MIZORAM PUBLIC SERVICE COMMISSION

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

PAPER - II

Time Allowed : 3 hours Full Marks : 100

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

1. If the attack of root knot disease is too severe, food plant should be:
(a) Cut at ground level (b) Uprooted and replanted
(c) Sprayed with Insecticide (d) None of these

2. The symptoms of tukra is:
(a) Leaf fall (b) Leaf curling
(c) Leaf rolling (d) Yellow leaf

3. The attack of termites is mainly on the:
(a) Root (b) Leaf
(c) Fruit (d) Stem

4. The attack of thrips is mainly on the:
(a) Stem (b) Leaf
(c) Root (d) Trunk

5. Stem borer can be controlled by using:
(a) Glycel (b) Nuvan
(c) Insecticide (d) None of these

6. Which one of the following is not a pest of silkworm food plant:
(a) Bihari hairy caterpillar (b) Thrips
(c) Stem borer (d) Tukra

7. Which one of the following silkworm disease is transmitted through gene?
(a) Bacteria (b) Flacherie
(c) Pebrine (d) Grasserie

8. Which one of the following silkworm disease is Viral disease?
(a) Bacteria (b) Flacherie
(c) Pebrine (d) Grasserie

9. Among the silkworm disease 'Conidia' is associated with:
(a) Fungal disease (b) Viral disease
(c) Bacterial disease (d) Protozoan disease

10. The infection of White muscardine is most common during:
(a) Rainy and summer seasons (b) Dry and summer seasons
(c) Dry and winter seasons (d) Rainy and winter seasons

11. The appearance of pebrine spore in microscope is:
(a) Transparent and oval (b) Translucent and oval
(c) Shinning and oval (d) Opaque and oval

12. The symptom of bacterial disease which is not found in other disease is:
(a) Loose motion (b) Mummified
(c) Vomiting (d) lose of appettite

13. The infected diseased and abnormal worms should be:
(a) Handpicked and thrown out (b) Handpicked and incinerated
(c) Handpicked and keep aside (d) Handpicked and put into the dustbin.

14. Silkworm Rearing and appliances should be thoroughly disinfected at least:
(a) one day before rearing (b) one week before rearing
(c) 2 days before rearing (d) 36Hrs before rearing.

15. Silkworm Rearing and appliances should be thoroughly disinfected with:
(a) 4% Formaldehyde (b) 2% Formaldehyde
(c) 3 % Formaldehyde (d) 1% Formaldehyde

16. Which one of the following is not grainage equipment?
(a) Plastic rearing tray (b) Rearing rack
(c) Cutting knife (d) Chopping knife

17. For preparation of loose eggs female moths are put to lay eggs on:
(a) Normal egg card (b) Paraffin paper
(c) Starch paper (d) Polythene sheet

18. Hydrometer is an instrument which is used to measure:
(a) Specific gravity of acid (b) Formalin strength
(c) Humidity (d) Alkaline strength

19. Decoupling of female and male moth should be done after:
(a) 1-2hours of pairing (b) 5-6hours of pairing
(c) 3- 4hours of pairing (d) 4-5hours of coupling

20. After _____ oviposition the egg are taken for disinfection:
(a) 14hours (b) 24hours
(c) 10hours (d) 16hours

21. Silkworm eggs should be disinfected/washed with:
(a) 1.5% formalin solution (b) 2% formalin solution
(c) 1% formalin solution 10hours (d) 2.5% formalin solution 16hours

22. Which one of the following acid is used for treatment of eggs to prevent diapause?
(a) Sulphuric acid (b) Nitric acid
(c) Hydrochloric acid (d) Bromic acid

23. Hibernating eggs can be prevented by acid treatment both in hot and cold, for hot acid treatment, the temperature of acid should be maintained at:
(a) 40.3°C (b) 46.1°C
(c) 49.2°C (d) 51.5°C

24. The required duration of dipping eggs into acid for cold acid treatment is:
(a) 15-20 minutes (b) 10-15 minutes
(c) 30-35 minutes (d) about 60 minutes

25. In India, what type of 'Tier system' is generally adopted for seed organisation.
(a) 3 Tier System (P1, P2, P3 System) (b) 2 Tier System (P1, P2 System)
(c) 4 Tier System (P1, P2, P3, P4 System) (d) Single Tier System

26. In Mizoram, what type of 'Tier system' is generally adopted?
(a) 4 Tier System (P1, P2, P3, P4 System (b) 2 Tier System(P1,P2 System)
(c) 3 Tier System (P1, P2, P3 System) (d) Single Tier System

