam only
 - (b) Assam and Mizoram
 - (c) Assam, Meghalaya, Mizoram & Nagaland
 - (d) All N.E Indian states
16. Among the varieties of som, the best variety for rearing of muga silkworm is
 - (a) Ampatia
 - (b) Jampatia
 - (c) Kathalpatia
 - (d) Naharpatia
17. Ideal soil pH of Muga food plantation is
 - (a) 4.0 to 4.5
 - (b) 4.5 to 5.0
 - (c) 5.0 to 5.5
 - (d) 5.5 to 6.0
18. Muga food plants can grow very well in the soil of
 - (a) Sandy loam
 - (b) Slightly acidic
 - (c) Alkaline
 - (d) Alluvial
19. Tasar is the most important among the non-mulberry silks accounting for about
 - (a) 60%
 - (b) 70%
 - (c) 80%
 - (d) 90%
20. Fertilizers are applied in som and soalu plantation in the months of
 - (a) January and October
 - (b) February and November
 - (c) March and August
 - (d) April and September
21. When the som and soalu plantations are established, it can be utilized for
 - (a) 10 – 15 years
 - (b) 15 – 20 years
 - (c) 20 – 25 years
 - (d) 30 – 40 years
22. Muga silkworm rearing will commence from _____ when the plantation is raised through seedlings.
 - (a) 2 years
 - (b) 3 years
 - (c) 5 years
 - (d) 8 years
23. Scientific name of soalu is
 - (a) *Litsaea polyantha*
 - (b) *Litsaea citrata*
 - (c) *Machilus bombycina*
 - (d) *Magnolia sphenocarpa*
24. Som seeds are available during
 - (a) January to February
 - (b) February to March
 - (c) March to May
 - (d) May to June

25. It is essential to re-establish the muga food plantation in a systematic way in order to
(a) Arrest the declining trend of muga silk production (b) Fulfil the state developmental work
(c) Complete the sericulture activities (d) Achieve the CSB projects
26. The most common and suitable food plants of Eri silkworm in Mizoram is
(a) *Heteropanax fragrans* (b) *Ricinus communis*
(c) *Manihot utilissima* (d) *Carica papaya*
27. The desired mulberry cutting for planting is
(a) 6 – 7 months' old (b) 7 – 8 months' old
(c) 8 – 10 months' old (d) 10 – 12 months' old
28. Layering method of mulberry propagation involves the development of
(a) Roots from the bud (b) Roots from a stem
(c) Plants from joining two plants (d) Plants from root grafting
29. For planting of mulberry, number of live buds in one cutting should have
(a) 2 – 3 (b) 3 – 4
(c) 4 – 5 (d) 5 – 6
30. To raise one hectare of mulberry plantation, the required area of nursery is
(a) 0.1 ha (b) 0.2 ha
(c) 0.3 ha (d) 0.4 ha
31. Generally, one hectare of mulberry nursery can provide
(a) 100,000 – 200,000 saplings (b) 200,000 – 300,000 saplings
(c) 300,000 – 400,000 saplings (d) 400,000 – 500,000 saplings
32. Under irrigated conditions in Karnataka, the system of planting is
(a) Row system (b) Pit system
(c) Strip system (d) None of the above
33. Among the nutrients in fertilizers, the greatest influence on the quality of mulberry leaves is
(a) Potassium (b) Nitrogen
(c) Phosphorous (d) Calcium
34. Mulberry plantation, under row system of planting, the spacing follow is
(a) 40 cm × 30 cm (b) 50 cm × 30 cm
(c) 60 cm × 30 cm (d) 70 cm × 30 cm
35. In any silkworm food plantation, mulching is helpful
(a) To facilitate manuring of soil (b) To conserve moisture
(c) In photosynthesis process (d) In intercropping
36. Growth and sprouting of buds cannot be obtained at a temperature
(a) Below 5°C (b) Below 8°C
(c) Below 10°C (d) Below 13°C
37. Mulberry crop should not be extract more than _____ of the available water from the soil to regulate plant growth.
(a) 40 – 50% (b) 50 – 60%
(c) 60 – 70% (d) 70 – 80%

