MIZORAM PUBLIC SERVICE COMMISSION

LIMITED DEPARTMENTAL EXAMINATIONS FOR PROMOTION TO SERICULTURE EXTENSION OFFICER UNDER SERICULTURE DEPARTMENT GOVERNMENT OF MIZORAM, OCTOBER, 2018

PAPER - I

Time Allowed : 3 hours Full Marks : 100

Marks for each question is indicated against it.
Attempt all questions.

1. The recommended dose of N:P:K in one acre of Mulberry Garden per year is:
(a) 50:50:100 Kgs (b) 40:50:60 Kgs
(c) 100:50:50Kgs (d) 60:40:30Kgs

2. Muga food plants are generally propagated through:
(a) Saplings (b) Cuttings
(c) Seedlings (d) All of these

3. In Mizoram, Mulberry is generally propagated through:
(a) Saplings (b) Cuttings
(c) Seeds (d) All of these

4. The recommended Spacing for Som plantation in Mizoram is :
(a) 6x10 ft (b) 8x10ft
(c) 10x10ft (d) 10x15ft.

5. Which one of the following is the primary food plant of Eri silkworm?
(a) Recinus Communis (b) Terminalia Tomentosa
(c) Morus alba (d) Terminalia Arjuna

6. Which one of the following is the primary food plant of Oak Tasar silkworm?
(a) Quercus Griffithii/Serrata (b) Manihot esculenta
(c) Terminalia Tomentosa (d) Kesseru

7. In mulberry irrigated farm, pruning is conducted as:
(a) Middle pruning (b) Light pruning
(c) Bottom pruning (d) All of these

8. 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) 7.1 – 7.5

9. The recommended spacing for Mulberry plantation in rain fed condition is:
(a) 3 x 4 ft (b) 2 x 2 ft
(c) 4 x 5 ft (d) 6 x 6 ft

10. Mulberry silkworm eggs generally hatch after oviposition during:
(a) 7 - 9 days (b) 10 - 12days
(c) 14 - 16 days (d) 5 – 8 days

11. Sex separation of month can be determined by the appearance of:
(a) Head (b) Eye
(c) Legs (d) Antenna

12. In silkworm rearing 'Shoot Rearing' refers to:
(a) putting the worms on the shoot (b) Rearing the worms on the tree
(c) Simply outdoor rearing (d) feeding the worms with cut branch on the bed

13. Foam pad should be used:
(a) Continuously during Rearing (b) During rainy season
(c) Only during dry season (d) All of these

14. The optimum temperature and humidity for late aged Silkworm is:
(a) 25°C and 80-85%RH (b) 28°C and 80-85%RH
(c) 25°C and 65-70%RH (d) 25°C and 70-75%RH

15. The optimum temperature and humidity for Chawki Silkworm is:
(a) 25°C and 80-85%RH (b) 28°C and 80-85%RH
(c) 25°C and 65-70%RH (d) 25°C and 70-75%RH

16. In Mulberry Silkworm eggs pinhead stage is seen on:
(a) 3days before hatching (b) 2days before hatching
(c) 1day before hatching (d) 1½ day before hatching.

17. Brushing of hatched larvae is to be done only after:
(a) 60% of eggs hatched (b) 90% of eggs hatched
(c) 70% of eggs hatched (d) 75% of eggs hatched.

18. During Moulting do not _____ the silkworms.
(a) Feeds vigorously (b) Feeds little quantity
(c) Feeds normally (d) Feed

19. Lime powder dusting after moulting should be carried out:
(a) One hour before feeding (b) Five minutes before feeding
(c) Thirty minutes before feeding (d) Ten minutes before feeding

20. Pick the odd one out:
(a) Bleaching powder (b) Formaldehyde
(c) Glycel (d) Decol

21. The other meaning of moulting is:
(a) Ecdysis (b) Eclipses
(c) Ecclesiastic (d) Eclectic

22. Hygrometer is an instrument which is used to measure:
(a) Acid strength (b) Temperature
(c) Humidity (d) Alkaline strength

23. A single Bivoltin (Mulberry) female moth can lay eggs:
(a) 200-300 eggs (b) 300-400 eggs
(c) 450-500 eggs (d) 500-600 eggs

24. A single Multivoltin (Muga) female moth can lay eggs:
(a) 130-150 eggs (b) 300-350 eggs
(c) 200-250 eggs (d) 120-135 eggs

