

MIZORAM PUBLIC SERVICE COMMISSION
LIMITED DEPARTMENTAL EXAMINATIONS FOR PROMOTION TO
SERICULTURE EXTENSION OFFICER (S.E.O)
UNDER SERICULTURE DEPARTMENT, GOVERNMENT OF MIZORAM. OCTOBER -2021

PAPER - I

Time Allowed : 3 hours

Full Marks : 100

All questions carry equal mark of 1 each.
Attempt all questions.

1. A basal dose of organic manure is applied at the rate of _____ per hectare in rainfed areas:
(a) 5 tonnes (b) 10 tonnes
(c) 20 tonnes (d) 25 tonnes
2. Periodically some branches of the mulberry plants are methodically cut off, and this operation is called:
(a) Cutting (b) Layering
(c) Pruning (d) Mulching
3. The inter-plant and inter-row distance recommended for tropical countries is:
(a) 1×1 feet (b) 2×2 feet
(c) 3×3 feet (d) 4×4 feet
4. _____ system is followed for rainfed mulberry crop:
(a) Pit system (b) Row system
(c) Kolar system (d) Strip system
5. Mulberry can be grown in a rainfall range of:
(a) 150mm – 500mm (b) 200mm – 750mm
(c) 400mm – 1500mm (d) 600mm – 2500mm
6. The ideal range of pH value of soil for mulberry cultivation is:
(a) 3.5 – 3.9 (b) 4.9 – 5.5
(c) 6.2 – 6.8 (d) 7.2 – 7.2
7. Mulberry is mostly propagated through:
(a) Layering (b) Grafting
(c) Sapling (d) Cutting
8. The required temperature and relative humidity during preservation of leaves:
(a) below 5°C and over 75% (b) below 10°C and over 80%
(c) below 20°C and over 90% (d) below 25°C and over 95%
9. Leaves harvested in the _____ contain less water and more carbohydrates:
(a) morning (b) afternoon
(c) night (d) noon
10. The inter-row spaces are covered with cut-straw mats or mulberry twigs as a protective material. This is called:
(a) Intercultivation (b) Pruning
(c) Grafting (d) Mulching

11. The period of mulberry storage should not exceed _____ :
- (a) 8 hours (b) 12 hours
(c) 18 hours (d) 24 hours
12. _____, in which the mulberry branches are cut around mid-height at about one metre:
- (a) Bottom pruning (b) Middle pruning
(c) Top pruning (d) Ground pruning
13. Mulberry cuttings should be selected from well established garden of:
- (a) 2 – 3 months (b) 5 – 6 months
(c) 8 – 12 months (d) 1 -2 years
14. In row system of planting, recommended dose of NPK(Kg/ha) in irrigated areas:
- (a) 50 : 50 : 50 (b) 100 : 50 : 50
(c) 200 : 100 : 100 (d) 300 : 120 : 120
15. _____ requires more labour and further the leaves wither too quickly:
- (a) Leaf picking (b) Branch cutting
(c) Whole shoot harvest (d) Top cutting
16. In Mizoram, mulberry is generally propagated through:
- (a) Seedling (b) Cutting
(c) Sapling (d) Layering
17. Time of harvesting preferable during:
- (a) morning hours (b) noon time
(c) evening hours (d) night time
18. Optimum spacing of mulberry planting under rainfed condition is:
- (a) 40 × 40cm (b) 60 × 60cm
(c) 90 × 90cm (d) 120 × 120cm
19. _____ is a technique of joining the parts of two plants in such a way that they unite and grow as one plant:
- (a) Grafting (b) Layering
(c) Budding (d) Cutting
20. Mulberry is mainly planted in the month of:
- (a) March – April (b) April – June
(c) July – August (d) September – November
21. When the scion is inserted into the stem portion, it is called:
- (a) Crown grafting (b) Whip grafting
(c) Shoot grafting (d) Wedge grafting
22. In order to loosen the soil, land should be prepared by deep ploughing with a mould up to a depth of:
- (a) 12 – 15cm (b) 15 – 20cm
(c) 20 – 30cm (d) 30 – 40cm
23. In India, the leaf picking starts about _____ after bottom pruning:
- (a) 2 weeks (b) 5 weeks
(c) 10 weeks (d) 20 weeks