38. Soil moisture can be measure by
(a) Hygrometer (b) Hydrometer
(c) Soil texture method (d) Tensiometer
39. Effective of leaf production when balanced fertilizers are applied along with irrigation
(a) 1 – 2 times (b) 2 – 3 times
(c) 3 – 4 times (d) 5 – 6 times
40. Ideal condition for leaf preservation is
(a) 20°C atmospheric temperature (b) 25°C atmospheric temperature
(c) 15°C atmospheric temperature (d) 18°C atmospheric temperature
41. In som and soalu nursery, germination of seed starts after
(a) 1 week (b) 2 week
(c) 3 weeks (d) 4 weeks
42. The seedlings of som need _____ months to attain a height of 1 ft. in a nursery.
(a) 1 month (b) 2 months
(c) 3 months (d) 4 months
43. Carica papaya is the food plant of
(a) Oak tasar (b) Eri
(c) Muga (d) Tasar
44. Ricinus communis is propagated through
(a) Cutting (b) Seed
(c) Layering (d) Grafting
45. Tissue culture is
(a) New micro-propagation method (b) Involved in genetic engineering
(c) New silkworm breeding method (d) Involved in new grafting method
46. The somatic number of Ricinus communis is
(a) 20 (b) 24
(c) 28 (d) 30
47. Machilus bombycina is the food plant of
(a) Oak tasar (b) Eri
(c) Tasar (d) Muga
48. The food plant of Tropical tasar is
(a) Ailanthus excelsa (b) Terminalia arjuna
(c) Jatropha curcas (d) Litsaea polyantha
49. The flowering time of som plant is
(a) December – March (b) November – December
(c) January – February (d) March – April
50. Fruit development of Soalu is during
(a) January – February (b) February – March
(c) April – May (d) May – August
51. The spacing of seeds sown in the nursery of som and soalu is
(a) 5 cm × 5 cm (b) 10 cm × 10 cm
(c) 15 cm × 15 cm (d) 20 cm × 20 cm

52. Mulberry plant is a
(a) Annual plant (b) Biennial plant
(c) Evergreen (d) Perennial
53. Mulberry variety that grow wild in the Himalayas is
(a) *Morus alba* (b) *Morus nigra*
(c) *Morus sinensis* (d) *Morus multicaulis*
54. The ideal temperature for growing mulberry is
(a) 22 - 25°C (b) 23 - 26°C
(c) 24 - 29°C (d) 25 - 30°C
55. Row system of planting mulberry is practiced commonly in
(a) West Bengal (b) South India
(c) Jammu & Kashmir (d) N.E. India
56. Nitrogen content in Urea is
(a) 34% (b) 40%
(c) 46% (d) 56%
57. The recommended dosage of NPK for Rain-fed mulberry plantation is in the ratio of
(a) 2:1:1 (b) 2:2:2
(c) 2:1:2 (d) 1:2:1
58. The recommended dosage of NPK for irrigated mulberry plantation is in the ratio of
(a) 2:1:1 (b) 2.5:1:2
(c) 2:1:2 (d) 2.5:1:2.5
59. Vermicompost is associated with
(a) Fertilizers (b) Organic manures
(c) NPK (d) Green Manuring
60. Kesseru is the food plant of
(a) Muga silkworm (b) Oak tasar silkworm
(c) Temperate tasar silkworm (d) Eri silkworm
61. Assam is famously associated with
(a) Eri silk (b) Mulberry silk
(c) Tasar silk (d) Muga silk
62. Among the following food plants mentioned which one is used for rearing domesticated silkworm?
(a) Soalu (b) Castor
(c) Oak (d) Tapioca
63. Which one is not fungal root disease among the Mulberry plant diseases mentioned below?
(a) White root rot (b) Violet root rot
(c) Red root rot (d) Fusarium root rot
64. What causes rotting of Mulberry stem due to the destruction of Xylem?
(a) Fungus (b) Burning
(c) Mechanical (d) Chemical
65. What is the most common disease in Mulberry nurseries?
(a) Wilt disease (b) Twig blight
(c) Collar rot (d) Stem blight

66. When the Mulberry leaves harvested from the Powdery mildew diseased plants, the protein content is reduced by about
- (a) 10 % (b) 30 %
(c) 50 % (d) 70 %
67. Appearance of small whitish spots circular or irregular with a yellow halo followed by the falling off the affected leaves is the symptoms of what Mulberry plant disease?
- (a) Leaf rust (b) Black leaf spot
(c) Fungal leaf disease (d) Leaf spot disease
68. Scientific name of Nematodes is
- (a) Pasteuria penetrans (b) Meloidogyne incognita
(c) Paecilomyces lilacinus (d) Episomus fugulus
69. Among the nutrients which one is the constituent of all proteins, enzymes, chlorophyll, vitamins, hormones and nucleic acids in plants?
- (a) Calcium (b) Potasium
(c) Nitrogen (d) Magnesium
70. Yellowing of the tender leaves (chlorosis) with subsequent abscission, abnormally long and woody stem and roots, arresting of growth is the deficiency symptoms of
- (a) Iron (b) Boron
(c) Zinc (d) Sulphur
71. What disease damage the shoots and killing the branches in Tasar food plants?
- (a) Leaf curl (b) Stem borer
(c) Zinc deficiency (d) Root rot
72. Name the pest which causes damage to Muga food plant leaves by sucking the plant sap and cause wilting of leaves :
- (a) Thrips (b) Semiloopers
(c) Apanteles (d) Leaf roller
73. Appearance of colourless shiny patches appear under the surface of the leaves turning the upper surface pale brown in Castor plants is the disease of
- (a) Leaf spot (b) Rust
(c) Seedling blight (d) Powdery mildew
74. Growing resistant variety and Blitox (0.3 %) spray is the control measure of Castor against which pest and disease?
- (a) Leaf spot (b) Powdery Mildew
(c) Rust (d) Castor butterfly
75. What is the easy and practical control measures for Mulberry pests under field conditions
- (a) Physical (b) Cultural
(c) Biological (d) Chemical