25. Silkworm Rearing house and appliances should be properly disinfected with:

(a) 4% Formaldehyde (b) 2% Formaldehyde

(c) 3% Formaldehyde (d) 1% Formaldehyde

26. Lime powder dusting should be stopped during:

(a) Stopped during rainy season (b) Decreased in late age worm

(c) Increased in chawki worms (d) Dry season

27. Spacing of_____ is optimum for good growth of Mulberry under rainfed condition

(a) 70cm x 70cm (b) 90cm x 90cm

(c) 60cm x 60cm (d) 80cm x 80cm

28. The total fertilizer dose of Mulberry plantation from second year onwards is _____

(a) NPK 150 : 50 : 50 (b) NPK 120 : 50 : 50

(c) NPK 100 : 50 : 50 (d) NPK 130 : 50 : 50

29. The methological of covering the soil in between the row space with some protective material which help in conserving moisture keeps the soil loose and friable is known as

(a) Layering (b) Mulching

(c) Weeding (d) Pruning

30. The technique of joining the parts of two plants in such away that they unite and grow as one plant is called

(a) Budding (b) Layering

(c) Grafting (d) Cutting

31. Under rainfed conditions, after three months of planting, which of the following dosages of NPK/ hectare should be applied?

(a) 50N: 50P: 50K (b) 50N: 100P: 50K

(c) 100N: 50P: 50K (d) 120N: 100P: 50K

32. When the Scion is inserted into the stem portion, it is called

(a) Root grafting (b) Shoot grafting

(c) Bud grafting (d) Stem grafting

33. After two (2) months of planting weeding and _____ should be done.

(a) Light hoeing (b) Manures should be applied

(c) Intercultivation should be done (d) Deep ploughing should be done

34. In Mulberry_____ is practiced solely to improve the yield of foliage.

(a) Budding (b) Cutting

(c) Pruning (d) grafting

35. After planting, first bottom pruning should be done

(a) After 10 months (b) After 8 months

(c) After 1 year (d) After 2 year

36. Mulberry can be propagated by

(a) Cuttings (b) Saplings

(c) Both Cuttings and Saplings (d) grafting

37. After first bottom pruning, harvesting of leaf should be started after

(a) 45 days (b) 50 days

(c) 55 days (d) 60 days

38. It is possible to get a leaf Yield of _____ Kilogram per hectare per year
(a) 15,000 – 17,000 (b) 12,000 – 15,000
(c) 12,500 – 14,500 (d) 13,000 – 14,000

39. Chemical fertilizer must be applied in the nursery when saplings attain
(a) 20 to 25cm height (b) 25 to 30cm height
(c) 30 to 40cm height (d) 40 to 45cm height

40. The most common disease noticed in nursery is
(a) Leaf rust (b) Leaf spot
(c) Powdery mildew (d) None of these

41. The cutting should be prepared from Mulberry branches of
(a) 2 to 3 months old (b) 6 to 8 months old
(c) 10 months old (d) 12 months old

42. Each cutting should be 20 to 22cm length with minimum
(a) 3 to 4 healthy buds (b) 1 to 2 healthy buds
(c) 2 healthy buds (d) None of these

43. When the root is used as a stock instead of shoot the grafting is called
(a) Root grafting (b) Shoot grafting
(c) Bud grafting (d) Stem grafting

44. Sunshine is also one of the factors controlling the growth of Mulberry. In the tropical countries, it grows well with a sunshine range of
(a) 5.0 to 9.0 hours a day (b) 9.0 to 13.0 hours a day
(c) 4.0 to 7.2 hours a day (d) 8.2 to 14.0 hours a day

45. Mulberry grows best in a
(a) Flat and fertile land (b) Red sandy loam
(c) Alluvial soils (d) Black soils

46. Periodically the soils between the Mulberry plants are loosed either by means of bullock – drawn or tractor – drawn tillers. Inter-row space may be ploughed to a depth of15cm so as to eradicate the weeds. This process is called
(a) Mulching (b) Pruning
(c) Inter cultivation (d) Cutting

47. The entire branch of Mulberry plant is harvested and used to feed silkworms. This method is known as:
(a) Whole shoot harvest (b) Branch cutting
(c) Leaf picking (d) None of these