27. For production of MxB seed, which one of the following pairing is to be done?
(a) Female Bivoltin X Male Multivoltin (b) Male Bivoltin X Female Multivoltin
(c) Female Multiivoltin X Male Multivoltin (d) Male Bivoltin X Femaie Bivoltin

28. In Mizoram, for production of MxB hybrid, Sex separation is done, in which:
(a) Cocoon is cut and all female multivoltine pupae are rejected
(b) Cocoon is cut and all male Bivoltine pupae are rejected
(c) Cocoon is cut and all male multivoltine pupae are rejected
(d) Cocoon is cut and all female Bivoltine pupae are rejected

29. For production of non-hibernating seed, the egg is collected after oviposition and:
(a) The eggs should be kept for distribution
(b) The eggs should be put outside for sun drying
(c) The eggs should be rinsed with clear water and disinfected with 2% formalin
(d) The eggs should be kept in clean and dry place without wetting

30. The specific gravity of acid for hot acid treatment is:
(a) 1.1-1.2Sp.gr (b) 1.5-1.6Sp.gr
(c) 1.06-1.07Sp.gr (d) 2-2.1Sp.gr

31. As soon as cocoon arrive at grainage, cocoon is sorted for:
(a) Rejection of flimsy cocoon (b) Rejection of stained cocoon
(c) Rejection of double cocoon (d) All of the above

32. If pairing is done with the same parents, there is chance of:
(a) Better quality of cocoon (b) inferior quality of cocoon
(c) Irregular hatching (d) Inbreeding

33. In the presence of adequate number of seed cocoon and manpower, the whole process of grainage operation can be completed within:
(a) One month (b) One week
(c) Two weeks (d) Three weeks

34. Scientific name of Jassid is
(a) Spodoptera litura (b) Aleurodicus disperses
(c) Empoasca flavescens (d) Spilosoma obliqua

35. Causative agent of Pebrine disease is
(a) Exorista bombysis (b) Exorista orbilans
(c) Bacillia Streptococci (d) Nosema bombysis

36. Powdery mildew occurs in
(a) Summer season (b) Rainy season
(c) Winter season (d) During winter and Rainy season

37. Nuclear Polyhedrosis is a viral disease commonly known as
(a) Flacherie (b) Grasserie
(c) White Muscardine (d) Green Muscardine

38. Causative agent of white Muscardine
(a) Beauveria bassiana (b) Bacillus thuringiensis
(c) Streptococcus species (d) Serratia Marcesence

39. Septicemia is a
(a) Bacterial disease (b) Viral disease
(c) Fungal disease (d) Protozoan disease

40. If spray of 0.15 % DDVP is used to Control Bihar Hairy Caterpillar, save period will be
(a) 5 days after spraying (b) 10 days after spraying
(c) 15 days after spraying (d) 20 days after spraying

41. Which of the following is not a bacterial disease?
(a) Sotto (b) Aspergillosis
(c) Disease of digestive tract (d) Septicemia

42. Muscardine is a
(a) Bacterial disease (b) Viral disease
(c) Fungal disease (d) Protozoan disease

43. Thrips attacks the
(a) Marginal part of the leaf (b) Stalk of the leaf
(c) Ventral side of the leaf (d) Dorsal part of the leaf

44. Installation of light trap and sticky trap is one of the controls of
(a) Jassid (b) Scale insect
(c) Powdery mildew (d) Bihar hairy caterpillar

45. Pebrine is cause by
(a) Virus (b) Bacteria
(c) Protozoa (d) Fungus

46. The main symptom of Grasserie disease is
(a) Loss of appetite (b) Swelling on inter segment of the worms
(c) Sluggishness (d) The larvae become soft and flaccid

47. Mother moth examination is conducted to prevent silkworm from
(a) Muscardine disease (b) Grasserie disease
(c) Flacherie disease (d) Pebrine disease

48. Bacterial Toxicosis is caused by different strains of
(a) Bacillus thuringiensis (b) Streptococcus bombysis
(c) Beauveria bassiana (d) none of these

49. The causative agent of leaf roller is
(a) Meconellicoccus hirsutus (b) Diaphania pulverulentalis
(c) Spodoptera litura (d) Diacrisia obliqua

50. The target area of the leaf roller is
(a) The apical portion of the mulberry shoot (b) Marginal part of the leaf
(c) Stalk of the leaf (d) Ventral side of the leaf