24. _____ method avoids the transmission of diseases through scion as it uses only a small portion of it:
- (a) Root grafting (b) Bud grafting
(c) Shoot grafting (d) Layering
25. Regular irrigation at an interval of _____ days is ideal for mulberry plant:
- (a) 2 – 3 (b) 3 – 5
(c) 5 – 6 (d) 8 – 10
26. _____ is the most popular method used for commercial plantation:
- (a) Seedling propagation (b) Vegetative propagation
(c) Cutting propagation (d) Grafting
27. Recommended doses of fertilizers after 2nd year onwards under rainfed condition:
- (a) 100N : 50P : 50K (b) 100N : 100P : 50K
(c) 100N : 100P : 100K (d) 50N : 50P : 50K
28. The entire branch of mulberry plant is harvested and used to feed silkworms. This method is known as:
- (a) Branch cutting (b) Whole shoot harvest
(c) Leaf picking (d) Root cutting
29. The common organic manure used in mulberry garden is:
- (a) Neem oil cake (b) Silkworm litter
(c) Mulberry twigs (d) FYM and compost
30. Mulberry grows best in:
- (a) Alluvial soil (b) Black soil
(c) Fertile soil (d) Red loamy soil
31. At least _____ should be carried out during the first six months after planting of cuttings:
- (a) one weeding (b) two weedings
(c) three weedings (d) four weedings
32. In case of leaf harvest methods, the first harvest is taken _____ after 1st pruning:
- (a) 50 days (b) 70 days
(c) 100 days (d) 120 days
33. FYM has to be applied at _____ in two doses following the first bottom pruning and third pruning:
- (a) 10 tonnes/ha/yr (b) 20 tonnes/ha/yr
(c) 25 tonnes/ha/yr (d) 40 tonnes/ha/yr
34. Mulberry is a perennial, and it consistently yields leaf for more than:
- (a) 5 – 10 yrs (b) 10 – 15 yrs
(c) 15 – 20 yrs (d) 25 – 30 yrs
35. Recommended dose of fertilizer during 1st year under rainfed is:
- (a) 25N : 25P : 25K (b) 50N : 50P : 50K
(c) 50N : 25P : 25K (d) 50N : 25P : 50K
36. In leaf picking method, the first bottom pruning has to be taken up at a height of _____ from ground level:
- (a) 5 – 10 cm (b) 10 – 15 cm
(c) 15 – 20 cm (d) 20 – 25 cm

37. _____ is made by the decomposition of grass or straw or other domestic and agricultural wastes in pits under anaerobic conditions:
- (a) Compost (b) FYM
(c) Green Manure (d) Biogas slurry
38. After planting, the saplings need to be cut at _____ above the ground level within a week:
- (a) 5 – 10 cm (b) 10 – 15 cm
(c) 20 – 25 cm (d) 25 – 30 cm
39. _____ consists of dung, urine and straw that has been used as bedding for cattle:
- (a) Green manure (b) compost
(c) FYM (d) Sericulture waste
40. Any biological material or process used for adding essential nutrient content to the soil is called:
- (a) Chemical fertilizers (b) Biofertilizers
(c) Organic Manure (d) Manure
41. *Bombyx mori*, the mulberry silkworm is included in the order of:
- (a) Insecta (b) Lepidoptera
(c) Arthropoda (d) Bombycidae
42. _____ races produce only one generation per year:
- (a) Univoltine (b) Bivoltine
(c) Multivoltine (d) None of these
43. The newly hatched larva is about _____ long:
- (a) 2 mm (b) 3 mm
(c) 5 mm (d) 6 mm
44. *Bombyx mori* undergoes complete metamorphosis and has _____ stages in its life cycle:
- (a) 2 (b) 3
(c) 4 (d) 5
45. Pupal period of bivoltine races of *Bombyx mori* is:
- (a) 12 – 15 days (b) 15 – 20 days
(c) 20 – 25 days (d) 28 – 28 days
46. The newly hatched larva is _____ in colour:
- (a) white (b) black
(c) brown (d) green
47. The protective covering of the silkworm egg is called:
- (a) micropyle (b) endochorion
(c) chorion (d) exochorion
48. Larval period of multivoltine races of *Bombyx mori* is:
- (a) 5 -10 days (b) 10 – 20 days
(c) 20 – 25 days (d) 25 – 30 days
49. Bivoltine races of mulberry silkworm generally produce:
- (a) greenish cocoon (b) golden yellow cocoon
(c) white cocoon (d) pale yellow cocoon