48. The common organic manures used for Mulberry are
(a) FYM and compost (b) Composted Mulberry twigs
(c) Silkworm litter (d) Neem cake and groundnut cake

49. _____ increases the Mulberry growth, size and weight of leaves and ultimately the yield
(a) Phosphorus (b) Nitrogen
(c) Potassium (d) Phosphatic fetilizers

50. When the main Stem is cut at ground level at every harvest without allowing the stump formation it is called
(a) Fist form pruning (b) Bottom pruning
(c) Middle pruning (d) Kolar system

51. In hilly areas, where 90 x 90cm or 120 x 90cm spacing is recommended, the doses of chemical fertilizers will be

(a) 150: 100 : 100 NPK/ha/year
(b) 200 : 100 : 100kg/NPK/ha/year
(c) 250 : 100 : 100 NPK/ha/year
(d) 300 : 100 : 100 NPK/ha/year

52. Mulberry is a perennial crop and it consistently yields leaf for more than

(a) 5 – 10 years
(b) 10 – 15 years
(c) 15 – 20 years
(d) 25 – 30 years

53. For high yielding Mulberry variety like V – I, recommended dose of chemical fertilizers is

(a) 350: 140: 140kg NPK/ha/year
(b) 250: 120: 120kgNPK/ha/year
(c) 300: 150: 150kg NPK/ha/year
(d) None of these

54. Under irrigated conditions, how many cuttings should be planted per pit

(a) 1
(b) 2
(c) 3
(d) 4

55. Optimum spacing of Mulberry plant under rainfed conditions is

(a) 60cm x 60cm
(b) 90cm x 90cm
(c) 40cm x 40cm
(d) 120cm x 120cm

56. In India, the leaf picking starts about _____ after bottom pruning

(a) 10 weeks
(b) 9 weeks
(c) 7 weeks
(d) None of these

57. In order to loosen the soil, land should be prepared by deep ploughing with mould up to a depth of

(a) 10 – 15cm
(b) 15 – 20cm
(c) 20 – 30cm
(d) 30 – 40cm

58. The larval stage of Bombyx mori passes through _____ number of moults before spinning the cocoons

(a) Three
(b) Four
(c) Five
(d) None of these

59. The diapausing stage in the life cycle of Bombyx mori is

(a) Egg
(b) Pupa
(c) Larva
(d) Moth

60. Silkwowm races with one generation in a year is called

(a) Multivoltine
(b) Bivoltine
(c) Univoltine
(d) None of these

61. The optimum rearing temperature recommended for first and second instar

(a) 27 – 28°C
(b) 29 – 30°C
(c) 30 – 32°C
(d) None of these

62. Black boxing of silkworm eggs during incubation is done to

(a) 48hrs – 72hrs
(b) Synchronize hatching
(c) For uniform growth of larvae
(d) All of these

63. Young age silkworm require

(a) Thick leaves
(b) Matured leaves
(c) Top tender leaves
(d) Bottom leaves

64. During late age period, the silkworm body weight increases by

(a) 25 times (b) 35 times

(c) 45 times (d) 50 times

65. During young age silkworm rearing by how many times the body weight increase

(a) 50 times (b) 200 times

(c) 150 times (d) 40 times

66. Larval period of Silkworm from hatching to spinning is about

(a) 26 days duration (b) 30 days duration

(c) 40 days duration (d) 35 days duration

67. Silkworm are fond of _____ dim light

(a) 15 to 30 lux (b) 20 to 25 lux

(c) 35 to 40 lux (d) 45 to 50 lux

68. A place or building where young age silkworm are reared in scientific way under ideal temperature and relative humidity