51. The scientific name of Mealy bug is
(a) Diacrisia pulverulentalis (b) Meconellicoccus hirsutus
(c) Diacrisia obliqua (d) None of these

52. Bacterical leaf blight occurs mainly in
(a) Summer season (b) Rainy and winter seasons
(c) Spring season (d) Autumn season

53. Among the silkworm diseases which disease is transmitted from parents to the offspring?
(a) Bacterical (b) Flacherie
(c) Pebrine (d) Fungal

54. Leaf spot can be controlled by
(a) Spraying 0.2 % Bavistin solution on the leaves (b) Spraying 0.2 % streptomycin on the leaves
(c) Removal of affected portion (d) Spraying Rogor on the leaves

55. Red rust disease is caused by a fungus
(a) Aecidium mori (b) Pseudomonas syringae
(c) Fusarium pollidoroseum (d) Cerotelium fici

56. Stem canker is caused by
(a) Fusarium Solani (b) Botryodiplodia theobromae
(c) Phoma Sorghina (d) Phoma Morourm

57. In order to produce Disease free layings, individual mother Moth is homogenized in
(a) 2ml of 0.6 % K_2CO_3 (b) 2ml of 0.5 % K_2CO_3
(c) 80ml of 0.6 % K_2CO_3 for 1 minute (d) None of these

58. Aspergillosis occurs during
(a) Chawki stage (b) 3rd stage
(c) 4th stage (d) 5th stage

59. The main symptom of white Muscardine disease is
(a) The larvae lose appetite and become inactive (b) The larvae become soft and flaccid
(c) Cephalothoracic region becomes translucent (d) The death larvae turn red in colour

60. Sotto disease is one of
(a) Bacterical diseases (b) Viral disease
(c) Fungal disease (d) Pebrine disease

61. White Muscardine disease in silkworm is caused by
(a) Beauveria bassiana (b) Streptococcus bombysis
(c) Bacillus thuringiensis (d) Staphylococci

62. Tha bacterial disease that infects the digestive organ is
(a) Streptococci (b) Smitthia Virus
(c) Polydral body (d) Sotto disease

63. The most dangerous disease in mulberry due to its epidemic nature and potentiality to kill the plants completely
(a) Root knot disease (b) Root rot disease
(c) Stem canker (d) Coller rot disease

64. Cercospora moricola is the fugus which cause

(a) Leaf spot disease (b) Leaf rust disease

(c) Powdery mildew disease (d) Root rot disease

65. _____ is eco-friendly and can be used for the control of all major foliar and soil borne disease of mulberry

(a) DDVP (b) Neem Pesticide

(c) Chetak (d) Dithane M-45

66. Define Grainage

(a) Grainage is the centre where silkworm eggs, free from all diseases are produced.

(b) Grainage is a place where silkworm seeds are multiplied

(c) Grainage is a place where seed cocoons are stocked

(d) Grainage is Disease Free Eggs

67. Oviposition is allowed in darkness and at optimum Relative humidity of

(a) 78 ± 5 % (b) 75 ± 5 %

(c) 80 ± 5 % (d) 82 ± 5 %

68. Under optimum conditions of temperature and humidity moth emergence occurs in

(a) 12 to 14 days from the date of spinning (b) 7 to 10 days from the date of spinning

(c) 5 to 8 days from the date of spinning (d) None of the above

69. How many hours is sufficient for mating of silkworm moths

(a) 2 hours approx. (b) 1 hour approx.

(c) 3 hours approx. (d) 5 hours approx.