50. _____ is a term used in biology to indicate the number of broods or generations of an organism in a year:
- (a) Moultinism (b) Voltinism
(c) Multivoltine (d) Univoltine
51. In diapausing races, the colour of the eggs changes to _____ when they enter into diapause:
- (a) black colour (b) red colour
(c) dark green colour (d) deep brown colour
52. The size of moth is about:
- (a) 1×2 cm (b) 2×2 cm
(c) 3×3 cm (d) 4×2 cm
53. The female larva has a pair of sex marks on the ventral side of the 8th and 9th abdominal segments called:
- (a) Bursa copulatrix (b) Herold's gland
(c) Ishiwata's fore glands (d) Seminal duct
54. In male pupa, there is a small round spot on the _____ segment:
- (a) 6th (b) 7th
(c) 8th (d) 9th
55. The destruction of disease causing germs is known as:
- (a) disinfectant (b) disinfection
(c) fumigation (d) bed cleaning
56. The casting off its skin by silkworm is called:
- (a) moulding (b) mounting
(c) moulting (d) voltinism
57. In case of male moth, _____ segments are visible in the abdomen.
- (a) 6th (b) 7th
(c) 8th (d) 9th
58. Commercial formalin contains _____ formaldehyde:
- (a) 20 – 25 % (b) 26 – 30%
(c) 36 – 40% (d) 40 – 45%
59. Silkworm litter should be removed periodically, and the process of its removal is called:
- (a) disinfection (b) bed cleaning
(c) deflossing (d) disinfectant
60. _____ formalin is used for routine disinfection of rearing room and rearing appliances prior to the commencement of rearing:
- (a) 2% (b) 5%
(c) 8% (d) 10%
61. Young age silkworm require:
- (a) matured leaves (b) bottom leaves
(c) thick leaves (d) tender leaves
62. How many times required bed cleaning during the 2nd instar:
- (a) one (b) two
(c) three (d) four

63. The mesh size during 1st instar:
- (a) 1 mm² (b) 2 mm²
(c) 3 mm² (d) 4 mm²
64. Moulting occurs _____ times during the larval life in commercial races.
- (a) 2 (b) 3
(c) 4 (d) 5
65. _____ are placed below the legs of the rearing stand and are filled with water to prevent ants from crawling up.
- (a) Foam rubber strip (b) Mats
(c) Feeding stand (d) Ant wells
66. Required temperature during the 5th instar:
- (a) 16 – 18^oC (b) 23 – 24^oC
(c) 24 – 28^oC (d) 28 – 30^oC
67. The best time for brushing is:
- (a) 6 am (b) 8 am
(c) 10 am (d) 11 am
68. _____ is used to prevent evaporation of moisture and to maintain high humidity in the rearing bed:
- (a) Foam rubber strip (b) Paraffin paper
(c) Mats (d) Ant well
69. In tropical regions, the best orientation of rearing house will be _____ direction:
- (a) North – South (b) South – North
(c) East – West (d) West – East
70. In general, a floor area of _____ is required for tray rearing method:
- (a) 1sq ft/df1 (b) 2sq ft/df1
(c) 3sq ft/df1 (d) 4sq ft/df1
71. _____ is the most popular method of brushing in India:
- (a) Husk method (b) Net method
(c) Cloth method (d) Feather method
72. Optimum temperature required during the 1st instar:
- (a) 10 – 15^oC (b) 15 – 18^oC
(c) 26 – 28^oC (d) 28 – 32^oC
73. _____ directly affects the growth of the larvae and quality of cocoons:
- (a) Humidity (b) Temperature
(c) Heat (d) Air
74. _____ before brushing, disinfection should be done:
- (a) 1 day (b) 2 days
(c) 3 days (d) 4 days
75. The rearing room should have proper ventilation of air and _____ of light and _____ of darkness:
- (a) 18 hours and 1 hours (b) 18 hours and 2 hours
(c) 18 hours and 6 hours (d) 18 hours and 8 hours