(a) National Silkworm Seed Technology (b) Silkworm Seed Production Centre

(c) Chawki Rearing centre (d) Grainage Centre

69. During 2nd instar, how many times of bed cleaning should be done?

(a) Once (b) Twice

(c) Thrice (d) Five

70. Required relative humidity during 5th instar

(a) 65 % (b) 70 %

(c) 50 % (d) 80 %

71. Required temperature during 5th instar

(a) 23 – 24°C (b) 26 – 27°C

(c) 28 – 29°C (d) None of these

72. Chawki worms are more resistant to

(a) High temperature (b) Low temperature

(c) Low humidity (d) None of these

73. Transferring of matured silkworm larvae to a suitable frame to spin cocoon is called

(a) Moulting (b) Dusting

(c) Brushing (d) Mounting

74. The term voltinism is used in

(a) Agriculture (b) Horticulture

(c) Sericulture (d) Pisciculture

75. The casting off its skin by a silkworm is called

(a) Moulding (b) Mounting

(c) Moulting (d) None of these

76. The optimum temperature required during spinning is

(a) 26°C (b) 23°C

(c) 28°C (d) 30°C

77. Optimum relative humidity for best reeling quality is

(a) 80 – 85 %RH (b) 60 – 70 %RH

(c) 85 – 90 %RH (d) None of these

78. What will be the mounting density of ripen worms per square feet?

(a) 40 – 60 worms/sq.ft. (b) 80 – 90 worms/sq.ft.

(c) 100 – 120 worms/sq.ft. (d) 70 - 80 worms/sq.ft.

79. The process of transferring newly hatched larvae from egg sheet to rearing tray is called

(a) Mounting (b) Moulting

(c) Brushing (d) Loose egg

80. The worms inside the cocoons turn into pupa on

(a) 4^{th} or 5^{th} day (b) 6^{th} or 7^{th} day

(c) 8^{th} day (d) None of these

81. Cocoon harvesting should be done only on the _____ day from the day of spinning

(a) 4^{th} day (b) 5^{th} day

(c) 6^{th} day (d) 7^{th} day

82. Bivoltine cocoon harvesting should be done on the _____ from the day of spinning

(a) 5^{th} day (b) 6^{th} day

(c) 4^{th} day (d) 9^{th} day

83. The amount of leaf utilized to produce one (1) Kg of cocoon is

(a) 10 Kg of leaf (b) 20 Kg of leaf

(c) 15 Kg of leaf (d) 40 Kg of leaf

84. Per 100 laying of Multi X Bivoltine, cocoon harvest will be_____

(a) 40 to 45 Kgs (b) 45 to 50 Kgs

(c) 50 to 55 Kgs (d) None of these

85. In shoot feeding method, leaf saving is up to

(a) 30 % (b) 20 %

(c) 40 % (d) 50 %

86. When _____ of the worms settle for moult, feeding should be stopped

(a) 30 to 40 % (b) 90 to 95 %

(c) 60 to 70 % (d) 70 to 80 %

87. Mature worm requires _____ to complete spinning of cocoon.

(a) 48 to 72 hours (b) 50 to 80 hours

(c) 30 to 50 hours (d) 70 to 80 hours

88. The proper density of mounting in the case of "Chandrike" could be taken as _____ worms for a space 30cm x 30cm.

(a) 30 (b) 40

(c) 50 (d) 60

89. Quantum of leaf required during late age silkworm rearing is about

(a) 75 % (b) 82 %

(c) 94 % (d) 98 %

90. Bivoltine race of silkworm lay

(a) Diapause eggs (b) Non-diapause eggs

(c) Non-hybernating eggs (d) None of these

91. Required percentage of formalin solution to disinfect rearing equipment is

(a) 1 % (b) 2 %

(c) 5 % (d) 10 %

92. Rearing of young age silkworm usually lasts for

(a) 7 to 8 days (b) 10 to 12 days

(c) 12 to 14 days (d) 15 to 20 days

93. High nutritions,fresh and succulent mulberry leaf contains moisture of the chawki worms should be

(a) 65 – 70 % (b) 70 – 75 %

(c) 80 – 85 % (d) 75 – 80 %

94. The silk produced by Muga silkworm is

(a) Brick red colour (b) Golden colour

(c) Dark brown colour (d) Brown colour

95. _____ helps in uniform hatching of eggs

(a) Incubation (b) Black Boxing

(c) Procurement of eggs (d) None of these

96. During 3rd instar rearing, bed cleanings is recommended.

(a) Once (b) two times

(c) Thrice (d) Four times

97. It is ideal to transport eggs on the _____ of the oviposition

(a) 2nd or 3rd day (b) 4th or 5th day

(c) 6th or 7th day (d) None of these

98. In Bombyx mori, the egg stage generally last for

(a) 10 days (b) 15 days

(c) 20 days (d) 25 days

99. The colour of newly hatched larvae is

(a) Black (b) white

(c) Dark brown (d) Dark blue

100. Providing ideal environmental conditions to the eggs for healthy growth and development of the embryo is

(a) Incubation (b) Black boxing

(c) Brushing (d) None of these

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