70. During copulation, the coupling pairs are kept in _____ conditions, preferably at a temperature of _____ .

(a) Light, 24 – 25^0C (b) Light, 30 – 35^0C

(c) Semi dark, 24 – 25^0C (d) Semi dark, 30 – 35^0C

71. To avoid irregular emergence of moths _____ is to be maintained on the previous day of moth emergence

(a) Semi dark (b) Complete darkness

(c) Dark (d) Light dark

72. Seed cocoon are generally raised in

(a) P_1 station (b) P_2 station

(c) P_3 station (d) Grainage

73. Oviposition room should be maintain at optimum temperature of

(a) 25^0C (b) 28^0C

(c) 30^0C (d) 32^0C

74. The specific gravity of the acid required in cold acid treatment is _____ at _____ .

(a) 1.105;25^0C (b) 1.101; 30^0C

(c) 1.108;15^0C (d) 2.10; 15^0C

75. Grainage equipment which is used to record temperature and relative humidity is called as

(a) Hygrometer (b) Thermometer

(c) Hydrometer (d) All of these

76. The purpose of mother moth examination is to detect

(a) Muscardine disease (b) Pebrine disease

(c) Grasserie disease (d) Flacherie disease

77. Moth examination may be conducted by using

(a) live (green) moth (b) dead (dry) moth

(c) Green and dry moth (d) None of these

78. The development of male pupae can be delayed by preserving at

(a) 5 -7^{0}C (b) 7 – 10^{0}C

(c) 10 – 12^{0}C (d) 11 – 15^{0}C

79. The commercial grade HCL is generally available in the range of

(a) 1.002 – 1.006 sp.gr (b) 1.160 – 1.180 sp.gr

(c) 1.015 – 1.017 sp.gr (d) 1.001 – 1.009 sp.gr

80. In loose egg preparation, a unit of _____ eggs per box is considered a universal standard

(a) 12,000 (b) 15,000

(c) 20,000 (d) 23,000

81. To achieve better hatchability the temperature of the incubation room should be maintained at

(a) 28^{0}C (b) 26^{0}C

(c) 30^{0}C (d) 32^{0}C

82. _____ examination is most effective.

(a) Individual moth (b) Mass examination

(c) 20 – 30 moths (d) 40 – 60 moths

83. Ideal temperature for preservation of seed cocoon

(a) 24^{0}C to 26^{0}C (b) 27^{0}C to 28^{0}C

(c) 29^{0}C to 30^{0}C (d) None of these

84. A microscope with fine adjustment and a magnification of _____ is deal for the identification of pebrine spores

(a) 800 times (b) 500 times

(c) 600 times (d) 900 times

85. Another term of Hybrid is

(a) Heterosis (b) Mitosis

(c) Mutation (d) Photosynthesis

86. In hot acid treatment, the eggs dipping duration is between

(a) 5 to 6 minutes (b) 2 to 4 minutes

(c) 4 to 8 minutes (d) 5 to 12 minutes

87. In cold acid treatment, the eggs dipping duration ranges between

(a) 20 to 35 minutes (b) 40 to 90 minutes

(c) 50 to 60 minutes (d) 60 to 70 minutes

88. The station where foundation stock seeds are produced and also serve as the germplasm banks

(a) P_1 station (b) P_2 station

(c) P_3 station (d) P_4 station

89. In loose egg preparation, the separated eggs are soaked for 10 minutes in

(a) 2 % formalin
(b) 0.1 % Bleaching powder
(c) 0.2 % Bleaching powder
(d) 0.5 % Bleaching Powder

90. The P_2 seed multiplication is normally done in

(a) Private farms
(b) Govt. Farms
(c) NSSP
(d) None of these

91. Type of eggs required to be acid treated

(a) Multivoltine
(b) Univoltine
(c) Bivoltine
(d) All of these

92. To eliminate the possible risk of surface contamination of eggs by various pathogens, surface sterilization of eggs with 2% formaldehyde solution for _____ minutes is compulsory

(a) 10 – 15 minutes
(b) 5 – 10 minutes
(c) 10 minutes
(d) 15 minutes

93. For seed cocoon preservation, processing room should be maintained

(a) 10 hours light and 14 hours darkness
(b) 8 hours light and 12 hours darkness
(c) 6 hours light and 10 hours darkness
(d) 7 hours light and 8 hours darkness

94. The egg laying capacity of a breed is referred to as

(a) Egg production
(b) Fecundity
(c) Egg duration
(d) Egg capacity

95. If dead and dried moths are to be examined, required strength of chemical solution is

(a) 0.1 %
(b) 0.6 %
(c) 1 %
(d) 2 %

96. Seed cocoon preservation room should maintain a constant temperature of

(a) 15 0C – 18^0C
(b) 20^0C – 21^0C
(c) 23 0C – 25^0C
(d) 25^0C – 28^0C

97. Seed cocoons have to be cut_____ to avoid damage to the pupa

(a) Horizontally
(b) Obliquely
(c) Straightly
(d) None of these

98. For uniform development of all the eggs, hibernated eggs, after removal from cold storage should be kept at 15^0C for

(a) 2 days
(b) 3 days
(c) 4 days
(d) 5 days

99. Silkworm breeds which are generally reared in colder regions and complete only one life cycle in a year is

(a) Bivoltine
(b) Univoltine
(c) Multivoltine
(d) Trivoltine

100. Cellules are designed to provide

(a) Darkness
(b) Optimum humidity
(c) Disinfection
(d) All of these

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