76. Required relative humidity during the 1st instar:
- (a) 70% (b) 75%
(c) 80% (d) 85%
77. The first moult lasts for:
- (a) 5 – 10 hours (b) 10 – 15 hours
(c) 15 – 20 hours (d) 20 – 24 hours
78. _____ races lay only non-hibernating eggs:
- (a) Univoltine (b) Bivoltine
(c) Multivoltine (d) Commercial
79. Required relative humidity during the 5th instar:
- (a) 70% (b) 75%
(c) 80% (d) 85%
80. Silkworm are fond of _____ dim light:
- (a) 15 – 30 lux (b) 20 – 25 lux
(c) 25 – 30 lux (d) 30 – 35 lux
81. Silkworm settle for first moult usually in _____ from the date of brushing:
- (a) 1 day (b) 2 days
(c) 3 days (d) 5 days
82. Quantam of leaf required for late age silkworm rearing is about:
- (a) 50% (b) 75%
(c) 84% (d) 94%
83. The maximum distance to be covered during transportation of young age silkworm is about _____ journey:
- (a) 3 hours (b) 5 hours
(c) 8 hours (d) 12 hours
84. The second instar generally lasts for _____:
- (a) 1 day (b) 1 – 1.5 days
(c) 2 – 2.5 days (d) 3 – 3.5 days
85. Wooden or bamboo rearing trays are arranged in tiers on rearing stand for rearing and is called:
- (a) Floor rearing (b) Tray rearing
(c) Self rearing (d) Shoot rearing
86. During the late age period, the silkworm body weight increase by:
- (a) 20 times (b) 25 times
(c) 30 times (d) 35 times
87. Matured silkworm can complete cocooning in about:
- (a) 2 days (b) 4 days
(c) 5 days (d) 6 days
88. Transferring of matured silkworm larvae to a suitable frame to spin cocoon is called:
- (a) Moulting (b) Spinning
(c) Brushing (d) Mounting

89. The worm inside the cocoon turns into pupa on the _____ :
(a) 4th day (b) 6th day
(c) 8th day (d) 10th day
90. The time required for spinning silk to make a cocoon from beginning to end is usually about:
(a) 12 hours (b) 24 hours
(c) 48 hours (d) 56 hours
91. During young age period, the silkworm body weight increase by:
(a) 100 times (b) 200 times
(c) 300 times (d) 400 times
92. Cocoons usually harvested on the _____ after mounting:
(a) 1st day (b) 2nd day
(c) 4th day (d) 6th day
93. The process of transferring newly hatched larvae from egg sheet to rearing tray is called:
(a) Spinning (b) Mounting
(c) Brushing (d) Moulting
94. When _____ of the worms settle for moult, feeding should be stopped.
(a) 30 – 40% (b) 50 – 60%
(c) 70 – 80% (d) 90 – 95%
95. _____ helps uniform hatching of eggs:
(a) Incubation (b) Black boxing
(c) Procurement of eggs (d) Brushing
96. _____ races lay only diapausing eggs:
(a) Univoltine (b) Bivoltine
(c) Multivoltine (d) Commercial
97. _____ is a very useful disinfectant in sericulture, especially against viruses:
(a) Formalin (b) Bleaching powder
(c) Slaked lime (d) Chlorine dioxide
98. The male larva has a single median opening at the junction of the 8th and 9th segments called opening of _____ :
(a) Herold's gland (b) Receptaculum Seminis
(c) Ishiwata's foreglands (d) Ishiwata's hindglands
99. The female pupa can be distinguished from the male by the vertical line in the centre of the _____ abdominal segment on the ventral side:
(a) 6th (b) 7th
(c) 8th (d) 9th
100. Providing ideal environmental conditions to the eggs for healthy growth and development of the embryo is _____ :
(a) Incubation (b) Brushing
(c) Black boxing (d) Procurement of eggs